

II. interní klinika - klinika kardiologie a angiologie 1. LF UK a

ČLÁNEK V ČASOPISU

596601, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

DANKIEWICZ, Josef - CRONBERG, Tobias - LILJA, Gisela - JAKOBSEN, Janus C. - LEVIN, Helena - ULLEN, Susann - RYLANDER, Christian - WISE, Matt P. - ODDO, Mauro - CARIOU, Alain - **BĚLOHLÁVEK, Jan** (*1.LF/520, VFN/N202*) - HOVDENES, Jan - SAXENA, Manoj - KIRKEGAARD, Hans - YOUNG, Paul J. - PELOSI, Paolo - STORM, Christian - TACCONE, Fabio S. - JOANNIDIS, Michael - CALLAWAY, Clifton - EASTWOOD, Glenn M. - MORGAN, Matt P. G. - NORDBERG, Per - ERLINGE, David - NICHOL, Alistair D. - CHEW, Michelle S. - HOLLENBERG, Jacob - THOMAS, Matthew - BEWLEY, Jeremy - SWEET, Katie - GREJS, Anders M. - CHRISTENSEN, Steffen - HAENGGI, Matthias - LEVIS, Anja - LUNDIN, Andreas - DURING, Joachim - SCHMIDBAUER, Simon - KEEBLE, Thomas R. - KARAMASIS, Grigoris V. - SCHRAG, Claudia - FAESSLER, Edith - **ŠMÍD, Ondřej** (*1.LF/520, VFN/N202*) - **OTÁHAL, Michal** (*1.LF/700, VFN/N225*) - MAGGIORINI, Marco - WENDEL GARCIA, Pedro D. - JAUBERT, Paul - COLE, Jade M. - SOLAŘ, Miroslav (*FNHK/IKK, LFHK/IKK*) - BORGQUIST, Ola - LEITHNER, Christoph - ABED-MAILLARD, Samia - NAVARRA, Leanlove - ANNBORN, Martin - UNDEN, Johan - BRUNETTI, Iole - AWAD, Akil - MCGUIGAN, Peter - BJORKHOLT OLSEN, Roy - CASSINA, Tiziano - VIGNON, Philippe - LANGELAND, Halvor - LANGE, Theis - FRIBERG, Hans - NIELSEN, Niklas *Kor.*

Hypothermia versus Normothermia after Out-of-Hospital Cardiac Arrest.

In: The New England Journal of Medicine, 2021, 384(24):2283-2294, 12 s. ISSN 0028-4793

IF = 91.253 (2020)

Financování: I-FNHK; I-LFHK; V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Hypothermia or Normothermia after Cardiac Arrest This trial randomly assigned patients with coma after out-of-hospital cardiac arrest to undergo targeted hypothermia at 33 degrees C or normothermia with treatment of fever. At 6 months, there were no significant between-group differences regarding death or functional outcomes. Background Targeted temperature management is recommended for patients after cardiac arrest, but the supporting evidence is of low certainty. Methods In an open-label trial with blinded assessment of outcomes, we randomly assigned 1900 adults with coma who had had an out-of-hospital cardiac arrest of presumed cardiac or unknown cause to undergo targeted hypothermia at 33 degrees C, followed by controlled rewarming, or targeted normothermia with early treatment of fever (body temperature, ≥ 37.8 degrees C). The primary outcome was death from any cause at 6 months. Secondary outcomes included functional outcome at 6 months as assessed with the modified Rankin scale. Prespecified subgroups were defined according to sex, age, initial cardiac rhythm, time to return of spontaneous circulation, and presence or absence of shock on admission. Prespecified adverse events were pneumonia, sepsis, bleeding, arrhythmia resulting in hemodynamic compromise, and skin complications related to the temperature management device. Results A total of 1850 patients were evaluated for the primary outcome. At 6 months, 465 of 925 patients (50%) in the hypothermia group had died, as compared with 446 of 925 (48%) in the normothermia group (relative risk with hypothermia, 1.04; 95% confidence interval [CI], 0.94 to 1.14; $P=0.37$). Of the 1747 patients in whom the functional outcome was assessed, 488 of 881 (55%) in the hypothermia group had moderately severe disability or worse (modified Rankin scale score ≥ 4), as compared with 479 of 866 (55%) in the normothermia group (relative risk with hypothermia, 1.00; 95% CI, 0.92 to 1.09). Outcomes were consistent in the prespecified subgroups. Arrhythmia resulting in hemodynamic compromise was more common in the hypothermia group than in the normothermia group (24% vs. 17%, $P<0.001$). The incidence of other adverse events did not differ significantly between the two groups. Conclusions In patients with coma after out-of-hospital cardiac arrest, targeted hypothermia did not lead to a lower incidence of death by 6 months than targeted normothermia. (Funded by the Swedish Research Council and others; TTM2 ClinicalTrials.gov number, .)

Klíč. slova: targeted temperature management; european resuscitation council; american-heart-association; cardiopulmonary-resuscitation; guidelines

WoS:[000663653100012](https://doi.org/10.1093/oxford/97801908262132.0000001) Scopus:[2-s2.0-85108262132](https://doi.org/10.1093/oxford/97801908262132.0000001) PubMed:[34133859](https://pubmed.ncbi.nlm.nih.gov/34133859/) doi:[10.1056/NEJMoa2100591](https://doi.org/10.1056/NEJMoa2100591)

600323, *původní článek* / RIV22: 1.LF ANO

ZHOU, Bin - CARRILLO-LARCO, Rodrigo M. - DANAEI, Goodarz - RILEY, Leanne M. - PACIOREK, Christopher J. - STEVENS, Gretchen A. - GREGG, Edward W. - BENNETT, James E. - SOLOMON, Bethlehem - SINGLETON, Rosie K. - SOPHIEA, Marisa K. - IURILLI, Maria L. C. - LHOSTE, Victor P. F. - COWAN, Melanie J. - SAVIN, Stefan - WOODWARD, Mark - BALANOVA, Yulia - **CÍFKOVÁ, Renata (I.LF/520)** - DAMASCENO, Albertino - ELLIOTT, Paul - FARZADFAR, Farshad - HE, Jiang - IKEDA, Nayu - KENGNE, Andre P. - KHANG, Young-Ho - KIM, Hyeon Chang - LAXMAIAH, Avula - LIN, Hsien-Ho - MARGOZZINI MAIRA, Paula - MIRANDA, J. Jaime - NEUHAUSER, Hannelore - SUNDSTROM, Johan - VARGHESE, Cherian - WIDYAHENING, Indah S. - ZDROJEWSKI, Tomasz - EZZATI, Majid *Kor.* - ABARCA-GOMEZ, Leandra - ABDEEN, Ziad A. - RAHIM, Hanan F. Abdul - ABU-RMEILEH, Niveen M. - ACOSTA-CAZARES, Benjamin - ADAMS, Robert J. - AEKPLAKORN, Wichai - AFSANA, Kaosar - AFZAL, Shoab - AGDEPPA, Imelda A. - AGHAZADEH-ATTARI, Javad - AGUILAR-SALINAS, Carlos A. - AGYEMANG, Charles - AHMAD, Noor Ani - AHMADI, Ali - AHMADI, Naser - AHMADI, Nastaran - AHMADIZAR, Fariba - AHMED, Soheir H. - AHRENS, Wolfgang - AJLOUNI, Kamel - AL-RADDADI, Rajaa - ALAROUJ, Monira - ALBUHAIRAN, Fadia - ALDHUKAIR, Shahla - ALI, Mohamed M. - ALKANDARI, Abdullah - ALKERWI, Ala'a - ALLIN, Kristine - ALY, Eman - AMARAPURKAR, Deepak N. - AMOUGOU, Norbert - AMOUYEL, Philippe - ANDERSEN, Lars Bo - ANDERSSON, Sigmund A. - ANJANA, Ranjit Mohan - ANSARI-MOGHADDAM, Alireza - ANSONG, Daniel - AOUNALLAH-SKHIRI, Hajer - ARAUJO, Joana - ARIANSEN, Inger - ARIS, Tahir - ARKU, Raphael E. - ARLAPPA, Nimmathota - ARYAL, Krishna K. - ASPELUND, Thor - ASSAH, Felix K. - ASSUNCAO, Maria Cecilia F. - AUVINEN, Juha - AVDICOVA, Maria - AZEVEDO, Ana - AZIMI-NEZHAD, Mohsen - AZIZI, Fereidoun - AZMIN, Mehrdad - BABU, Bontha V. - BAHIJRI, Suhad - BALAKRISHNA, Nagalla - BALANOVA, Yulia - BAMOSHMOOSH, Mohamed - BANACH, Maciej - BANADINOVIC, Maja - BANDOSZ, Piotr - BANEGAS, Jose R. - LUSTIGOVÁ, Michala (*PřF/3400*) - ZUNIGA CISNEROS, Julio et al.

Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants.

In: The Lancet, 2021, 398(10304):957-980, 24 s. ISSN 0140-6736

IF = 79.323 (2020)

Financování: V-1LF; Q44;

Primární UK obor: Veřejné zdravotnictví, hygiena a epidemiologie, pracovní lékařství

Anotace: Background: Hypertension can be detected at the primary health-care level and low-cost treatments can effectively control hypertension. We aimed to measure the prevalence of hypertension and progress in its detection, treatment, and control from 1990 to 2019 for 200 countries and territories. Methods: We used data from 1990 to 2019 on people aged 30-79 years from population-representative studies with measurement of blood pressure and data on blood pressure treatment. We defined hypertension as having systolic blood pressure 140 mm Hg or greater, diastolic blood pressure 90 mm Hg or greater, or taking medication for hypertension. We applied a Bayesian hierarchical model to estimate the prevalence of hypertension and the proportion of people with hypertension who had a previous diagnosis (detection), who were taking medication for hypertension (treatment), and whose hypertension was controlled to below 140/90 mm Hg (control). The model allowed for trends over time to be non-linear and to vary by age. Findings: The number of people aged 30-79 years with hypertension doubled from 1990 to 2019, from 331 (95% credible interval 306-359) million women and 317 (292-344) million men in 1990 to 626 (584-668) million women and 652 (604-698) million men in 2019, despite stable global age-standardised prevalence. In 2019, age-standardised hypertension prevalence was lowest in Canada and Peru for both men and women; in Taiwan, South Korea, Japan, and some countries in western Europe including Switzerland, Spain, and the UK for women; and in several low-income and middle-income countries such as Eritrea, Bangladesh, Ethiopia, and Solomon Islands for men. Hypertension prevalence surpassed 50% for women in two countries and men in nine countries, in central and eastern Europe, central Asia, Oceania, and Latin America. Globally, 59% (55-62) of women and 49% (46-52) of men with hypertension reported a previous diagnosis of hypertension in 2019, and 47% (43-51) of women and 38% (35-41) of men were treated. Control rates among people with hypertension in 2019 were 23% (20-27) for women and 18% (16-21) for men. In 2019, treatment and control rates were highest in South Korea, Canada, and Iceland (treatment >70%; control >50%), followed by the USA, Costa Rica, Germany, Portugal, and Taiwan. Treatment rates were less than 25% for women and less than 20% for men in Nepal, Indonesia, and some countries in sub-Saharan Africa and Oceania. Control rates were below 10% for women and men in these countries and for

men in some countries in north Africa, central and south Asia, and eastern Europe. Treatment and control rates have improved in most countries since 1990, but we found little change in most countries in sub-Saharan Africa and Oceania. Improvements were largest in high-income countries, central Europe, and some upper-middle-income and recently high-income countries including Costa Rica, Taiwan, Kazakhstan, South Africa, Brazil, Chile, Turkey, and Iran. Interpretation: Improvements in the detection, treatment, and control of hypertension have varied substantially across countries, with some middle-income countries now outperforming most high-income nations. The dual approach of reducing hypertension prevalence through primary prevention and enhancing its treatment and control is achievable not only in high-income countries but also in low-income and middle-income settings.

Klíč. slova: blood-pressure; systematic analysis; income countries; middle-income; adults; prevention; guidelines; management; adherence; diagnosis

WoS:[000695130500023](#) Scopus:[2-s2.0-85114679906](#) PubMed:[34450083](#) doi:[10.1016/S0140-6736\(21\)01330-1](#)

600279, letter to the editors / **RIV22: 1.LF NE / RIV22: VFN NE**

BROMAN, Lars Mikael *Kor.* - EKSBERG, Staffan - LO COCO, Valeria - DE PIERO, Maria Elena - BĚLOHLÁVEK, Jan (*1.LF/520, VFN/N202*) - LORUSSO, Roberto

Extracorporeal membrane oxygenation for COVID-19 during first and second waves.

In: The Lancet: Respiratory Medicine, 2021, 9(8):e80-e81, 2 s. ISSN 2213-2600

IF = 30.700 (2020)

Primární UK obor: Kardiologie

Další UK obory: Intenzivní péče;

Anotace: COVID-19 has ravished the world, with secondary consequences that are not yet possible to estimate. WHO and the European Extracorporeal Life Support Organization (ELSO) recommended extracorporeal membrane oxygenation (ECMO) early in the pandemic, according to the standard criteria. In March, 2020, the EuroELSO survey was established to report the use of ECMO and outcomes in patients with COVID-19 once per week.

WoS:[000692814700007](#) Scopus:[2-s2.0-85111729871](#) PubMed:[34146489](#) doi:[10.1016/S2213-2600\(21\)00262-9](#)

596987, původní článek / **RIV22: 1.LF ANO / RIV22: VFN ANO**

HOEPER, Marius M. *Kor.* - AL-HITI, Hikmet - BENZA, Raymond L. - CHANG, Sung-A. - CORRIS, Paul A. - GIBBS, J. Simon R. - GRUNIG, Ekkehard - JANSKA, Pavel (*1.LF/520, VFN/N202*) - KLINGER, James R. - LANGLEBEN, David - MCLAUGHLIN, Vallerie V. - MEYER, Gisela M. B. - OTA-ARAKAKI, Jaqueline - PEACOCK, Andrew J. - PULIDO, Tomas - ROSENKRANZ, Stephan - VIZZA, Carmine Dario - VONK-NOORDEGRAAF, Anton - WHITE, R. James - CHANG, Mikyung - KLEINJUNG, Frank - MEIER, Christian - PARASCHIN, Karen - GHOFrani, Hossein Ardeschir - SIMONNEAU, Gerald *Switching to riociguat versus maintenance therapy with phosphodiesterase-5 inhibitors in patients with pulmonary arterial hypertension (REPLACE): a multicentre, open-label, randomised controlled trial.*

In: The Lancet: Respiratory Medicine, 2021, 9(6):573-584, 12 s. ISSN 2213-2600

IF = 30.700 (2020)

Financování: V-1LF; N-VFN Z;

Primární UK obor: Kardiologie

Anotace: Background: Riociguat and phosphodiesterase-5 inhibitors (PDE5i), approved for the treatment of pulmonary arterial hypertension (PAH), act on the same pathway via different mechanisms. Riociguat might be an alternative option for patients with PAH who do not respond sufficiently to treatment with PDE5i, but comparisons of the potential benefits of riociguat and PDE5i in these patients are needed. The aim of this trial was to assess the effects of switching to riociguat from PDE5i therapy versus continued PDE5i therapy in patients with PAH at intermediate risk of 1-year mortality. Methods: Riociguat replacing PDE5i therapy evaluated Against Continued PDE5i therapy (REPLACE) was an open-label, randomised controlled trial in 81 hospital-based pulmonary hypertension centres in 22 countries. The study enrolled patients aged 18–75 years with symptomatic PAH at intermediate risk of 1-year mortality (based on the European Society for Cardiology–European Respiratory Society guideline thresholds for WHO functional class and 6-min walk distance [6MWD]) who were receiving treatment with a PDE5i with or without an endothelin receptor antagonist for at least 6 weeks before randomisation. Patients were excluded if they had been previously

treated with riociguat, had used prostacyclin analogues or prostacyclin receptor agonists within 30 days before randomisation, had clinically significant restrictive or obstructive parenchymal lung disease, or had left heart disease. Patients were randomly assigned (1:1) to remain on PDE5i treatment (oral sildenafil [≥ 60 mg per day] or oral tadalafil [20–40 mg per day]; the PDE5i group) or to switch to oral riociguat (up to 2.5 mg three times per day; the riociguat group), using an interactive voice and web response system, stratified by cause of PAH. The primary endpoint was clinical improvement by week 24, defined as an absence of clinical worsening and prespecified improvements in at least two of three variables (6MWD, WHO functional class, and N-terminal prohormone of brain natriuretic peptide), analysed using last observation carried forward in all randomly assigned patients with observed values at baseline and week 24 who received at least one dose of study medication (the full analysis set). Secondary endpoints included clinical worsening events. The trial has been completed and is registered with ClinicalTrials.gov, NCT02891850. Findings: Between Jan 11, 2017, and July 31, 2019, 293 patients were screened, of which 226 patients were randomly assigned to the riociguat group (n=111) or to the PDE5i group (n=115). 211 patients completed the study and 14 patients discontinued (seven in each group). One patient assigned to the PDE5i group did not receive treatment, so 225 patients were included in the safety analysis, and one further patient in the PDE5i group had missing components of the composite primary endpoint at baseline, so 224 patients were included in the full analysis set. The primary endpoint was met by 45 (41%) of 111 patients in the riociguat group and 23 (20%) of 113 patients in the PDE5i group; odds ratio [OR] 2.78 (95% CI 1.53–5.06; $p=0.0007$). Clinical worsening events occurred in one (1%) of 111 patients in the riociguat group (hospitalisation due to worsening PAH) and 10 (9%) of 114 patients in the PDE5i group (hospitalisation due to worsening PAH [n=9]; disease progression [n=1]; OR 0.10 [0.01–0.73]; $p=0.0047$). The most frequently occurring adverse events were hypotension (15 [14%]), headache (14 [13%]), and dyspepsia (10 [9%]) in the riociguat group, and headache (eight [7%]), cough (seven [6%]), and upper respiratory tract infection (seven [6%]) in the PDE5i group. Serious adverse events were reported in eight (7%) of 111 patients in the riociguat group and 19 (17%) of 114 patients in the PDE5i group. During the study, four patients died in the PDE5i group, one of them during the safety follow-up period. Interpretation: Switching to riociguat from PDE5i treatment, both of which act via the nitric oxide–soluble guanylate cyclase–cyclic guanosine monophosphate pathway, could be a strategic option for treatment escalation in patients with PAH at intermediate risk of 1-year mortality.

Klíč. slova: long-term extension; sildenafil citrate; risk score; rationale; morbidity; diagnosis; tadalafil; survival; outcomes; registry

WoS:[000662049400023](#) Scopus:[2-s2.0-85103955172](#) PubMed:[33773120](#) doi:[10.1016/S2213-2600\(20\)30532-4](#)

597019, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

GARCIA-PAVIA, Pablo *Kor.* - RAPEZZI, Claudio - ADLER, Yehuda - ARAD, Michael - BASSO, Cristina - BRUCATO, Antonio - BURAZOR, Ivana - CAFORIO, Alida L. P. - DAMY, Thibaud - ERIKSSON, Urs - FONTANA, Marianna - GILLMORE, Julian D. - GONZALEZ-LOPEZ, Esther - GROGAN, Martha - HEYMANS, Stephane - IMAZIO, Massimo - KINDERMANN, Ingrid - KRISTEN, Arnt V. - MAURER, Mathew S. - MERLINI, Giampaolo - PANTAZIS, Antonis - PANKUWEIT, Sabine - RIGOPOULOS, Angelos G. - **LINHART, Aleš** ([1.LF/520](#), [VFN/N202](#))

Diagnosis and treatment of cardiac amyloidosis: a position statement of the ESC Working Group on Myocardial and Pericardial Diseases.

In: European Heart Journal, 2021, 42(16):1554-1568, 15 s. ISSN 0195-668X

IF = 29.983 (2020)

Financování: [V-1LF](#); [V-VFN](#);

Primární UK obor: [Kardiologie](#)

Anotace: Cardiac amyloidosis is a serious and progressive infiltrative disease that is caused by the deposition of amyloid fibrils at the cardiac level. It can be due to rare genetic variants in the hereditary forms or as a consequence of acquired conditions. Thanks to advances in imaging techniques and the possibility of achieving a non-invasive diagnosis, we now know that cardiac amyloidosis is a more frequent disease than traditionally considered. In this position paper the Working Group on Myocardial and Pericardial Disease proposes an invasive and non-invasive definition of cardiac amyloidosis, addresses clinical scenarios and situations to suspect the condition and proposes a diagnostic algorithm to aid diagnosis. Furthermore, we also review how to monitor and treat cardiac amyloidosis, in an attempt to bridge the gap between the latest

advances in the field and clinical practice. [GRAPHICS] .

Klíč. slova: Amyloidosis; Cardiac amyloidosis; Diagnosis; Treatment; AL; TTR; Transthyretin

WoS:[000661524700007](#) Scopus:[2-s2.0-85105690396](#) PubMed:[33825853](#) doi:[10.1093/eurheartj/ehab072](#)

596444, *původní článek* / RIV22: 1.LF ANO

MAAS, Angela H. E. M. *Kor.* - ROSANO, Giuseppe - CÍFKOVÁ, Renata (*1.LF/520*) - CHIEFFO, Alaide - VAN DIJKEN, Dorenda - HAMODA, Haitham - KUNADIAN, Vijay - LAAN, Ellen - LAMBRINOUDAKI, Irene - MACCLARAN, Kate - PANAY, Nick - STEVENSON, John C. - VAN TROTSENBURG, Mick - COLLINS, Peter

Cardiovascular health after menopause transition, pregnancy disorders, and other gynaecologic conditions: a consensus document from European cardiologists, gynaecologists, and endocrinologists.

In: European Heart Journal, 2021, 42(10):967-984, 18 s. ISSN 0195-668X

IF = 29.983 (2020)

Financování: V-1LF;

Primární UK obor: Kardiologie

Další UK obory: Gynekologie a porodnictví;

Anotace: Women undergo important changes in sex hormones throughout their lifetime that can impact cardiovascular disease risk. Whereas the traditional cardiovascular risk factors dominate in older age, there are several female-specific risk factors and inflammatory risk variables that influence a woman's risk at younger and middle age. Hypertensive pregnancy disorders and gestational diabetes are associated with a higher risk in younger women. Menopause transition has an additional adverse effect to ageing that may demand specific attention to ensure optimal cardiovascular risk profile and quality of life. In this position paper, we provide an update of gynaecological and obstetric conditions that interact with cardiovascular risk in women. Practice points for clinical use are given according to the latest standards from various related disciplines (Figure 1).

Klíč. slova: Coronary artery disease; Ischaemic heart disease; Menopausal hormone therapy; Female-specific risk factors; Hypertensive pregnancy disorders; Menopause; Transgender; Sexual health women

WoS:[000637048500007](#) Scopus:[2-s2.0-85102906230](#) PubMed:[33495787](#) doi:[10.1093/eurheartj/ehaa1044](#)

595674, *přehledový článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

PIERONI, Maurizio *Kor.* - MOON, James C. - ARBUSTINI, Eloisa - BARRIALES-VILLA, Roberto - CAMPOREALE, Antonia - VUJKOVAC, Andreja Cokan - ELLIOTT, Perry M. - HAGEGE, Albert - KUUSISTO, Johanna - LINHART, Aleš (*1.LF/520, VFN/N202*) - NORDBECK, Peter - OLIVOTTO, Iacopo - PIETILA-EFFATI, Paivi - NAMDAR, Mehdi

Cardiac Involvement in Fabry Disease: JACC Review Topic of the Week.

In: Journal of the American College of Cardiology, 2021, 77(7):922-936, 15 s. ISSN 0735-1097

IF = 24.093 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Fabry disease (FD) is a rare X-linked inherited lysosomal storage disorder caused by deficient α -galactosidase A activity that leads to an accumulation of globotriaosylceramide (Gb3) in affected tissues, including the heart. Cardiovascular involvement usually manifests as left ventricular hypertrophy, myocardial fibrosis, heart failure, and arrhythmias, which limit quality of life and represent the most common causes of death. Following the introduction of enzyme replacement therapy, early diagnosis and treatment have become essential to slow disease progression and prevent major cardiac complications. Recent advances in the understanding of FD pathophysiology suggest that in addition to Gb3 accumulation, other mechanisms contribute to the development of Fabry cardiomyopathy. Progress in imaging techniques have improved diagnosis and staging of FD-related cardiac disease, suggesting a central role for myocardial inflammation and setting the stage for further research. In addition, with the recent approval of oral chaperone therapy and new treatment developments, the FD-specific treatment landscape is rapidly evolving. (C) 2021 by the American College of Cardiology Foundation.

Klíč. slova: Fabry disease; hypertrophic cardiomyopathy; lysosome function; T1 mapping

WoS:[000631953800011](#) Scopus:[2-s2.0-85100490976](#) PubMed:[33602475](#) doi:[10.1016/j.jacc.2020.12.024](#)

603546, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

HEGDE, Sheila M. *Kor.* - LESTER, Steven J. - SOLOMON, Scott D. - MICHELIS, Michelle - ELLIOTT, Perry M. - NAGUEH, Sherif F. - CHOUDHURY, Lubna - ZEMÁNEK, David (*1.LF/520, VFN/N202*) - ZWAS, Donna R. - JACOBY, Daniel - WANG, Andrew - HO, Carolyn Y. - LI, Wanying - SEHNERT, Amy J. - OLIVOTTO, Iacopo - ABRAHAM, Theodore P.

Effect of Mavacamten on Echocardiographic Features in Symptomatic Patients With Obstructive Hypertrophic Cardiomyopathy.

In: Journal of the American College of Cardiology, 2021, 78(25):2518-2532, 15 s. ISSN 0735-1097 IF = 24.093 (2020)

Financování: V-1LF; N-VFN; Z;

Primární UK obor: Kardiologie

Anotace: Background: EXPLORER-HCM (Clinical Study to Evaluate Mavacamten [MYK-461] in Adults With Symptomatic Obstructive Hypertrophic Cardiomyopathy) demonstrated that mavacamten, a cardiac myosin inhibitor, improves symptoms, exercise capacity, and left ventricular outflow tract (LVOT) obstruction in patients with obstructive hypertrophic cardiomyopathy (oHCM). Objectives: The purpose of this study was to evaluate mavacamten's effect on measures of cardiac structure and function and its association with changes in other clinical measures. Methods: Key echocardiographic parameters from serial echocardiograms over 30 weeks from 251 symptomatic oHCM patients (mavacamten [n = 123], placebo [n = 128]) were assessed in a core laboratory. Results: More patients on mavacamten (80.9%; n = 76 of 94) vs placebo (34.0%; n = 33 of 97) showed complete resolution of mitral valve systolic anterior motion after 30 weeks (difference, 46.8%; P < 0.0001). Mavacamten also improved measures of diastolic function vs placebo, including left atrial volume index (LAVI) (mean ± SD baseline: 40 ± 12 mL/m² vs 41 ± 14 mL/m²; mean change from baseline of -7.5 mL/m² [95% CI: -9.0 to -6.1 mL/m²] vs -0.09 mL/m² [95% CI: -1.6 to 1.5 mL/m²]; P < 0.0001) and lateral E/e' (baseline, 15 ± 6 vs 15 ± 8; change of -3.8 [95% CI: -4.7 to -2.8] vs 0.04 [95% CI: -0.9 to 1.0]; P < 0.0001). Among mavacamten-treated patients, improvement in resting, Valsalva, and post-exercise LVOT gradients, LAVI, and lateral E/e' was associated with reduction in N-terminal pro-B-type natriuretic peptide (P ≤ 0.03 for all). Reduction in LAVI was associated with improved peak exercise oxygen consumption (P = 0.04). Conclusions: Mavacamten significantly improved measures of left ventricular diastolic function and systolic anterior motion. Improvement in LVOT obstruction, LAVI, and E/e' was associated with reduction in a biomarker of myocardial wall stress (N-terminal pro-B-type natriuretic peptide). These findings demonstrate improvement in important markers of the pathophysiology of oHCM with mavacamten. (Clinical Study to Evaluate Mavacamten [MYK-461] in Adults With Symptomatic Obstructive Hypertrophic Cardiomyopathy; NCT03470545).

Klíč. slova: diastolic function; hypertrophic cardiomyopathy; mavacamten; N-terminal pro-B-type natriuretic peptide

WoS:[000731415100007](#) Scopus:[2-s2.0-85120373019](#) PubMed:[34915982](#) doi:[10.1016/j.jacc.2021.09.1381](#)

589839, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

INZUCCHI, Silvio E. *Kor.* - DOCHERTY, Kieran F. - KOBER, Lars - KOSIBOROD, Mikhail N. - MARTINEZ, Felipe A. - PONIKOWSKI, Piotr - SABATINE, Marc S. - SOLOMON, Scott D. - VERMA, Subodh - BĚLOHLÁVEK, Jan (*1.LF/520, VFN/N202*) - BOEHM, Michael - CHIANG, Chern-En - DE BOER, Rudolf A. - DIEZ, Mirta - DUKAT, Andre - LJUNGMAN, Charlotta E. A. - BENGTSSON, Olof - LANGKILDE, Anna Maria - SJOSTRAND, Mikaela - JHUND, Pardeep S. - MCMURRAY, John J. V.

Dapagliflozin and the Incidence of Type 2 Diabetes in Patients With Heart Failure and Reduced Ejection Fraction: An Exploratory Analysis From DAPA-HF.

In: Diabetes Care, 2021, 44(2):586-594, 9 s. ISSN 0149-5992 IF = 19.112 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Další UK obory: Farmakologie a toxikologie;

Anotace: OBJECTIVE: The sodium-glucose cotransporter 2 inhibitor dapagliflozin reduced the risk of cardiovascular mortality and worsening heart failure in the Dapagliflozin and Prevention of Adverse Outcomes in Heart Failure (DAPA-HF) trial. This report explores the effect of dapagliflozin on incident type 2 diabetes (T2D) in the cohort without diabetes enrolled in the trial. RESEARCH DESIGN AND METHODS: The subgroup of 2,605 patients with heart failure and reduced ejection fraction (HFrEF), no prior history of diabetes, and an HbA1c of <6.5% at baseline was randomized to dapagliflozin 10 mg daily

or placebo. In this exploratory analysis, surveillance for new-onset diabetes was accomplished through periodic HbA1c testing as part of the study protocol and comparison between the treatment groups assessed through a Cox proportional hazards model. **RESULTS:** At baseline, the mean HbA1c was 5.8%. At 8 months, there were minimal changes, with a placebo-adjusted change in the dapagliflozin group of -0.04%. Over a median follow-up of 18 months, diabetes developed in 93 of 1,307 patients (7.1%) in the placebo group and 64 of 1,298 (4.9%) in the dapagliflozin group. Dapagliflozin led to a 32% reduction in diabetes incidence (hazard ratio 0.68, 95% CI 0.50-0.94; P = 0.019). More than 95% of the participants who developed T2D had prediabetes at baseline (HbA1c 5.7-6.4%). Participants who developed diabetes in DAPA-HF had a higher subsequent mortality than those who did not. **CONCLUSIONS:** In this exploratory analysis among patients with HF_{rEF}, treatment with dapagliflozin reduced the incidence of new diabetes. This potential benefit needs confirmation in trials of longer duration and in people without heart failure. **Klíč. slova:** impaired glucose-tolerance; life-style intervention; insulin-resistance; fasting glucose; prevention; acarbose; pioglitazone; metaanalysis; inhibitors; metformin
WoS:[000609407100044](#) Scopus:[2-s2.0-85099850126](#) PubMed:[33355302](#) doi:[10.2337/dc20-1675](#)

588742, letter to the editors / RIV22: 1.LF ANO / RIV22: VFN ANO

LORUSSO, Roberto - COMBES, Alain - COCO, Valeria Lo - DE PIERO, Maria Elena - **BĚLOHLÁVEK, Jan** ([1.LF/520](#), [VFN/N202](#)) *Kor.* [EuroECMO COVID-19 WorkingGroup - Euro-ELSO Steering Committee - **Balík Martin** ([1.LF/700](#), [VFN/N225](#)) - **Bláha Jan** ([1.LF/700](#), [VFN/N225](#)) - **Lipš Michal** ([1.LF/700](#), [VFN/N225](#)) - **Otáhal Michal** ([1.LF/700](#), [VFN/N225](#))]

ECMO for COVID-19 patients in Europe and Israel.

In: Intensive Care Medicine, 2021, 47(3):344-348, 5 s. ISSN 0342-4642
IF = 17.440 (2020)

Financování: [V-1LF](#); [V-VFN](#);

Primární UK obor: [Anesteziologie a resuscitace](#)

Další UK obory: [Kardiologie](#);

Anotace: As of October 17th the novel coronavirus (SARS-CoV-2) caused a pandemic disease (coronavirus disease 2019, COVID-19) 40 million people worldwide, with almost one million deaths. Although most patients have an uncomplicated clinical course, the more severe forms of COVID-19 require hospitalization and intensive care unit admission. Conventional high-flow oxygen therapy, non-invasive and/or invasive mechanical ventilation, often in combination with prone positioning, have all been reported to be effective in the majority of patients. However, in severe cases, life-threatening, refractory hypoxemia may occur. Secondary infections, myocardial disease involvement and a hypercoagulable state with/without pulmonary embolism may also contribute to the complexity of treating these critically ill patients. In such cases rescue therapy may be required.

Klíč. slova: extracorporeal membrane oxygenation (ECMO); coronavirus; COVID-19; patients; Europe; Israel; pandemic disease

WoS:[000606354800001](#) Scopus:[2-s2.0-85099387949](#) PubMed:[33420797](#) doi:[10.1007/s00134-020-06272-3](#)

597132, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

DELCROIX, Marion *Kor.* - TORBICKI, Adam - GOPALAN, Deepa - SITBON, Olivier - KLOK, Frederikus A. - LANG, Irene - JENKINS, David - KIM, Nick H. - HUMBERT, Marc - JAIS, Xavier - NOORDEGRAAF, Anton Vonk - PEPKE-ZABA, Joanna - BRENOT, Philippe - DORFMULLER, Peter - FADEL, Elie - GHOFrani, Hossein-Ardeschir - HOEPER, Marius M. - **JANSA, Pavel** ([1.LF/520](#), [VFN/N202](#)) - MADANI, Michael - MATSUBARA, Hiromi - OGO, Takeshi - GRUENIG, Ekkehard - D'ARMINI, Andrea - GALIE, Nazzareno - MEYER, Bernhard - CORKERY, Patrick - MESZAROS, Gergely - MAYER, Eckhard - SIMONNEAU, Gerald

ERS statement on chronic thromboembolic pulmonary hypertension.

In: European Respiratory Journal, 2021, 57(6):2002828, 37 s. ISSN 0903-1936
IF = 16.671 (2020)

Financování: [V-1LF](#); [V-VFN](#);

Primární UK obor: [Kardiologie](#)

Anotace: Chronic thromboembolic pulmonary hypertension (CTEPH) is a rare complication of acute pulmonary embolism, either symptomatic or not. The occlusion of proximal pulmonary arteries by fibrotic intravascular material, in combination with a secondary microvasculopathy of vessels <500 μm, leads to

increased pulmonary vascular resistance and progressive right heart failure. The mechanism responsible for the transformation of red clots into fibrotic material remnants has not yet been elucidated. In patients with pulmonary hypertension, the diagnosis is suspected when a ventilation/perfusion lung scan shows mismatched perfusion defects, and confirmed by right heart catheterisation and vascular imaging. Today, in addition to lifelong anticoagulation, treatment modalities include surgery, angioplasty and medical treatment according to the localisation and characteristics of the lesions. This statement outlines a review of the literature and current practice concerning diagnosis and management of CTEPH. It covers the definitions, diagnosis, epidemiology, follow-up after acute pulmonary embolism, pathophysiology, treatment by pulmonary endarterectomy, balloon pulmonary angioplasty, drugs and their combination, rehabilitation and new lines of research in CTEPH. It represents the first collaboration of the European Respiratory Society, the International CTEPH Association and the European Reference Network-Lung in the pulmonary hypertension domain. The statement summarises current knowledge, but does not make formal recommendations for clinical practice.

Klíč. slova: dual-energy ct; perfused blood-volume; quality-of-life; arterial-hypertension; computed-tomography; lung perfusion; vascular-resistance; ventilatory inefficiency; exercise intolerance; oral anticoagulants

WoS:[000670910500004](#) Scopus:[2-s2.0-85108582554](#) PubMed:[33334946](#) doi:[10.1183/13993003.02828-2020](#)

597746, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

ADAMSON, Carly - JHUND, Pardeep S. - DOCHERTY, Kieran F. - BĚLOHLÁVEK, Jan (*1.LF/520, VFN/N202*) - CHIANG, Chern-En - DIEZ, Mirta - DROZDZ, Jaroslaw - DUKAT, Andrej - HOWLETT, Jonathan - LJUNGMAN, Charlotta E. A. - PETRIE, Mark C. - SCHOU, Morten - INZUCCHI, Silvio E. - KOBER, Lars - KOSIBOROD, Mikhail N. - MARTINEZ, Felipe A. - PONIKOWSKI, Piotr - SABATINE, Marc S. - SOLOMON, Scott D. - BENGTSSON, Olof - LANGKILDE, Anna Maria - LINDHOLM, Daniel - SJOSTRAND, Mikaela - MCMURRAY, John J. V. *Kor.*

Efficacy of dapagliflozin in heart failure with reduced ejection fraction according to body mass index.

In: European Journal of Heart Failure, 2021, 23(10):1662-1672, 11 s. ISSN 1388-9842

IF = 15.534 (2020)

Financování: V-1LF; N-VFN Z;

Primární UK obor: Kardiologie

Anotace: Aims: In heart failure with reduced ejection fraction (HFrEF), there is an 'obesity paradox', where survival is better in patients with a higher body mass index (BMI) and weight loss is associated with worse outcomes. We examined the effect of a sodium-glucose co-transporter 2 inhibitor according to baseline BMI in the Dapagliflozin And Prevention of Adverse-outcomes in Heart Failure trial (DAPA-HF). Methods and results: Body mass index was examined using standard categories, i.e. underweight (<18.5 kg/m²); normal weight (18.5-24.9 kg/m²); overweight (25.0-29.9 kg/m²); obesity class I (30.0-34.9 kg/m²); obesity class II (35.0-39.9 kg/m²); and obesity class III (>=40 kg/m²). The primary outcome in DAPA-HF was the composite of worsening heart failure or cardiovascular death. Overall, 1348 patients (28.4%) were under/normal-weight, 1722 (36.3%) overweight, 1013 (21.4%) obesity class I and 659 (13.9%) obesity class II/III. The unadjusted hazard ratio (95% confidence interval) for the primary outcome with obesity class 1, the lowest risk group, as reference was: under/normal-weight 1.41 (1.16-1.71), overweight 1.18 (0.97-1.42), obesity class II/III 1.37 (1.10-1.72). Patients with class I obesity were also at lowest risk of death. The effect of dapagliflozin on the primary outcome and other outcomes did not vary by baseline BMI, e.g. hazard ratio for primary outcome: under/normal-weight 0.74 (0.58-0.94), overweight 0.81 (0.65-1.02), obesity class I 0.68 (0.50-0.92), obesity class II/III 0.71 (0.51-1.00) (P-value for interaction = 0.79). The mean decrease in weight at 8 months with dapagliflozin was 0.9 (0.7-1.1) kg (P < 0.001). Conclusion: We confirmed an 'obesity survival paradox' in HFrEF. We showed that dapagliflozin was beneficial across the wide range of BMI studied.

Klíč. slova: Heart failure; Dapagliflozin; SGLT2 inhibitor; Obesity; Body mass index; Adiposity

WoS:[000679127400001](#) Scopus:[2-s2.0-85111530103](#) PubMed:[34272791](#) doi:[10.1002/ejhf.2308](#)

595721, *původní článek* / RIV22: 1.LF NE / RIV22: VFN NE

GARCIA-PAVIA, Pablo *Kor.* - RAPEZZI, Claudio - ADLER, Yehuda - ARAD, Michael - BASSO, Cristina - BRUCATO, Antonio - BURAZOR, Ivana - CAFORIO, Alida L. P. - DAMY, Thibaud -

ERIKSSON, Urs - FONTANA, Marianna - GILLMORE, Julian D. - GONZALEZ-LOPEZ, Esther - GROGAN, Martha - HEYMANS, Stephane - IMAZIO, Massimo - KINDERMANN, Ingrid - KRISTEN, Arnt V. - MAURER, Mathew S. - MERLINI, Giampaolo - PANTAZIS, Antonis - PANKUWEIT, Sabine - RIGOPOULOS, Angelos G. - **LINHART, Aleš** ([1.LF/520](#), [VFN/N202](#))

Diagnosis and treatment of cardiac amyloidosis. A position statement of the European Society of Cardiology Working Group on Myocardial and Pericardial Diseases.

In: European Journal of Heart Failure, 2021, 23(4):512-526, 15 s. ISSN 1388-9842

IF = 15.534 (2020)

Primární UK obor: Kardiologie

Anotace: Cardiac amyloidosis is a serious and progressive infiltrative disease that is caused by the deposition of amyloid fibrils at the cardiac level. It can be due to rare genetic variants in the hereditary forms or as a consequence of acquired conditions. Thanks to advances in imaging techniques and the possibility of achieving a non-invasive diagnosis, we now know that cardiac amyloidosis is a more frequent disease than traditionally considered. In this position paper the Working Group on Myocardial and Pericardial Disease proposes an invasive and non-invasive definition of cardiac amyloidosis, addresses clinical scenarios and situations to suspect the condition and proposes a diagnostic algorithm to aid diagnosis. Furthermore, we also review how to monitor and treat cardiac amyloidosis, in an attempt to bridge the gap between the latest advances in the field and clinical practice.

Klíč. slova: cardiac amyloidosis; diagnosis; treatment; European Society of Cardiology Working Group on Myocardial and Pericardial Diseases

WoS:[000637442500001](#) Scopus:[2-s2.0-85103911805](#) PubMed:[33826207](#) doi:[10.1002/ejhf.2140](#)

603069, *přehledový článek* / **RIV22: 1.LF ANO** / **RIV22: VFN ANO**

SEFEROVIC, Petar M. *Kor.* - POLOVINA, Marija - ADLBRECHT, Christopher - **BĚLOHLÁVEK, Jan** ([1.LF/520](#), [VFN/N202](#)) - CHIONCEL, Ovidiu - GONCALVESOVA, Eva - MILINKOVIC, Ivan - GRUPPER, Avishay - HALMOSI, Robert - KAMZOLA, Ginta - KOSKINAS, Konstantinos C. - LOPATIN, Yuri - PARKHOMENKO, Alexander - PODER, Pentti - RISTIC, Arsen D. - SAKALYTE, Gintare - TRBUSIC, Matias - TUNDYBAYEVA, Meiramgul - VRTOVEC, Bojan - YOTOV, Yoto T. - MILICIC, Davor - PONIKOWSKI, Piotr - METRA, Marco - ROSANO, Giuseppe - COATS, Andrew J. S. ***Navigating between Scylla and Charybdis: challenges and strategies for implementing guideline-directed medical therapy in heart failure with reduced ejection fraction.***

In: European Journal of Heart Failure, 2021, 23(12):1999-2007, 9 s. ISSN 1388-9842

IF = 15.534 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Guideline-directed medical therapy (GDMT) has the potential to reduce the risks of mortality and hospitalisation in patients with heart failure (HF) with reduced ejection fraction (HFrEF). However, real-world data indicate that many patients with HFrEF do not receive optimised GDMT, which involves several different medications, many of which require up-titration to target doses. There are many challenges to implementing GDMT, the most important being patient-related factors (comorbidities, advanced age, frailty, cognitive impairment, poor adherence, low socioeconomic status), treatment-related factors (intolerance, side-effects) and healthcare-related factors that influence availability and accessibility of HF care.

Accordingly, international disparities in resources for HF management and limited public reimbursement of GDMT, coupled with clinical inertia for treatment intensification combine to hinder efforts to provide GDMT. In this review paper, authors aim to provide solutions based on available evidence, practical experience, and expert consensus on how to utilise evolving strategies, novel medications, and patient profiling to allow the more comprehensive uptake of GDMT. Authors discuss professional education, motivation, and training, as well as patient empowerment for self-care as important tools to overcome clinical inertia and boost GDMT implementation. We provide evidence on how multidisciplinary care and institutional accreditation can be successfully used to increase prescription rates and adherence to GDMT. We consider the role of modern technologies in advancing professional and patient education and facilitating patient-provider communication. Finally, authors emphasise the role of novel drugs (especially sodium-glucose co-transporter 2 inhibitors), and a tailored approach to drug management as evolving strategies for the more successful implementation of GDMT.

Klíč. slova: Heart failure; Guideline-directed medical therapy; Optimal treatment; Medication adherence;

Quality of care; Health education; Sodium-glucose co-transporter 2 inhibitors

WoS:[000729581700001](#) Scopus:[2-s2.0-85120942574](#) PubMed:[34755422](#) doi:[10.1002/ejhf.2378](#)

595700, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

FELKER, G. Michael *Kor.* - MCMURRAY, John J. V. - CLELAND, John G. - O'CONNOR, Christopher M. - TEERLINK, John R. - VOORS, Adriaan A. - BĚLOHLÁVEK, Jan (*1.LF/520*, *VFN/N202*) - BOHM, Michael - BORENTAIN, Maria - BUENO, Hector - COLE, Robert T. - DESOUZA, Mary M. - EZEKOWITZ, Justin A. - FILIPPATOS, Gerasimos - LANG, Ninian N. - KESSLER, Paul D. - MARTINEZ, Felipe A. - MEBAZAA, Alex - METRA, Marco - MOSTERD, Arend - PANG, Peter S. - PONIKOWSKI, Piotr - SATO, Naoki - SEIFFERT, Dietmar - YE, June

Effects of a Novel Nitroxyl Donor in Acute Heart Failure: The STAND-UP AHF Study.

In: JACC. Heart Failure, 2021, 9(2):146-157, 12 s. ISSN 2213-1779

IF = 12.035 (2020)

Financování: V-1LF; N-VFN Z;

Primární UK obor: Kardiologie

Anotace: Objectives: The primary objective was to identify well-tolerated doses of cimlanod in patients with acute heart failure (AHF). Secondary objectives were to identify signals of efficacy, including biomarkers, symptoms, and clinical events. Background: Nitroxyl (HNO) donors have vasodilator, inotropic and lusitropic effects. Bristol-Myers Squibb-986231 (cimlanod) is an HNO donor being developed for acute heart failure (AHF). Methods: This was a phase IIb, double-blind, randomized, placebo-controlled trial of 48-h treatment with cimlanod compared with placebo in patients with left ventricular ejection fraction $\leq 40\%$ hospitalized for AHF. In part I, patients were randomized in a 1:1 ratio to escalating doses of cimlanod or matching placebo. In part II, patients were randomized in a 1:1:1 ratio to either of the 2 highest tolerated doses of cimlanod from part I or placebo. The primary endpoint was the rate of clinically relevant hypotension (systolic blood pressure < 90 mm Hg or patients became symptomatic). Results: In part I (n = 100), clinically relevant hypotension was more common with cimlanod than placebo (20% vs. 8%; relative risk [RR]: 2.45; 95% confidence interval [CI]: 0.83 to 14.53). In part II (n = 222), the incidence of clinically relevant hypotension was 18% for placebo, 21% for cimlanod 6 $\mu\text{g}/\text{kg}/\text{min}$ (RR: 1.15; 95% CI: 0.58 to 2.43), and 35% for cimlanod 12 $\mu\text{g}/\text{kg}/\text{min}$ (RR: 1.9; 95% CI: 1.04 to 3.59). N-terminal pro-B-type natriuretic peptide and bilirubin decreased during infusion of cimlanod treatment compared with placebo, but these differences did not persist after treatment discontinuation. Conclusions: Cimlanod at a dose of 6 $\mu\text{g}/\text{kg}/\text{min}$ was reasonably well-tolerated compared with placebo. Cimlanod reduced markers of congestion, but this did not persist beyond the treatment period. (Evaluate the Safety and Efficacy of 48-Hour Infusions of HNO (Nitroxyl) Donor in Hospitalized Patients With Heart Failure [STANDUP AHF]; NCT03016325).

Klíč. slova: acute heart failure; clinical trials; drug therapy; nitroxyl

WoS:[000632562500009](#) Scopus:[2-s2.0-85099239575](#) PubMed:[33248986](#) doi:[10.1016/j.jchf.2020.10.012](#)

603336, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

MLČEK, Mikuláš (*1.LF/150*) *Kor.* - MEANI, Paolo - COTZA, Mauro - KOWALEWSKI, Mariusz - RAFFA, Giuseppe Maria - KURIŠČÁK, Eduard (*1.LF/150*) - POPKOVÁ, Michaela (*1.LF/150*) - PILATO, Michele - ARCADIPANE, Antonio - RANUCCI, Marco - LORUSSO, Roberto - BĚLOHLÁVEK, Jan (*1.LF/150*, *1.LF/520*, *VFN/N202*)

Atrial Septostomy for Left Ventricular Unloading During Extracorporeal Membrane Oxygenation for Cardiogenic Shock Animal Model.

In: JACC: Cardiovascular Interventions, 2021, 14(24):2698-2707, 10 s. ISSN 1936-8798

IF = 11.195 (2020)

Financování: FW01010679;

Primární UK obor: Kardiologie

Další UK obory: Fyziologie a patofyziologie;

Anotace: Objectives: The aim of this study was to quantify and understand the unloading effect of percutaneous balloon atrial septostomy (BAS) in acute cardiogenic shock (CS) treated with venoarterial (VA) extracorporeal membranous oxygenation (ECMO). Background: In CS treated with VA ECMO, increased left ventricular (LV) afterload is observed that commonly interferes with myocardial recovery or even promotes further LV deterioration. Several techniques for LV unloading exist, but the optimal strategy and the actual extent of such procedures have not been fully disclosed. Methods: In a porcine model (n = 11;

weight 56 kg [53-58 kg]), CS was induced by coronary artery balloon occlusion (57 minutes [53-64 minutes]). Then, a step-up VA ECMO protocol (40-80 mL/kg/min) was run before and after percutaneous BAS was performed. LV pressure-volume loops and multiple hemoglobin saturation data were evaluated. The Wilcoxon rank sum test was used to assess individual variable differences. Results: Immediately after BAS while on VA ECMO support, LV work decreased significantly: pressure-volume area, end-diastolic pressure, and stroke volume to TILDE OPERATOR+D9178% and end-systolic pressure to TILDE OPERATOR+D9186%, while superior vena cava and tissue oximetry did not change. During elevating VA ECMO support (40-80 mL/kg/min) with BAS vs without BAS, we observed 1) significantly less mechanical work increase (122% vs 172%); 2) no end-diastolic volume increase (100% vs 111%); and 3) a considerable increase in end-systolic pressure (134% vs 144%). Conclusions: In acute CS supported by VA ECMO, atrial septostomy is an effective LV unloading tool. LV pressure is a key component of LV work load, so whenever LV work reduction is a priority, arterial pressure should carefully be titrated low while maintaining organ perfusion.

Klíč. slova: animal model; atrial septostomy; cardiogenic shock; left ventricular unloading; venoarterial extracorporeal membrane oxygenation

WoS:[000734184400011](#) Scopus:[2-s2.0-85120744716](#) PubMed:[34949394](#) doi:[10.1016/j.jcin.2021.09.011](#)

599063, jiný článek / RIV22: 1.LF NE / RIV22: VFN NE

KOVÁRNÍK, Tomáš ([1.LF/520](#), [VFN/N202](#)) *Kor.* - **BĚLOHLÁVEK, Jan** ([1.LF/520](#), [VFN/N202](#)) - **ZEMÁNEK, David** ([1.LF/520](#), [VFN/N202](#)) - **LAMBERT, Lukáš** ([1.LF/620](#), [VFN/N249](#))

Post MI Ventricular Septal Defect Treated by Percutaneous Implantation of Figulla Flex ASD Occluder.

In: JACC: Cardiovascular Interventions, 2021, 14(15):e191-e193, 3 s. ISSN 1936-8798

IF = 11.195 (2020)

Financování: [NV16-28525A](#);

Primární UK obor: [Kardiologie](#)

Anotace: Images in Intervention (Post MI Ventricular Septal Defect Treated by Percutaneous Implantation of Figulla Flex ASD Occluder).

Klíč. slova: myocardial infarction; occluder; ventricular septal defect

WoS:[000684843000003](#) Scopus:[2-s2.0-85111057112](#) PubMed:[34274299](#) doi:[10.1016/j.jcin.2021.04.045](#)

601845, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

BENZA, Raymond L. *Kor.* - **GHOFRANI, Hossein-Ardeschir** - **GRUNIG, Ekkehard** - **HOEPER, M. Marius** - **JANSA, Pavel** ([1.LF/520](#), [VFN/N202](#)) - **JING, Zhi-Cheng** - **KIM, Nick H.** - **LANGLEBEN, David** - **SIMONNEAU, Gerald** - **WANG, Chen** - **BUSSE, Dennis** - **MEIER, Christian** - **GHIO, Stefano**

Effect of riociguat on right ventricular function in patients with pulmonary arterial hypertension and chronic thromboembolic pulmonary hypertension.

In: The Journal of Heart and Lung Transplantation, 2021, 40(10):1172-1180, 9 s. ISSN 1053-2498

IF = 10.247 (2020)

Financování: [V-1LF](#); [N-VFN](#) [Z](#);

Primární UK obor: [Kardiologie](#)

Anotace: BACKGROUND: In the Phase III PATENT-1 (NCT00810693) and CHEST-1 (NCT00855465) studies, riociguat demonstrated efficacy vs placebo in patients with pulmonary arterial hypertension (PAH) and chronic thromboembolic pulmonary hypertension (CTEPH). Clinical effects were maintained at 2 years in the long-term extension studies PATENT-2 (NCT00863681) and CHEST-2 (NCT00910429).

METHODS: This post hoc analysis of hemodynamic data from PATENT-1 and CHEST-1 assessed whether riociguat improved right ventricular (RV) function parameters including stroke volume index (SVI), stroke volume, RV work index, and cardiac efficiency. REVEAL Risk Score (RRS) was calculated for patients stratified by SVI and right atrial pressure (RAP) at baseline and follow-up. The association between RV function parameters and SVI and RAP stratification with long-term outcomes was assessed. RESULTS: In PATENT-1 (n = 341) and CHEST-1 (n = 238), riociguat improved RV function parameters vs placebo (p < 0.05). At follow-up, there were significant differences in RRS between patients with favorable and unfavorable SVI and RAP, irrespective of treatment arm (p < 0.0001). Multiple RV function parameters at baseline and follow-up were associated with survival and clinical worsening-free survival (CWFS) in PATENT-2 (n = 396; p < 0.05) and CHEST-2 (n = 237). In PATENT-2, favorable SVI and RAP at follow-up only was associated with survival and CWFS (p < 0.05), while in CHEST-2, favorable SVI and RAP at

baseline and follow-up were associated with survival and CWFS ($p < 0.05$). CONCLUSION: This post hoc analysis of PATENT and CHEST suggests that riociguat improves RV function in patients with PAH and CTEPH.

Klíč. slova: hypertension; pulmonary; ventricular function; right; PAH; CTEPH

WoS:[000706296500026](#) Scopus:[2-s2.0-85111805810](#) PubMed:[34353714](#) doi:[10.1016/j.healun.2021.06.020](#)

597101, *původní článek* / RIV22: 1.LF ANO

TREMBLAY, Johanne *Kor.* - HALOUI, Mounisif - ATTAOUA, Redha - TAHIR, Ramzan - HISHMIH, Camil - HARVEY, Francois - MAROIS-BLANCHET, Francois-Christophe - LONG, Carole - SIMON, Paul - SANTUCCI, Lara - HIZEL, Candan - CHALMERS, John - MARRE, Michel - HARRAP, Stephen - **CÍFKOVÁ, Renata** (*1.LF/520*) - KRAJCOVIECHOVA, Alena - MATTHEWS, David R. - WILLIAMS, Bryan - POULTER, Neil - ZOUNGAS, Sophia - COLAGIURI, Stephen - MANCIA, Giuseppe - GROBBEE, Diederick E. - RODGERS, Anthony - LIU, Liusheng - AGBESSI, Mawusse - BRUAT, Vanessa - FAVE, Marie-Julie - HARWOOD, Michelle P. - AWADALLA, Philip - WOODWARD, Mark *Kor.* - HUSSIN, Julie G. - HAMET, Pavel *Kor.*

Polygenic risk scores predict diabetes complications and their response to intensive blood pressure and glucose control.

In: Diabetologia, 2021, 64(9):2012-2025, 14 s. ISSN 0012-186X

IF = 10.122 (2020)

Financování: V-1LF;

Primární UK obor: *Kardiologie*

Anotace: Aims/hypothesis Type 2 diabetes increases the risk of cardiovascular and renal complications, but early risk prediction could lead to timely intervention and better outcomes. Genetic information can be used to enable early detection of risk. Methods We developed a multi-polygenic risk score (multiPRS) that combines ten weighted PRSs (10 wPRS) composed of 598 SNPs associated with main risk factors and outcomes of type 2 diabetes, derived from summary statistics data of genome-wide association studies. The 10 wPRS, first principal component of ethnicity, sex, age at onset and diabetes duration were included into one logistic regression model to predict micro- and macrovascular outcomes in 4098 participants in the ADVANCE study and 17,604 individuals with type 2 diabetes in the UK Biobank study. Results The model showed a similar predictive performance for cardiovascular and renal complications in different cohorts. It identified the top 30% of ADVANCE participants with a mean of 3.1-fold increased risk of major micro- and macrovascular events ($p = 6.3 \times 10^{-21}$ and $p = 9.6 \times 10^{-31}$, respectively) and a 4.4-fold ($p = 6.8 \times 10^{-33}$) higher risk of cardiovascular death. While in ADVANCE overall, combined intensive blood pressure and glucose control decreased cardiovascular death by 24%, the model identified a high-risk group in whom it decreased the mortality rate by 47%, and a low-risk group in whom it had no discernible effect. High-risk individuals had the greatest absolute risk reduction with a number needed to treat of 12 to prevent one cardiovascular death over 5 years. Conclusions/interpretation This novel multiPRS model stratified individuals with type 2 diabetes according to risk of complications and helped to target earlier those who would receive greater benefit from intensive therapy.

Klíč. slova: ADVANCE trial; Cardiovascular complications; Genetics; Polygenic risk score; Prediction; Renal complications; UK Biobank

WoS:[000669749700001](#) Scopus:[2-s2.0-85109288365](#) PubMed:[34226943](#) doi:[10.1007/s00125-021-05491-7](#)

600322, *původní článek* / RIV22: 1.LF ANO

IURILLI, Maria L. C - ZHOU, Bin - BENNETT, James E - CARRILLO-LARCO, Rodrigo M - SOPHIEA, Marisa K - RODRIGUEZ-MARTINEZ, Andrea - BIXBY, Honor - SOLOMON, Bethlehem D - TADDEI, Cristina - DANAEI, Goodarz - DI CESARE, Mariachiara - STEVENS, Gretchen A - RILEY, Leanne M - SAVIN, Stefan - COWAN, Melanie J - BOVET, Pascal - DAMASCENO, Albertino - CHIRITA-EMANDI, Adela - HAYES, Alison J - IKEDA, Nayu - JACKSON, Rod T - KHANG, Young-Ho - LAXMAIAH, Avula - LIU, Jing - MIRANDA, J. Jaime - SAIDI, Olfa - SEBERT, Sylvain - SORIC, Maroje - STARC, Gregor - GREGG, Edward W - ABARCA-GOMEZ, Leandra - ABDEEN, Ziad A - ABDRAKHMANOVA, Shynar - GHAFAR, Suhaila Abdul - RAHIM, Hanan F. Abdul - ABU-RMEILEH, Niveen M - GARBA, Jamila Abubakar - ACOSTA-CAZARES, Benjamin - ADAMS, Robert J - AEKPLAKORN, Wichai - AFSANA, Kaosar - AFZAL, Shoaib - AGDEPPA, Imelda A - AGHAZADEH-ATTARI, Javad - AGUILAR-SALINAS, Carlos A - AGYEMANG, Charles - AHMAD, Mohamad Hasnan - AHMAD, Noor

Ani - AHMADI, Ali - AHMADI, Naser - AHMED, Soheir H - AHRENS, Wolfgang - AITMURZAEVA, Gulmira - AJLOUNI, Kamel - AL-HAZZAA, Hazzaa M - AL-LAHOU, Badreya - AL-RADDADI, Rajaa - ALAROUJ, Monira - ALBUHAIRAN, Fadia - ALDHUKAIR, Shahla - ALI, Mohamed M - ALKANDARI, Abdullah - ALKERWI, Ala'a - ALLIN, Kristine - ALVAREZ-PEDREROL, Mar - ALY, Eman - AMARAPURKAR, Deepak N - AMIRI, Parisa - AMOUGOU, Norbert - AMOUYEL, Philippe - ANDERSEN, Lars Bo - ANDERSSSEN, Sigmund A - ANGQUIST, Lars - ANJANA, Ranjit Mohan - ANSARI-MOGHADDAM, Alireza - AOUNALLAH-SKHIRI, Hajer - ARAUJO, Joana - ARIANSEN, Inger - ARIS, Tahir - ARKU, Raphael E - ARLAPPA, Nimmathota - ARYAL, Krishna K - ASPELUND, Thor - ASSAH, Felix K - ASSUNCAO, Maria Cecilia F - AUNG, May Soe - AUVINEN, Juha - AVDICOVA, Maria - AVI, Shina - AZEVEDO, Ana - AZIMI-NEZHAD, Mohsen - AZIZI, Fereidoun - AZMIN, Mehrdad - BABU, Bontha, V - JORGENSEN, Maja Boksgaard - BAHARUDIN, Azli - BAHIJRI, Suhad - BAKER, Jennifer L - BALAKRISHNA, Nagalla - **CÍFKOVÁ, Renata** (*1.LF/520, 2.LF/Ústav farmakologie*) - LUSTIGOVÁ, Michala (*PřF/3400*) *Kor.* et al.

Heterogeneous contributions of change in population distribution of body mass index to change in obesity and underweight NCD Risk Factor Collaboration (NCD-RisC).

In: eLife, 2021, 10(MAR 9 2021):e60060, 35 s. ISSN 2050-084X

IF = 8.146 (2020)

Financování: V-1LF; Q44;

Primární UK obor: Veřejné zdravotnictví, hygiena a epidemiologie, pracovní lékařství

Anotace: From 1985 to 2016, the prevalence of underweight decreased, and that of obesity and severe obesity increased, in most regions, with significant variation in the magnitude of these changes across regions. We investigated how much change in mean body mass index (BMI) explains changes in the prevalence of underweight, obesity, and severe obesity in different regions using data from 2896 population-based studies with 187 million participants. Changes in the prevalence of underweight and total obesity, and to a lesser extent severe obesity, are largely driven by shifts in the distribution of BMI, with smaller contributions from changes in the shape of the distribution. In East and Southeast Asia and sub-Saharan Africa, the underweight tail of the BMI distribution was left behind as the distribution shifted. There is a need for policies that address all forms of malnutrition by making healthy foods accessible and affordable, while restricting unhealthy foods through fiscal and regulatory restrictions.

Klíč. slova: BMI; epidemiology; global health; obesity; underweight; systematic analysis; Australian adults; pooled analysis; Chinese adults; double burden; US adults; trends; health; malnutrition; prevalence

WoS:[000627596100001](#) Scopus:[2-s2.0-85103837539](#) doi:[10.7554/eLife.60060](#)

597090, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

KOWALEWSKI, Mariusz - ZIELINSKI, Kamil - BRODIE, Daniel - MACLAREN, Graeme - WHITMAN, Glenn - RAFFA, Giuseppe M. - BOEKEN, Udo - SHEKAR, Kiran - CHEN, Yih-Sharng - BERMUDEZ, Christian - D'ALESSANDRO, David - HOU, Xiaotong - HAFT, Jonathan - **BĚLOHLÁVEK, Jan** (*1.LF/520, VFN/N202*) - DZIEMBOWSKA, Inga - SUWALSKI, Piotr - ALEXANDER, Peta - BARBARO, Ryan P. - GAUDINO, Mario - DI MAURO, Michele - MAESSEN, Jos - LORUSSO, Roberto *Kor.*
Venoarterial Extracorporeal Membrane Oxygenation for Postcardiotomy Shock-Analysis of the Extracorporeal Life Support Organization Registry*

In: Critical Care Medicine, 2021, 49(7):1107-1117, 11 s. ISSN 0090-3493

IF = 7.598 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: OBJECTIVES: Refractory postcardiotomy cardiogenic shock complicating cardiac surgery yields nearly 100% mortality when untreated. Use of venoarterial extracorporeal membrane oxygenation for postcardiotomy cardiogenic shock has increased worldwide recently. The aim of the current analysis was to outline the trends in use, changing patient profiles, and in-hospital outcomes including complications in patients undergoing venoarterial extracorporeal membrane oxygenation for postcardiotomy cardiogenic shock. DESIGN: Analysis of extracorporeal life support organization registry from January 2010 to December 2018. SETTING: Multicenter worldwide registry. PATIENTS: Seven-thousand one-hundred eighty-five patients supported with venoarterial extracorporeal membrane oxygenation for postcardiotomy cardiogenic shock. INTERVENTIONS: Venoarterial extracorporeal membrane oxygenation. MEASUREMENTS AND MAIN RESULTS: Hospital death, weaning from extracorporeal membrane

oxygenation, hospital complications. Mortality predictors were assessed by multivariable logistic regression. Propensity score matching was performed for comparison of peripheral and central cannulation for extracorporeal membrane oxygenation. A significant trend toward more extracorporeal membrane oxygenation use in recent years (coefficient, 0.009; $p < 0.001$) was found. Mean age was 56.3 +/- 14.9 years and significantly increased over time (coefficient, 0.513; $p < 0.001$). Most commonly, venoarterial extracorporeal membrane oxygenation was instituted after coronary artery bypass surgery (26.8%) and valvular surgery (25.6%), followed by heart transplantation (20.7%). Overall, successful extracorporeal membrane oxygenation weaning was possible in 4,520 cases (56.4%), and survival to hospital discharge was achieved in 41.7% of cases. In-hospital mortality rates remained constant over time (coefficient, -8.775; $p = 0.682$), whereas complication rates were significantly reduced (coefficient, -0.009; $p = 0.003$). Higher mortality was observed after coronary artery bypass surgery (65.4%), combined coronary artery bypass surgery with valve (68.4%), and aortic (69.6%) procedures than other indications. Lower mortality rates were observed in heart transplantation recipients (46.0%). Age ($p < 0.001$), central cannulation ($p < 0.001$), and occurrence of complications while on extracorporeal membrane oxygenation were independently associated with poorer prognosis. **CONCLUSIONS:** The analysis confirmed increased use of venoarterial extracorporeal membrane oxygenation for postcardiotomy cardiogenic shock. Mortality rates remained relatively constant over time despite a decrease in complications, in the setting of supporting older patients. **Klíč. slova:** extracorporeal life support; extracorporeal membrane oxygenation; postcardiotomy cardiogenic shock

WoS:[000664035700032](#) Scopus:[2-s2.0-85106580078](#) PubMed:[33729722](#)
doi:[10.1097/CCM.0000000000004922](#)

590650, kazuistika / RIV22: 1.LF NE / RIV22: VFN NE

KUCHYNKA, Petr (1.LF/520, VFN/N202) - PALEČEK, Tomáš (1.LF/520, VFN/N202) *Kor.* - ŠOTOLOVÁ, Iveta (1.LF/520, VFN/N202) - MAŠEK, Martin (1.LF/620, VFN/N249) - LAMBERT, Lukáš (1.LF/620, VFN/N249)

Dystrophic calcification of the interventricular septum mimicking cardiac tumour and role of multimodality imaging.

In: European Heart Journal: Cardiovascular Imaging, 2021, 22(5):e20-e20, 1 s. ISSN 2047-2404
IF = 6.875 (2020)

Primární UK obor: Kardiologie

Anotace: Myocardial calcifications represent a rare type of myocardial pathology with a wide range of imaging appearances, from focal deposits to diffuse myocardial involvement. Two types of myocardial calcifications are usually recognized. Dystrophic calcifications represent the sequelae of local tissue damage like degeneration or necrosis.

Klíč. slova: Dystrophic; calcification; interventricular; septum; mimicking; cardiac; tumour; role; multimodality; imaging

WoS:[000661522100008](#) Scopus:[2-s2.0-85102282194](#) PubMed:[32888027](#) doi:[10.1093/ehjci/jeaa248](#)

602877, původní článek / RIV22: 1.LF ANO

SEDLÁČEK, Kamil (FNHK/IKK, LFHK/IKK) *Kor.* - JANSOVÁ, Helena - VANČURA, Vlastimil (FNP/KARD) - GRIECO, Domenico - KAUTZNER, Josef - WICHTERLE, Dan (1.LF/520)

Simple electrophysiological predictor of QRS change induced by cardiac resynchronization therapy: A novel marker of complete left bundle branch block.

In: Heart Rhythm, 2021, 18(10):1717-1723, 7 s. ISSN 1547-5271
IF = 6.343 (2020)

Financování: I-FNHK; I-LFHK; V-1LF; I-FNP-05;

Primární UK obor: Kardiologie

Anotace: BACKGROUND QRS complex shortening by cardiac resynchronization therapy (CRT) has been associated with improved outcomes. OBJECTIVE We hypothesized that the absence of QRS duration (QRSd) prolongation by right ventricular mid-septal pacing (RVP) may indicate complete left bundle branch block (cLBBB). METHODS We prospectively collected 12-lead surface electrocardiograms (ECGs) and intracardiac electrograms during CRT implant procedures. Digital recordings were edited and manually measured. The outcome measure was a change in QRSd induced by CRT (delta CRT). Several outcome predictors were investigated: native QRSd, cLBBB (by using Strauss criteria), interval between the onset of

the QRS complex and the local left ventricular electrogram (Q-LV), and a newly proposed index defined by the difference between RVP and native QRSd (delta RVP). RESULTS One hundred thirty-three consecutive patients were included in the study. Delta RVP was 27.6 ± 2.5 ms, and delta CRT was -14 ± 28 ms. Delta CRT correlated with native QRSd ($r = -0.65$), with the presence of ECG-based cLBBB ($r = -0.40$), with Q-LV ($r = -0.68$), and with delta RVP ($r = 0.72$) ($P < .00001$ for all correlations). In multivariable analysis, delta CRT was most strongly associated with delta RVP ($P < .00001$), followed by native QRSd and Q-LV, while ECG-based cLBBB became a nonsignificant factor. CONCLUSION Baseline QRSd, delta RVP, and LV electrical lead position (Q-LV) represent strong independent predictors of ECG response to CRT. The absence of QRSd prolongation by RVP may serve as an alternative and more specific marker of cLBBB. Delta RVP correlates strongly with the CRT effect on QRSd and outperforms the predictive value of ECG-based cLBBB.

Klíč. slova: Cardiac resynchronization therapy; Heart failure; Left bundle branch block; Electrocardiography; Outcome predictors

WoS:[000703169000019](#) Scopus:[2-s2.0-85111245324](#) PubMed:[34098086](#) doi:[10.1016/j.hrthm.2021.05.033](#)

592838, původní článek / RIV22: 1.LF ANO

KLEISSNER, Martin (3.LF/3.LF) *Kor.* - ŠRAMKO, Marek (1.LF/520) - KOHOUTEK, Jan - KAUTZNER, Josef - KETTNER, Jiří

Serum S100 Protein Is a Reliable Predictor of Brain Injury After Out-of-Hospital Cardiac Arrest: A Cohort Study.

In: Frontiers in Cardiovascular Medicine [online], 2021, 8(February):624825, 9 s. ISSN 2297-055X IF = 6.050 (2020)

Financování: V-1LF; V-3LF;

Primární UK obor: Kardiologie

Anotace: Purpose: To evaluate serum S100 protein at hospital admission and after 48 h in early neuroprognostication of comatose survivors of out-of-hospital cardiac arrest (OHCA). Methods: The study included 48 consecutive patients after OHCA, who survived for at least 72 h after the event. The patients were divided based on their best cerebral performance category (CPC) achieved over a 30 day follow-up period: favorable neurological outcome (CPC 1-2) vs. unfavorable neurological outcome (CPC 3-4). Predictors of an unfavorable neurological outcome were identified by multivariable regression analysis. Analysis of the receiver operating characteristic curve (ROC) was used to determine the cut-off value for S100, having a 0% false-positive prediction rate. Results: Of the 48 patients, 30 (63%) had a favorable and 18 (38%) had an unfavorable neurological outcome. Eleven patients (23%) died over the 30 day follow-up. Increased S100 levels at 48 h after OHCA, but not the baseline S100 levels, were independently associated with unfavorable neurological outcome, with an area under the ROC curve of 0.85 (confidence interval 0.74-0.96). A 48 h S100 value ≥ 0.37 $\mu\text{g/L}$ had a specificity of 100% and sensitivity of 39% in predicting an unfavorable 30 day neurological outcome. Conclusion: This study showed that S100 values assessed 48 h after an OHCA could independently predict an unfavorable neurological outcome at 30 days.

Klíč. slova: acute cardiac care; brain injury; cardiac arrest; hypothermia; neuroprognostication; prehospital resuscitation

WoS:[000620585700001](#) PubMed:[33634170](#) doi:[10.3389/fcvm.2021.624825](#)

595673, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

BANACH, Maciej - GAITA, Dan - HALUZIK, Martin - JANEZ, Andrej - KAMENOV, Zdravko - KEMPLER, Peter - LALIC, Nebojsa - LINHART, Aleš (1.LF/520, VFN/N202) - MIKHAILIDIS, Dimitri P. - NOCON, Aleksandra *Kor.* - NUNES, Jose Silva - PAPANAS, Nikolaos - RAPOSO, Joao Filipe - RIZZO, Manfredi - STOIAN, Anca Pantea

Adoption of the ADA/EASD guidelines in 10 Eastern and Southern European countries: Physician survey and good clinical practice recommendations from an international expert panel.

In: Diabetes Research and Clinical Practice, 2021, 172(February):108535, 11 s. ISSN 0168-8227 IF = 5.602 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Aims: Evidence from cardiovascular outcomes trials (CVOTs) of glucagon-like peptide-1 receptor agonists and sodium-glucose cotransporter-2 inhibitors was reflected in the most recent guidelines from the

American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). The aim of the present study was to assess the adoption of the ADA/EASD guidelines in a convenience sample of physicians from Eastern and Southern Europe, the barriers to the implementation of these guidelines and the measures needed to facilitate their implementation. Methods: Attendees at two international diabetes conferences could volunteer to respond to a fully anonymous survey. Responses were analysed descriptively and a panel of experts from around the region was consulted to interpret the survey results. Results: Responses (n = 96) from 10 countries were analysed. Most participants (63.4%) considered the ADA/EASD guidelines fundamental to their practice. All respondents saw the value of the CVOT-based ADA/EASD recommendations and 77 & ndash;80% generally implemented them. Measures suggested to improve adherence to the ADA/EASD guidelines included aligning reimbursement policy with the guidelines (54.4%), publishing guidelines in a simple and concise form (42.4%) and translating guidelines into local languages (33.3%). Conclusions: Aligning reimbursement with recent evidence and providing short summaries of the ADA/EASD guidelines in local languages could facilitate physician adherence. (c) 2020 The Author. Published by Elsevier B.V. This is an open access article under the CC BY NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Klíč. slova: Type 2 diabetes; Clinical guidelines; Adherence; GLP-1RAs; SGLT2is

WoS:[000632553000007](https://www.scopus.com/search/form.do?latency=0&query=000632553000007) PubMed:[33189792](https://pubmed.ncbi.nlm.nih.gov/33189792/) doi:[10.1016/j.diabres.2020.108535](https://doi.org/10.1016/j.diabres.2020.108535)

603275, původní článek / RIV22: 1.LF ANO

ABDEL-KAFI, Saif - ŠRAMKO, Marek ([1.LF/520](#)) - OMARA, Sharif - DE RIVA, Marta - CVEK, Jakub - PEICHL, Petr - KAUTZNER, Josef - ZEPPENFELD, Katja *Kor.*

Accuracy of electroanatomical mapping-guided cardiac radiotherapy for ventricular tachycardia: pitfalls and solutions.

In: *Europace*, 2021, 23(12):1989-1997, 9 s. ISSN 1099-5129

IF = 5.214 (2020)

Financování: V-1LF;

Primární UK obor: Kardiologie

Anotace: Aims: To analyse and optimize the interobserver agreement for gross target volume (GTV) delineation on cardiac computed tomography (CCT) based on electroanatomical mapping (EAM) data acquired to guide radiotherapy for ventricular tachycardia (VT). Methods and results: Electroanatomical mapping data were exported and merged with the segmented CCT using manual registration by two observers. A GTV was created by both observers for predefined left ventricular (LV) areas based on preselected endocardial EAM points indicating a two-dimensional (2D) surface area of interest. The influence of (interobserver) registration accuracy and availability of EAM data on the final GTV and 2D surface location within each LV area was evaluated. The median distance between the CCT and EAM after registration was 2.7 mm, 95th percentile 6.2 mm for observer #1 and 3.0 mm, 95th percentile 7.6 mm for observer #2 (P = 0.9). Created GTVs were significantly different (8 vs. 19 mL) with lowest GTV overlap (35%) for lateral wall target areas. Similarly, the highest shift between 2D surfaces was observed for the septal LV (6.4 mm). The optimal surface registration accuracy (2.6 mm) and interobserver agreement (Δ interobserver EAM surface registration 1.3 mm) was achieved if at least three cardiac chambers were mapped, including high-quality endocardial LV EAM. Conclusion: Detailed EAM of at least three chambers allows for accurate co-registration of EAM data with CCT and high interobserver agreement to guide radiotherapy of VT. However, the substrate location should be taken in consideration when creating a treatment volume margin.

Klíč. slova: Stereotactic body radiotherapy; Ventricular tachycardia; Cardiac radiotherapy; GTV accuracy; Co-registration accuracy; Electroanatomical voltage mapping; Treatment

WoS:[000733371300014](https://www.scopus.com/search/form.do?latency=0&query=000733371300014) PubMed:[34524422](https://pubmed.ncbi.nlm.nih.gov/34524422/) doi:[10.1093/europace/euab195](https://doi.org/10.1093/europace/euab195)

594972, jiný článek / RIV22: 1.LF NE

KREUTZ, Reinhold *Kor.* - CÍFKOVÁ, Renata ([1.LF/520](#)) - KJELDSEN, Sverre E. - NARKIEWICZ, Krzysztof - BURNIER, Michel - OPARIL, Suzanne - MANCIA, Giuseppe

In Memoriam: Jiri Widimsky Sr. 1925-2020.

In: *Journal of Hypertension*, 2021, 39(2):386-388, 3 s. ISSN 0263-6352

IF = 4.844 (2020)

Primární UK obor: Kardiologie

Anotace: The sad news came to us of the passing of Jiří Widimský Sr. on 11 November 2020 at the age of 95 years.

WoS:[000612619500032](#) PubMed:[33394865](#) doi:[10.1097/HJH.0000000000002768](#)

595670, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

MORENO-MARTINEZ, D. - AGUIAR, P. - AURAY-BLAIS, C. - BECK, M. - BICHET, D. G. - BURLINA, A. - COLE, D. - ELLIOTT, P. - FELDT-RASMUSSEN, U. - FERIOZZI, S. - FLETCHER, J. - GIUGLIANI, R. - JOVANOVIĆ, A. - KAMPMANN, C. - LANGEVELD, M. - LIDOVE, O. - LINHART, Aleš (*1.LF/520*, *VFN/N202*) - MAUER, M. - MOON, J. C. - MUIR, A. - NOWAK, A. - OLIVEIRA, J. P. - ORTIZ, A. - PINTOS-MORELL, G. - POLITEI, J. - ROZENFELD, P. - SCHIFFMANN, R. - SVARSTAD, E. - TALBOT, A. S. - THOMAS, M. - TONDEL, C. - WARNOCK, D. - WEST, M. L. - HUGHES, D. A.

Kor.

Standardising clinical outcomes measures for adult clinical trials in Fabry disease: A global Delphi consensus.

In: Molecular Genetics and Metabolism, 2021, 132(4):234-243, 10 s. ISSN 1096-7192

IF = 4.797 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Background: Recent years have witnessed a considerable increase in clinical trials of new investigational agents for Fabry disease (FD). Several trials investigating different agents are currently in progress; however, lack of standardisation results in challenges to interpretation and comparison. To facilitate the standardisation of investigational programs, we have developed a common framework for future clinical trials in FD. Methods and findings: A broad consensus regarding clinical outcomes and ways to measure them was obtained via the Delphi methodology. 35 FD clinical experts from 4 continents, representing 3389 FD patients, participated in 3 rounds of Delphi procedure. The aim was to reach a consensus regarding clinical trial design, best treatment comparator, clinical outcomes, measurement of those clinical outcomes and inclusion and exclusion criteria. Consensus results of this initiative included: the selection of the adaptive clinical trial as the ideal study design and agalsidase beta as ideal comparator treatment due to its longstanding use in FD. Renal and cardiac outcomes, such as glomerular filtration rate, proteinuria and left ventricular mass index, were prioritised, whereas neurological outcomes including cerebrovascular and white matter lesions were dismissed as a primary or secondary outcome measure. Besides, there was a consensus regarding the importance of patient-related outcomes such as general quality of life, pain, and gastrointestinal symptoms. Also, unity about lysoGb3 and Gb3 tissue deposits as useful surrogate markers of the disease was obtained. The group recognised that cardiac Ti mapping still has potential but requires further development before its widespread introduction in clinical trials. Finally, patients with end-stage renal disease or renal transplant should be excluded unless a particular group for them is created inside the clinical trial. Conclusion: This consensus will help to shape the future of clinical trials in FD. We note that the FDA has, coincidentally, recently published draft guidelines on clinical trials in FD and welcome this contribution.

Klíč. slova: Lysosomal storage disorders; Fabry disease; Clinical trial; Delphi consensus; Clinical outcomes; Inherited metabolic disorders

WoS:[000631172600005](#) Scopus:[2-s2.0-85101623383](#) PubMed:[33642210](#) doi:[10.1016/j.ymgme.2021.02.001](#)

599077, *původní článek* / RIV22: 1.LF ANO

WOHLFAHRT, Peter (*1.LF/520*) *Kor.* - JENČA, Dominik (*3.LF/3.LF*) - MELENOVSKÝ, Vojtěch - FRANEKOVÁ, Janka (*3.LF/Imunologie*) - JABOR, Antonín - ŠRAMKO, Marek - STANĚK, Vladimír - ŽELÍZKO, Michael - POLEDNE, Rudolf - PÍTHA, Jan - ADÁMKOVÁ, Věra - KAUTZNER, Josef ***Very low lipoprotein(a) and increased mortality risk after myocardial infarction.***

In: European Journal of Internal Medicine, 2021, 91(September):33-39, 7 s. ISSN 0953-6205

IF = 4.624 (2020)

Financování: V-1LF; V-3LF;

Primární UK obor: Kardiologie

Anotace: Background: Inconclusive data exist on risk associated with Lp(a) in patients after myocardial infarction (MI). Aims of the present study were to evaluate the association of Lp(a) level with total mortality and recurrent cardiovascular events. Design and methods: Single center prospective registry of consecutive

patients hospitalized for acute myocardial infarction between June 2017 and June 2020 at a large tertiary cardiac center with available blood samples drawn <24h of admission. Results: Data from 851 consecutive patients hospitalized for MI were evaluated. During the median follow-up of 19 months (interquartile range 10-27), 58 (6.8%) patients died. Nonlinear modelling revealed a U-shaped association between Lp(a) and total mortality risk. Compared to patients with Lp(a) ranging between 10-30 nmol/L and after multivariate adjustment, total mortality risk was increased both in patients with Lp(a) 7 nmol/L (hazard ratio (HR) 4.08, 95% confidence interval (CI) 1.72-9.68) and Lp(a) 125 nmol/L (HR 2.92, 95% CI 1.16-7.37), respectively. Similarly, the risk of combined endpoint of acute coronary syndrome recurrence or cardiovascular mortality was increased both in patients with low (sub-HR 2.60, 95% CI 1.33-5.08) and high (sub-HR 2.10, 95% CI 1.00-4.39) Lp(a). Adjustment for heart failure signs at the time of hospitalization weakened the association with total mortality and recurrent cardiovascular events. Conclusions: In the present analysis, both high and low concentrations of Lp(a) were associated with an increased risk of total mortality and recurrent cardiovascular events after MI. The excess of mortality associated with Lp(a) was partially attributable to more prevalent heart failure.

Klíč. slova: Myocardial infarction; Cholesterol; Lipoprotein(a); Secondary prevention

WoS:[000690383400007](#) Scopus:[2-s2.0-85105484387](#) PubMed:[33972150](#) doi:[10.1016/j.ejim.2021.04.012](#)

595688, *původní článek* / RIV22: 1.LF ANO

JUNG, Susanne - KOLWELTER, Julie - BOSCH, Agnes - CÍFKOVÁ, Renata (*1.LF/520*) - HARAZNY, Joanna M. - OTT, Christian - ACHENBACH, Stephan - SCHMIEDER, Roland E. *Kor.*

Hypertrophic remodelling of retinal arterioles in patients with congestive heart failure.

In: ESC Heart Failure [online], 2021, 8(3):1892-1900, 9 s. ISSN 2055-5822

IF = 4.411 (2020)

Financování: [NV15-27109A](#);

Primární UK obor: Kardiologie

Anotace: Aims: Analysis of microvascular parameters in the retinal circulation-known to reflect those in the systemic circulation-allows us to differentiate between eutrophic and hypertrophic remodelling of small arteries. This study aimed to examine microvascular changes in patients with congestive heart failure (CHF) and reduced as well as mid-range ejection fraction. Methods and results: Forty subjects with CHF underwent measurement of retinal capillary flow (RCF), wall-to-lumen ratio (WLR), vessel and lumen diameter, wall thickness, and wall cross-sectional area (WCSA) of retinal arterioles of the right eye by scanning laser Doppler flowmetry (SLDF). Applying a matched pair approach, we compared this group with reference values of age-matched controls from a random sample in the population of Pilsen, Czech Republic. There was no significant difference in RCF and WLR between the groups (RCF: P = 0.513; WLR: P = 0.106). In contrast, wall thickness and WCSA, indicators of hypertrophic remodelling, were higher in CHF subjects (WT: 15.0 +- 4.2 vs. 12.7 +- 4.2 µm, P = 0.021; WCSA: 4437.6 +- 1314.5 vs. 3615.9 +- 1567.8 µm², P = 0.014). Similarly, vessel (109.4 +- 11.1 vs. 100.5 +- 14.4 µm, P = 0.002) and lumen diameter (79.0 +- 7.9 vs. 75.2 +- 8.5 µm, P = 0.009) were increased in CHF. Conclusions: In CHF subjects, we observed hypertrophic remodelling of retinal arterioles indicative of similar changes of small resistance arteries in the systemic circulation. Microvascular structure and function assessed by SLDF may thereby represent a useful, non-invasive method for monitoring of microvascular damage in patients with CHF and may offer innovative treatment targets for new CHF therapies.

Klíč. slova: Hypertrophic remodelling; Retina; Heart failure; Microvasculature

WoS:[000634928000001](#) Scopus:[2-s2.0-85103429578](#) PubMed:[33787089](#) doi:[10.1002/ehf2.13334](#)

595552, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

MALÍK, Jan (*1.LF/530, VFN/N203*) *Kor.* - VALERIÁNOVÁ, Anna (*1.LF/530, VFN/N203*) - TUKA, Vladimír (*1.LF/520, VFN/N203*) - TRACHTA, Pavel (*1.LF/530, VFN/N203*) - BEDNÁŘOVÁ, Vladimíra (*1.LF/511, VFN/N205*) - HRUŠKOVÁ, Zdenka (*1.LF/511, VFN/N205*) - SLAVÍKOVÁ, Marcela (*VFN/N723*) - ROSNER, Mitchell H. - TESAŘ, Vladimír (*1.LF/511, VFN/N205*)

The effect of high-flow arteriovenous fistulas on systemic haemodynamics and brain oxygenation.

In: ESC Heart Failure [online], 2021, 8(3):2165-2171, 7 s. ISSN 2055-5822

IF = 4.411 (2020)

Financování: [V-1LF](#); [NV17-31796A](#);

Primární UK obor: Kardiologie

Anotace: Aims: High-flow arteriovenous fistula (AVF) for haemodialysis leads to profound haemodynamic changes and sometimes to heart failure (HF). Cardiac output (CO) is divided between the AVF and body tissues. The term effective CO (CO_{ef}) represents the difference between CO and AVF flow volume (Q_a) and better characterizes the altered haemodynamics that may result in organ hypoxia. We investigated the effects of Q_a reduction on systemic haemodynamics and on brain oxygenation. Methods and results: This is a single-centre interventional study. Twenty-six patients on chronic haemodialysis with high Q_a (>1500 mL/min) were indicated for surgical Q_a reduction for HF symptoms and/or signs of structural heart disease on echocardiography. The included patients underwent three sets of examinations: at 4 months and then 2 days prior and 6 weeks post-surgical procedure. Clinical status, echocardiographical haemodynamic assessment, Q_a, and brain oximetry were recorded. All parameters remained stable from selection to inclusion. After the procedure, Q_a decreased from 3.0 ± 1.4 to 1.3 ± 0.5 L/min, P < 0.00001, CO from 7.8 ± 1.9 to 6.6 ± 1.5 L/min, P = 0.0002, but CO_{ef} increased from 4.6 ± 1.4 to 5.3 ± 1.4 L/min, P = 0.036. Brain tissue oxygen saturation increased from 56 ± 11% to 60 ± 9%, P = 0.001. Conclusions: Q_a reduction led to increased CO_{ef}. This was explained by a decreased proportion of CO running through the AVF in patients with Q_a > 2.0 L/min. These observations were mirrored by higher brain oxygenation and might explain HF symptoms and improved haemodynamics even in asymptomatic high Q_a patients.

Klíč. slova: High-output heart failure; Arteriovenous fistula; Effective cardiac output; Brain oximetry
WoS:[000631526200001](#) Scopus:[2-s2.0-85102875270](#) PubMed:[33755355](#) doi:[10.1002/ehf2.13305](#)

599932, *původní článek* / RIV22: VFN ANO

TABORSKY, Milos - SKALA, Tomas *Kor.* - LAZAROVA, Marie - AIGLOVA, Renata - SPINAR, Jindrich - SPINAROVA, Lenka - VITOVEC, Jiri - KAUTZNER, Josef - MELENOVSKY, Vojtech - MALEK, Filip - DUSEK, Ladislav - JARKOVSKY, Jiri - BENESOVA, Klara - VICHA, Marek - LINHART, Aleš (*VFN/N202*)

Trends in the treatment and survival of heart failure patients: a nationwide population-based study in the Czech Republic.

In: ESC Heart Failure [online], 2021, 8(5):3800-3808, 9 s. ISSN 2055-5822

IF = 4.411 (2020)

Financování: V-VFN;

Primární UK obor: *Kardiologie*

Anotace: Aims: A retrospective nationwide observational analysis of diagnoses, procedures, and treatment reported to the Czech National Registry of Reimbursed Health Services between 2012 and 2018. Methods and results: Prevalence of heart failure (HF) patients increased from 176 496 (1679.4 per 100 000 population) in 2012 to 285 745 (2689.0 per 100 000 population) patients in 2018 (mean age 74.4 ± 12.8 years). In the last years, a stable incidence of HF patients was observed (544 per 100 000 population in 2016 vs. 551 per 100 000 population in 2018; P = 0.310). Mortality rate decreased from 20.55% in 2012 to 15.89% in 2018. The number of hospitalized patients remained similar (318.2 per 100 000 population in 2012 vs. 311.8 per 100 000 population in 2018; P = 0.479). The most used drugs were diuretics (173 295; 60.6%) and beta-blockers (178 823; 62.6%), followed by angiotensin-converting enzyme inhibitors/angiotensin II receptor blockers (angiotensin-converting enzyme inhibitors 120.581; 42.2%; angiotensin II receptor blockers 47 216; 16.5%). Even though the whole number of implanted devices in HF patients increased steadily (from 25 205 in 2012 to 45 363 in 2018), the prevalence of all devices (pacemakers and defibrillators) in the HF patients remained about the same (14.3% in 2012; 15.9% in 2018). Conclusions: The study included all patients with HF in the Czech Republic. These are the first nationwide data of HF epidemiology in the Eastern bloc. The incidence of HF remains stable in the last years. Due to aging of the population, the prevalence of HF significantly increased in the last 6 years. Despite a continuous increase in the prevalence of HF and a suboptimal utilization of its pharmacological therapy, mortality decreased, and the number of hospitalized patients remained the same.

Klíč. slova: Heart failure; Incidence; Prevalence; Treatment; European Union; Czech Republic

WoS:[000686108700001](#) Scopus:[2-s2.0-85112762202](#) PubMed:[34409755](#) doi:[10.1002/ehf2.13559](#)

596181, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

GIMENO, Juan R. *Kor.* - ELLIOTT, Perry M. - TAVAZZI, Luigi - TENDERA, Michal - KASKI, Juan P. - LAROCHE, Cecile - BARRIALES-VILLA, Roberto - SEFEROVIC, Petar - BIAGINI, Elena - ARBUSTINI, Eloisa - LOPES, Luis R. - LINHART, Aleš (*1.LF/520*, *VFN/N202*) - MOGENSEN, Jens -

HAGEGE, Albert - ESPINOSA, Maria A. - SAAD, Aly - MAGGIONI, Aldo P. - CAFORIO, Alida L. P. - CHARRON, Philippe H

Prospective follow-up in various subtypes of cardiomyopathies: insights from the ESC EORP Cardiomyopathy Registry.

In: European Heart Journal. Quality of Care and Clinical Outcomes, 2021, 7(2):134-142, 9 s. ISSN 2058-5225

IF = 4.370 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Aims: The European Society of Cardiology (ESC) European Observational Research Programme (EORP) Cardiomyopathy Registry is a prospective multinational registry of consecutive patients with cardiomyopathies. The objective of this report is to describe the short-term outcomes of adult patients (≥ 18 years old). Methods and results: Out of 3208 patients recruited, follow-up data at 1 year were obtained in 2713 patients (84.6%) [1420 with hypertrophic (HCM); 1105 dilated (DCM); 128 arrhythmogenic right ventricular (ARVC); and 60 restrictive (RCM) cardiomyopathies]. Improvement of symptoms (dyspnoea, chest pain, and palpitations) was globally observed over time ($P < 0.05$ for each). Additional invasive procedures were performed: prophylactic implantation of implantable cardioverter-defibrillator (ICD) (5.2%), pacemaker (1.2%), heart transplant (1.1%), ablation for atrial or ventricular arrhythmia (0.5% and 0.1%). Patients with atrial fibrillation increased from 28.7% to 32.2% of the cohort. Ventricular arrhythmias (VF/ventricular tachycardias) in ICD carriers (primary prevention) at 1 year were more frequent in ARVC, then in DCM, HCM, and RCM (10.3%, 8.2%, 7.5%, and 0%, respectively). Major cardiovascular events (MACE) occurred in 29.3% of RCM, 10.5% of DCM, 5.3% of HCM, and 3.9% of ARVC ($P < 0.001$). MACE were more frequent in index patients compared to relatives (10.8% vs. 4.4%, $P < 0.001$), more frequent in East Europe centres (13.1%) and least common in South Europe (5.3%) ($P < 0.001$). Subtype of cardiomyopathy, geographical region, and proband were predictors of MACE on multivariable analysis. Conclusions: Despite symptomatic improvement, patients with cardiomyopathies remain prone to major clinical events in the short term. Outcomes were different not only according to cardiomyopathy subtypes but also in relatives vs. index patients, and according to European regions.

Klíč. slova: Cardiomyopathy; Registry; Prognosis; MACE

WoS:[000637042000006](#) Scopus:[2-s2.0-85102964958](#) PubMed:[33035297](#) doi:[10.1093/ehjqcco/qcaa075](#)

601751, původní článek / RIV22: 1.LF ANO

HLINOMAZ, Ota - MOŤOVSKÁ, Zuzana (3.LF/Kardiologie) *Kor.* - KNOT, Jiří (3.LF/Kardiologie) - MIKLÍK, Roman - SABBAAH, Mahmoud - HROMÁDKA, Milan (FNP/KARD, LFPI/KK) - VARVAŘOVSKÝ, Ivo - DUŠEK, Jaroslav (FNHK/IKK) - SVOBODA, Michal - TOUŠEK, František - MAJTAN, Bohumil - ŠIMEK, Stanislav (1.LF/150, 1.LF/520) - BRANNY, Marian - JARKOVSKÝ, Jiří *Stent Selection for Primary Angioplasty and Outcomes in the Era of Potent Antiplatelets. Data from the Multicenter Randomized Prague-18 Trial.*

In: Journal of Clinical Medicine [online], 2021, 10(21):5103, 12 s. ISSN 2077-0383

IF = 4.242 (2020)

Financování: I-LFP; I-FNHK; Q38; I-FNP-05;

Primární UK obor: Kardiologie

Anotace: Drug-eluting stents (DES) are the recommended stents for primary percutaneous coronary intervention (PCI). This study aimed to determine why interventional cardiologists used non-DES and how it influenced patient prognoses. The efficacy and safety outcomes of the different stents were also compared in patients treated with either prasugrel or ticagrelor. Of the PRAGUE-18 study patients, 749 (67.4%) were treated with DES, 296 (26.6%) with bare-metal stents (BMS), and 66 (5.9%) with bioabsorbable vascular scaffold/stents (BVS) between 2013 and 2016. Cardiogenic shock at presentation, left main coronary artery disease, especially as the culprit lesion, and right coronary artery stenosis were the reasons for selecting a BMS. The incidence of the primary composite net-clinical endpoint (EP) (death, nonfatal myocardial infarction, stroke, serious bleeding, or revascularization) at seven days was 2.5% vs. 6.3% and 3.0% in the DES, vs. with BMS and BVS, respectively (HR 2.7; 95% CI 1.419-5.15, $p = 0.002$ for BMS vs. DES and 1.25 (0.29-5.39) $p = 0.76$ for BVS vs. DES). Patients with BMS were at higher risk of death at 30 days (HR 2.20; 95% CI 1.01-4.76; for BMS vs. DES, $p = 0.045$) and at one year (HR 2.1; 95% CI 1.19-3.69; $p = 0.01$); they also had a higher composite of cardiac death, reinfarction, and stroke (HR 1.66; 95% CI 1.0-

2.74; $p = 0.047$) at one year. BMS were associated with a significantly higher rate of primary EP whether treated with prasugrel or ticagrelor. In conclusion, patients with the highest initial risk profile were preferably treated with BMS over BVS. BMS were associated with a significantly higher rate of cardiovascular events whether treated with prasugrel or ticagrelor.

Klíč. slova: acute myocardial infarction; bare-metal stent; bioresorbable scaffolds; drug-eluting stent; prasugrel; primary angioplasty; ticagrelor

WoS:[000718744300001](https://www.scopus.com/search/form.do?query=2-s2.0-85118214055) Scopus:[2-s2.0-85118214055](https://pubmed.ncbi.nlm.nih.gov/34768623/) PubMed:[34768623](https://pubmed.ncbi.nlm.nih.gov/34768623/) doi:[10.3390/jcm10215103](https://doi.org/10.3390/jcm10215103)

597780, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

REKOVÁ, Petra (1.LF/600, VFN/N212) - DOSTÁLOVÁ, Gabriela (1.LF/520, VFN/N202) - KEMLINK, David (1.LF/600, VFN/N212) *Kor.* - PAULASOVÁ - SCHWABOVÁ, Jaroslava (2.LF/NK, FNM/2118, FNM/2119) - DUBSKÁ, Zora (1.LF/750, VFN/N238) - VANĚČKOVÁ, Manuela (1.LF/620, VFN/N249) - MAŠEK, Martin (1.LF/620, VFN/N249) - KODET, Ondřej (1.LF/110, 1.LF/131, 1.LF/580, VFN/N237) - POUPĚTOVÁ, Helena (1.LF/650, VFN/N216) - MAZUROVÁ, Stella (1.LF/650, VFN/N216) - RAJDOVA, A. - VLCKOVA, E. - TÁBOŘÍKOVÁ, A. - FAFEJTOVÁ, Š. - NEVSIMALOVA, M. - LINHART, Aleš (1.LF/520, VFN/N202) - TOMEK, Aleš (2.LF/NK, FNM/2118)

Detailed phenotype of GLA variants identified by the nationwide neurological screening of stroke patients in the Czech Republic.

In: Journal of Clinical Medicine [online], 2021, 10(16):3543, 17 s. ISSN 2077-0383

IF = 4.242 (2020)

Financování: RVO-VFN64165; I-FNM; V-1LF; Q27; Q33;

Primární UK obor: Neurozobrazování

Anotace: Fabry disease (FD) is a rare X-linked disorder of glycosphingolipid metabolism caused by pathogenic variants within the alpha-galactosidase A (GLA) gene, often leading to neurological manifestations including stroke. Multiple screening programs seeking GLA variants among stroke survivors lacked detailed phenotype description, making the interpretation of the detected variant's pathogenicity difficult. Here, we describe detailed clinical characteristics of GLA variant carriers identified by a nationwide stroke screening program in the Czech Republic. A total of 23 individuals with 8 different GLA variants were included in the study. A comprehensive diagnostic workup was performed by a team of FD specialists. The investigation led to the suggestion of phenotype reclassification for the G325S mutation from late-onset to classical. A novel variant R30K was found and was classified as a variant of unknown significance (VUS). The typical manifestation in our FD patients was a stroke occurring in the posterior circulation with an accompanying pathological finding in the cerebrospinal fluid. Moreover, we confirmed that cornea verticillata is typically associated with classical variants. Our findings underline the importance of detailed phenotype description and data sharing in the correct identification of pathogenicity of gene variants detected by high-risk-population screening programs.

Klíč. slova: Data sharing; Fabry disease; GLA gene variants; Phenotype; Screening programs; Stroke

WoS:[000690449900001](https://www.scopus.com/search/form.do?query=2-s2.0-85112153199) Scopus:[2-s2.0-85112153199](https://pubmed.ncbi.nlm.nih.gov/34441839/) PubMed:[34441839](https://pubmed.ncbi.nlm.nih.gov/34441839/) doi:[10.3390/jcm10163543](https://doi.org/10.3390/jcm10163543)

591419, *původní článek* / RIV22: 1.LF ANO

MAYER, Otto (FNP/2.IK, LFPI/2.IK, LFPI/BC) *Kor.* - BRUTHANS, Jan (LFPI/2.IK) - SEIDLEROVÁ, Jitka (FNP/2.IK, LFPI/2.IK, LFPI/BC) - KARNOSOVÁ, Petra (FNP/2.IK, LFPI/2.IK, LFPI/BC) - MATEŘÁNKOVÁ, Markéta (FNP/2.IK, LFPI/2.IK) - GELŽINSKÝ, Július (FNP/2.IK, LFPI/2.IK, LFPI/BC) - RYCHECKÁ, Martina (LFPI/2.IK) - OPATRŇÝ, Jan (FNP/KARD) - WOHLFAHRT, Peter - KUČERA, Radek (FNP/OID) - TREFIL, Ladislav (FNP/ÚKBH) - CÍFKOVÁ, Renata (1.LF/520) - FILIPOVSKÝ, Jan (FNP/2.IK, LFPI/2.IK, LFPI/BC) - VERMEER, Cees

The coincidence of low vitamin K status and high expression of growth differentiation factor 15 may indicate increased mortality risk in stable coronary heart disease patients.

In: Nutrition, Metabolism & Cardiovascular Diseases, 2021, 31(2):540-551, 12 s. ISSN 0939-4753

IF = 4.222 (2020)

Financování: I-FNP-51; Q39; NV17-29520A; SVV260537;

Primární UK obor: Kardiologie

Anotace: Matrix Gla protein (MGP) is a natural inhibitor of vascular calcification critically dependent on circulating vitamin K status. Growth differentiation factor 15 (GDF-15) is a regulatory cytokine mainly of the inflammatory and angiogenesis pathways, but potentially also involved in bone mineralization. We

sought to determine whether these two circulating biomarkers jointly influenced morbidity and mortality risk in patients with chronic coronary heart disease (CHD). 894 patients ≥ 6 months after myocardial infarction and/or coronary revascularization at baseline were followed in a prospective study. All-cause and cardiovascular mortality, non-fatal cardiovascular events (myocardial infarction, stroke, any revascularization), and hospitalization for heart failure (HF) were followed as outcomes. Desphospho-uncarboxylated MGP (dp-ucMGP) was used as a biomarker of vitamin K status. Both, increased concentrations of dp-ucMGP (≥ 884 pmol/L) and GDF-15 (≥ 1339 pg/mL) were identified as independent predictors of 5-year all-cause or cardiovascular mortality. However, their coincidence further increased mortality risk. The highest risk was observed in patients with high dp-ucMGP plus high GDF-15, not only when compared with those with "normal" concentrations of both biomarkers [HR 5.51 (95% CI 2.91-10.44), $p < 0.0001$ and 6.79 (95% CI 3.06-15.08), $p < 0.0001$ for all-cause and cardiovascular mortality, respectively], but even when compared with patients with only one factor increased. This pattern was less convincing with non-fatal cardiovascular events or hospitalization for HF. In conclusions, the individual coincidence of low vitamin K status (high dp-ucMGP) and high GDF-15 expression predicts poor survival of stable CHD patients.

Klíč. slova: matrix γ -carboxyglutamate protein (MGP); dp-ucMGP; all-cause death; cardiovascular death; non-fatal cardiovascular events; heart failure; EUROASPIRE

WoS: [000618872600022](https://doi.org/10.1016/j.numecd.2020.09.015) Scopus: [2-s2.0-85097058902](https://doi.org/10.1016/j.numecd.2020.09.015) doi: [10.1016/j.numecd.2020.09.015](https://doi.org/10.1016/j.numecd.2020.09.015)

596759, *původní článek* / RIV22: 1.LF ANO

DLOUHÁ, Dana - IVÁK, Peter (1.LF/690, 3.LF/FYZ3LF) *Kor.* - NETUKA, Ivan (1.LF/690) - NOVÁKOVÁ, Šárka - KOŇAŘÍK, Miroslav - TUČANOVÁ, Zuzana - LÁNSKÁ, Věra - HLAVÁČEK, Daniel (3.LF/3.LF) - WOHLFAHRT, Peter (1.LF/520) - HUBÁČEK, Jaroslav (1.LF/530) - PÍTHA, Jan *The effect of long-term left ventricular assist device support on flow-sensitive plasma microRNA levels.*

In: International Journal of Cardiology, 2021, 339(September):138-143, 6 s. ISSN 0167-5273

IF = 4.164 (2020)

Financování: V-1LF; V-3LF;

Primární UK obor: Kardiologie

Anotace: BACKGROUND: Implantation of current generation left ventricular assist devices (LVADs) in the treatment of end-stage heart failure (HF), not only improves HF symptoms and end-organ perfusion, but also leads to cellular and molecular responses, presumably in response to the continuous flow generated by these devices. MicroRNAs (miRNAs) are important post-transcriptional regulators of gene expression in multiple biological processes, including the pathogenesis of HF. In our study, we examined the influence of long-term LVAD support on changes in flow-sensitive miRNAs in plasma. MATERIALS AND METHODS: Blood samples from patients with end-stage heart failure (N = 33; age = 55.7 \pm 11.6 years) were collected before LVAD implantation and 3, 6, 9, and 12 months after implantation. Plasma levels of the flow-sensitive miRNAs; miR-10a, miR-10b, miR-146a, miR-146b, miR-663a, miR-663b, miR-21, miR-155, and miR-126 were measured using quantitative PCR. RESULTS: Increasing quantities of miR-126 ($P < 0.03$) and miR-146a ($P < 0.02$) was observed at each follow-up visit after LVAD implantation. A positive association between miR-155 and Belcaro score ($P < 0.04$) and an inverse correlation between miR-126 and endothelial function, measured as the reactive hyperemia index ($P < 0.05$), was observed. CONCLUSIONS: Our observations suggest that after LVAD implantation, low pulsatile flow up-regulates plasma levels of circulating flow-sensitive miRNAs, contributing to endothelial dysfunction and vascular remodeling.

Klíč. slova: Endothelial dysfunction; Left ventricular assist device; Plasma; miRNA

WoS: [000722892200037](https://doi.org/10.1016/j.ijcard.2021.06.050) Scopus: [2-s2.0-85114033245](https://doi.org/10.1016/j.ijcard.2021.06.050) PubMed: [34197842](https://doi.org/10.1016/j.ijcard.2021.06.050) doi: [10.1016/j.ijcard.2021.06.050](https://doi.org/10.1016/j.ijcard.2021.06.050)

599050, *původní článek* / RIV22: 1.LF ANO

HUGHES, Derralynn *Kor.* - LINHART, Aleš (1.LF/520) - GUREVICH, Andrey - KALAMPOKI, Vasiliki - JAZUKEVICIENE, Dalia - FERIOZZI, Sandro

Prompt Agalsidase Alfa Therapy Initiation is Associated with Improved Renal and Cardiovascular Outcomes in a Fabry Outcome Survey Analysis.

In: Drug Design, Development and Therapy [online], 2021, 15(August):3561-3572, 12 s. ISSN 1177-8881

IF = 4.162 (2020)

Financování: V-1LF;

Primární UK obor: Kardiologie

Anotace: Background: The timing of enzyme replacement therapy initiation in patients with Fabry disease is hypothesized to be critical. In this study, we used Fabry Outcome Survey data to assess the impact of prompt versus delayed initiation of treatment with agalsidase alfa on cardiovascular and renal events in patients with Fabry disease. Methods: Available genetic data at baseline were used to define patients with mutations associated with classical versus late-onset Fabry disease. Time to cardiovascular or renal events, from treatment initiation until 120 months, was compared for patients in prompt versus delayed groups. "Prompt" was defined as treatment initiation <24 months from symptom onset (analysis A) or diagnosis (analysis B), and "delayed" was defined as ≥ 24 months from symptom onset (analysis A) or diagnosis (analysis B). Kaplan-Meier curves and Log rank tests compared event-free probabilities and time to first event. Multivariate Cox regression estimated hazard ratios (HRs). Results: Analysis by time from symptom onset included 1374 patients (172 prompt, 1202 delayed). In a multivariate Cox regression analysis, prompt versus delayed treatment initiation significantly reduced the probability of cardiovascular (HR=0.62; $P<0.001$) and renal (HR=0.57; $P=0.001$) events. History of cardiovascular or renal events was associated with increased risk of respective events. Analysis by time from diagnosis included 2051 patients (1006 prompt, 1045 delayed). In a multivariate Cox regression analysis, prompt treatment initiation significantly reduced the probability of cardiovascular events (HR=0.83; $P=0.003$) after adjusting for history of cardiovascular events, sex, and age at treatment initiation. Univariate analysis showed that the probability of renal events was significantly lower in the prompt group ($P=0.018$); this finding was attenuated in the multivariate Cox regression analysis. Conclusion: This analysis suggests that prompt treatment initiation with agalsidase alfa provided better renal and cardiovascular outcomes than delayed treatment in patients with Fabry disease.

Klíč. slova: cardiomyopathies; nephrology; mutation; therapeutics; early diagnosis

WoS:[000685606600001](#) Scopus:[2-s2.0-85113529901](#) PubMed:[34429585](#) doi:[10.2147/DDDT.S313789](#)

596984, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

GODINAS, Laurent *Kor.* - IYER, Keerthana - MESZAROS, Gergely - QUARCK, Rozenn - ESCRIBANO-SUBIAS, Pilar - NOORDEGRAAF, Anton Vonk - JANSÁ, Pavel (*1.LF/520, VFN/N202*) - D'ALTO, Michele - LUKNAR, Milan - ILIC, Senka Milutinov - BELGE, Catharina - SITBON, Olivier - REIS, Abilio - ROSENKRANZ, Stephan - PEPKE-ZABA, Joanna - HUMBERT, Marc - DELCROIX, Marion
PH CARE COVID survey: an international patient survey on the care for pulmonary hypertension patients during the early phase of the COVID-19 pandemic.

In: Orphanet Journal of Rare Diseases, 2021, 16(1):196, 9 s. ISSN 1750-1172

IF = 4.123 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Veřejné zdravotnictví, hygiena a epidemiologie, pracovní lékařství

Další UK obory: Kardiologie;

Anotace: Background: During the COVID-19 pandemic, most of the health care systems suspended their non-urgent activities. This included the cancellation of consultations for patients with rare diseases, such as severe pulmonary hypertension (PH), resulting in potential medication shortage and loss of follow-up. Thus, the aim of the study was to evaluate PH patient health status evolution, access to health care and mental health experience during the early phase of the pandemic. Methods: We conducted an online patient survey, available in 16 languages, between 22/05/2020 and 28/06/2020. The survey included questions corresponding to demographic, COVID-19 and PH related information. Results: 1073 patients (or relatives, 27%) from 52 countries all over the world participated in the survey. Seventy-seven percent (77%) of responders reported a diagnosis of pulmonary arterial hypertension and 15% of chronic thromboembolic PH. The COVID-19 related events were few: only 1% of all responders reported a diagnosis of COVID-19. However, 8% of patients reported health deterioration possibly related to PH, and 4% hospitalization for PH. Besides, 11% of the patients reported difficulties to access their PH expert centre, and 3% interruption of treatment due to shortage of medication. Anxiety or depression was reported by 67% of the participants. Conclusion: Although COVID-19 incidence in PH patients was low, PH related problems occurred frequently as the pandemic progressed, including difficulties to have access to specialized care. The importance of primary health care was emphasized. Further studies are needed to evaluate the long-term consequences of COVID-related PH care disruption.

Klíč. slova: Pulmonary hypertension; COVID-19; Patient survey; Pulmonary arterial hypertension; Chronic

thromboembolic pulmonary hypertension

WoS:[000658928600001](#) Scopus:[2-s2.0-85105134916](#) PubMed:[33933110](#) doi:[10.1186/s13023-021-01752-1](#)

596810, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

ĎUĐÁKOVÁ, Eubica (1.LF/650) - **STRÁNECKÝ, Viktor** (1.LF/650, VFN/N216) - **PIHEROVÁ, Lenka** (1.LF/650) - **PALEČEK, Tomáš** (1.LF/520, VFN/N202) - **PONTIKOS, Nikolas** - **KMOCH, Stanislav** (1.LF/650, VFN/N216) - **SKALICKÁ, Pavlína** (1.LF/650, 1.LF/750, VFN/N238) - **VANĚČKOVÁ, Manuela** (1.LF/620, VFN/N249) - **DAVIDSON, Alice E.** - **LIŠKOVÁ, Petra** (1.LF/650, VFN/N238) *Kor. Non-Penetrance for Ocular Phenotype in Two Individuals Carrying Heterozygous Loss-of-Function ZEB1 Alleles.*

In: Genes, 2021, 12(5):677, 8 s. ISSN 2073-4425

IF = 4.096 (2020)

Financování: SVV260148; V-VFN; Q26; UNCE/MED/007; CZ.02.1.01/0.0/0.0/16_013/0001634; EF16_013/0001634; NV19-08-00122; GA20-19278S; LM2018132;

Primární UK obor: Oftalmologie

Další UK obory: Molekulární a buněčná biologie;

Anotace: ZEB1 loss-of-function (LoF) alleles are known to cause a rare autosomal dominant disorder-posterior polymorphous corneal dystrophy type 3 (PPCD3). To date, 50 pathogenic LoF variants have been identified as disease-causing and familial studies have indicated that the PPCD3 phenotype is penetrant in approximately 95% of carriers. In this study, we interrogated in-house exomes (n = 3616) and genomes (n = 88) for the presence of putative heterozygous LoF variants in ZEB1. Next, we performed detailed phenotyping in a father and his son who carried a novel LoF c.1279C>T; p.(Glu427*) variant in ZEB1 (NM_030751.6) absent from the gnomAD v.2.1.1 dataset. Ocular examination of the two subjects did not show any abnormalities characteristic of PPCD3. GnomAD (n = 141,456 subjects) was also interrogated for LoF ZEB1 variants, notably 8 distinct heterozygous changes presumed to lead to ZEB1 haploinsufficiency, not reported to be associated with PPCD3, have been identified. The NM_030751.6 transcript has a pLI score ≥ 0.99 , indicating extreme intolerance to haploinsufficiency. In conclusion, ZEB1 LoF variants are present in a general population at an extremely low frequency. As PPCD3 can be asymptomatic, the true penetrance of ZEB1 LoF variants remains currently unknown but is likely to be lower than estimated by the familial led approaches adopted to date.

Klíč. slova: ZEB1; cornea; penetrance; loss-of-function

WoS:[000653949200001](#) Scopus:[2-s2.0-85105479744](#) PubMed:[33946386](#) doi:[10.3390/genes12050677](#)

594996, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

RASHIDI, Farid *Kor.* - **BARCO, Stefano** - **KAMANGAR, Farin** - **HERESI, Gustavo A.** - **EMADI, Ashkan** - **KAYMAZ, Cihangir** - **JANSA, Pavel** (1.LF/520, VFN/N202) - **REIS, Abilio** - **RASHIDI, Arash** - **TAGHIZADIEH, Ali** - **REZAEIFAR, Parisa** - **MOGHIMI, Minoosh** - **GHODRATI, Samad** - **MOZAFARI, Abolfazl** - **FOUMANI, Ali Alavi** - **TAHAMTAN, Ouria** - **RAFIEE, Effat** - **ABBASPOUR, Zahra** - **KHODADADI, Kusra** - **ALAMDARI, Golsa** - **BOODAGHI, Yasman** - **REZAEI, Maryam** - **MUHAMMADI, Muhammad Javad** - **ABBASI, Meysam** - **MOVASEGHI, Fatemeh** - **KOOHI, Ata** - **SHAKOURZAD, Leila** - **EBRAHIMI, Fatemeh** - **RADVAR, Sarvin** - **AMOOZADEH, Maryam** - **FEREIDOONI, Fatemeh** - **NASEARI, Hanieh** - **MOVALLED, Kobra** - **GHORBANI, Ozra** - **ANSARIN, Khalil**

Incidence of symptomatic venous thromboembolism following hospitalization for coronavirus disease 2019: Prospective results from a multi-center study.

In: Thrombosis Research, 2021, 198(February):135-138, 4 s. ISSN 0049-3848

IF = 3.944 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Background: Thrombosis and pulmonary embolism appear to be major causes of mortality in hospitalized coronavirus disease 2019 (COVID-19) patients. However, few studies have focused on the incidence of venous thromboembolism (VTE) after hospitalization for COVID-19. Methods: In this multi-center study, we followed 1529 COVID-19 patients for at least 45 days after hospital discharge, who underwent routine telephone follow-up. In case of signs or symptoms of pulmonary embolism (PE) or deep vein thrombosis (DVT), they were invited for an in-hospital visit with a pulmonologist. The primary

outcome was symptomatic VTE within 45 days of hospital discharge. Results: Of 1529 COVID-19 patients discharged from hospital, a total of 228 (14.9%) reported potential signs or symptoms of PE or DVT and were seen for an in-hospital visit. Of these, 13 and 12 received Doppler ultrasounds or pulmonary CT angiography, respectively, of whom only one patient was diagnosed with symptomatic PE. Of 51 (3.3%) patients who died after discharge, two deaths were attributed to VTE corresponding to a 45-day cumulative rate of symptomatic VTE of 0.2% (95%CI 0.1%-0.6%; n = 3). There was no evidence of acute respiratory distress syndrome (ARDS) in these patients. Other deaths after hospital discharge included myocardial infarction (n = 13), heart failure (n = 9), and stroke (n = 9). Conclusions: We did not observe a high rate of symptomatic VTE in COVID-19 patients after hospital discharge. Routine extended thromboprophylaxis after hospitalization for COVID-19 may not have a net clinical benefit. Randomized trials may be warranted.

Klíč. slova: COVID-19; Venous thromboembolism; Thromboprophylaxis; Cohort study; Hospitalization
WoS:[000616053200023](https://www.scopus.com/search/form.do?query=000616053200023) PubMed:[33338976](https://pubmed.ncbi.nlm.nih.gov/33338976/) doi:[10.1016/j.thromres.2020.12.001](https://doi.org/10.1016/j.thromres.2020.12.001)

589929, *původní článek* / RIV22: 1.LF ANO

GELŽINSKÝ, Július (FNP/2.IK, LFPI/2.IK, LFPI/BC) *Kor.* - MAYER, Otto (FNP/2.IK, LFPI/2.IK, LFPI/BC) - MLÍKOVÁ SEIDLEROVÁ, Jitka (FNP/2.IK, LFPI/2.IK, LFPI/BC) - MATEŘÁNKOVÁ, Markéta (FNP/2.IK, LFPI/2.IK) - MAREŠ, Štěpán (FNP/2.IK, LFPI/2.IK, LFPI/BC) - KORDÍKOVÁ, Veronika (FNP/2.IK, LFPI/2.IK, LFPI/BC) - TREFIL, Ladislav (FNP/ÚKBH) - CÍFKOVÁ, Renata (1.LF/520) - FILIPOVSKÝ, Jan (FNP/2.IK, LFPI/2.IK, LFPI/BC)

Serum biomarkers, skin autofluorescence and other methods. Which parameter better illustrates the relationship between advanced glycation end products and arterial stiffness in the general population?.

In: Hypertension Research, 2021, 44(5):518-527, 10 s. ISSN 0916-9636
IF = 3.872 (2020)

Financování: [NV15-27109A](https://www.scopus.com/search/form.do?query=NV15-27109A); [Q39](https://www.scopus.com/search/form.do?query=Q39); [I-FNP-07](https://www.scopus.com/search/form.do?query=I-FNP-07);

Primární UK obor: Kardiologie

Anotace: Stiffening of large arteries, clinically manifesting as increased aortic pulse wave velocity (PWV), is an inevitable outcome of aging. Among other mechanisms, impaired glucose metabolism plays an important role, leading to the deposition of advanced glycation end products (AGEs). This process is counterbalanced by the circulating soluble receptor for AGEs (sRAGE). We investigated the association between arterial stiffness on one side and multiple circulating biomarkers and the degree of skin deposition of AGEs on the other. In a cross-sectional design, 867 participants based on a general population sample (Czech post-MONICA studies) were examined. PWV was measured by SphygmoCor device (AtCor Medical Ltd.), while skin AGEs were measured using a dedicated autofluorescence method (AGE Reader mu(R)). To quantify the circulating status of AGEs, carboxymethyl lysine (CML) and sRAGE concentrations were assessed by ELISA, along with conventional glucose metabolism indicators. When analyzing the whole sample using multiple linear or logistic regression models and after adjustment for potential covariates, a significant association with PWV was found for fasting glycemia, HbA1c, sRAGE, skin AGEs, and the skin AGE-to-sRAGE ratio. Among these parameters, stepwise models identified the strongest association for the skin AGEs and AGE-to-sRAGE ratio, and this was also true when diabetic subjects were excluded. In contrast, neither CML nor its ratio relative to sRAGE showed any association with arterial stiffness. In conclusion, skin AGEs along with their ratio relative to sRAGE were closely associated with arterial stiffness and is a better indicator of the current status of deposited AGEs than other relevant factors.

Klíč. slova: AGEs; Carboxymethyl lysine; Glucose metabolism; Pulse wave velocity; SRAGE

WoS:[000607341600001](https://www.scopus.com/search/form.do?query=000607341600001) Scopus:[2-s2.0-85100091717](https://www.scopus.com/search/form.do?query=2-s2.0-85100091717) PubMed:[33437026](https://pubmed.ncbi.nlm.nih.gov/33437026/) doi:[10.1038/s41440-020-00601-1](https://doi.org/10.1038/s41440-020-00601-1)

593370, *původní článek* / RIV22: 1.LF ANO

ŠTOLBOVÁ, Kristýna (3.LF/3.LF) - NOVODVORSKÝ, Peter - JAKUBÍKOVÁ, Iva - DVOŘÁKOVÁ, Iveta - MRÁZ, Miloš (1.LF/410) - WICHTERLE, Dan (1.LF/520) - KAUTZNER, Josef - HALUZÍK, Martin (1.LF/410) *Kor.*

Effect of Complex Weight-Reducing Interventions on Rhythm Control in Obese Individuals with Atrial Fibrillation Following Catheter Ablation: A Study Protocol.

In: Advances in Therapy, 2021, 38(4):2007-2016, 10 s. ISSN 0741-238X
IF = 3.847 (2020)

Financování: [V-1LF](#); [V-3LF](#);

Primární UK obor: [Kardiologie](#)

Anotace: INTRODUCTION: Obesity and atrial fibrillation (AF) pose a significant burden on healthcare systems worldwide. Reduction of body weight has been documented to reduce the risk of AF. Little is known about the effect of different weight-reducing interventions including bariatric surgery in obese individuals on the risk of arrhythmia recurrence following catheter ablation (CA) for AF, and about the pathophysiological mechanisms linking these two conditions. METHODS: The Effect of complex weight-reducing interventions on rhythm control in obese subjects with Atrial Fibrillation (HOBIT-AF) is a single-blinded, parallel-group randomised controlled trial with 18-month follow-up to assess the effect of complex weight-reducing interventions supported by the use of smart technologies and bariatric surgery on the arrhythmia burden in obese individuals following CA for AF. One hundred and sixty individuals (age 18-70 years, body mass index ≥ 30 kg/m²) will be randomised in a 1:1 fashion to undergo a structured weight reduction programme and sleeve gastrectomy (when indicated and preferred by the patient) aiming to achieve greater than 10% weight reduction from baseline (intervention group) or standard post-ablation medical care (control group). Two-week continuous ECG monitoring will be used 3 and 18 months after CA to assess the arrhythmia burden. Other investigations will include transthoracic echocardiography with quantification of epicardial adipose tissue, and markers of low-grade inflammation and circulating adipokines. PLANNED OUTCOMES: The main objective is to assess the effect of complex weight-reducing interventions on the arrhythmia burden and quality of life. Subgroup analyses to identify patient subgroups preferentially benefiting from weight loss related to a decrease in arrhythmia burden will be performed. Exploratory objectives will include investigation of potential mechanisms linking weight reduction with amelioration of arrhythmia burden such as changes in markers of low-grade inflammation, circulating adipokines, cytokines, monocytes or reduction of epicardial adipose tissue volume. TRIAL REGISTRATION: [NCT04560387](#).

Klíč. slova: Atrial fibrillation; Bariatric surgery; Low-grade inflammation; Obesity; Sleeve gastrectomy; Weight reduction

WoS:[000628063100001](#) Scopus:[2-s2.0-85102524731](#) PubMed:[33710588](#) doi:[10.1007/s12325-021-01667-0](#)

579571, *původní článek* / **RIV22: 1.LF ANO** / **RIV22: VFN ANO**

KOUSAL, Bohdan ([1.LF/650](#), [1.LF/750](#), [VFN/N238](#)) - **MAJER, Filip** ([1.LF/650](#)) - **VLÁŠKOVÁ, Hana** ([1.LF/650](#), [VFN/N216](#)) - **DVOŘÁKOVÁ, Lenka** ([1.LF/650](#), [VFN/N216](#)) - **PIHEROVÁ, Lenka** ([1.LF/650](#)) - **MELIŠKA, Martin** ([1.LF/750](#), [VFN/N238](#)) - **LANGROVÁ, Hana** ([FNHK/OČNÍ](#), [LFHK/OČNÍ](#)) - **PALEČEK, Tomáš** ([1.LF/520](#), [VFN/N202](#)) - **KUBANEK, M.** - **KREBSOVA, A.** - **GURKA, J.** - **STARÁ, Veronika** ([FNM/2126](#)) - **MICHAELIDES, M.** - **KALINA, Tomáš** ([2.LF/Klinika dětské hematologie a onkologie](#), [FNM/2167](#)) - **SIKORA, Jakub** ([1.LF/650](#), [VFN/N854](#)) - **LIŠKOVÁ, Petra** ([1.LF/650](#), [VFN/N238](#)) *Kor.*

Pigmentary retinopathy can indicate the presence of pathogenic LAMP2 variants even in somatic mosaic carriers with no additional signs of Danon disease.

In: *Acta Ophthalmologica*, 2021, 99(1):61-68, 8 s. ISSN 1755-375X

IF = 3.761 (2020)

Financování: [RVO-VFN64165](#); [I-FNHK](#); [I-LFHK](#); [NV15-27682A](#); [Q26](#); [Q30](#); [UNCE/MED/007](#); [NV19-08-00122](#); [NU20-07-00182](#); [SVV260516](#);

Primární UK obor: [Oftalmologie](#)

Anotace: Purpose: Danon disease (DD) is a rare X-linked disorder caused by pathogenic variants in LAMP2. DD primarily manifests as a severe cardiomyopathy. An early diagnosis is crucial for patient survival. The aim of the study was to determine the usefulness of ocular examination for identification of DD. Methods: Detailed ocular examination in 10 patients with DD (3 males, 7 females) and a 45-year-old asymptomatic female somatic mosaic carrier of a LAMP2 disease-causing variant. Results: All patients with manifest cardiomyopathy had pigmentary retinopathy with altered autofluorescence and diffuse visual field loss. Best corrected visual acuity (BCVA) was decreased (<0.63) in 8 (40%) out of 20 eyes. The severity of retinal pathology increased with age, resulting in marked cone-rod involvement overtime. Spectral-domain optical coherence tomography in younger patients revealed focal loss of photoreceptors, disruption and deposition at the retinal pigment epithelium/Bruch's membrane layer (corresponding to areas of marked increased autofluorescence), and hyperreflective foci in the outer nuclear layer. Cystoid macular oedema was seen in one eye. In the asymptomatic female with somatic mosaicism, the BCVA was 1.0 bilaterally. An

abnormal autofluorescence pattern in the left eye was present; while full-field electroretinography was normal. Conclusions: Detailed ocular examination may represent a sensitive and quick screening tool for the identification of carriers of LAMP2 pathogenic variants, even in somatic mosaicism. Hence, further investigation should be undertaken in all patients with pigmentary retinal dystrophy as it may be a sign of a life-threatening disease.

Klíč. slova: autofluorescence; Danon disease; LAMP2; pigmentary retinopathy; somatic mosaicism; spectral-domain optical coherence tomography

WoS:[000539794700001](#) Scopus:[2-s2.0-85086343875](#) PubMed:[32533651](#) doi:[10.1111/aos.14478](#)

597120, *přehledový článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

ROB, Daniel (*1.LF/520, VFN/N202*) - **BĚLOHLÁVEK, Jan** (*1.LF/520, VFN/N202*) *Kor.*

The mechanical support of cardiogenic shock.

In: Current Opinion in Critical Care, 2021, 27(4):440-446, 7 s. ISSN 1070-5295

IF = 3.687 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Purpose of review: Cardiogenic shock (CS) therapy involving catecholamines, inotropes, fluids and revascularization is often insufficient, and short-term mortality remains 50%. Different treatment algorithms and mechanical circulatory support devices (MCS) have been increasingly used in the treatment of CS. Coronavirus disease 2019 (COVID-19) pandemic is a major challenge faced by intensive care medicine providers inevitably influencing also CS management. Recent findings: There is a lack of prospective data as well as international consensus regarding CS classification, patient risk stratification, and MCS use. Veno-arterial extracorporeal membrane oxygenation is considered the first line MCS in refractory CS and Impella the MCS of choice for the left ventricle unloading. Several ongoing randomized trials will provide much-needed evidence for MCS use in the coming years. COVID-19 infection is associated with several cardiovascular disorders complicated by CS and more data regarding the prevalence and mortality of CS during COVID-19 infection are needed. Summary: This review summarizes current trends in the use of MCS in CS and discusses differences in CS management during the COVID-19 pandemic. Careful patient selection, early MCS initiation, and comprehensive intensive care by experienced team is key to successful outcome in patients with refractory CS.

Klíč. slova: cardiogenic shock; coronavirus disease 2019; extracorporeal membrane oxygenation; impella; mechanical circulatory support

WoS:[000668299300016](#) PubMed:[33929344](#) doi:[10.1097/MCC.0000000000000837](#)

594989, *původní článek* / RIV22: 1.LF ANO

CÍFKOVÁ, Renata (*1.LF/520*) *Kor.* - HARAZNY, Joanna M. - BRUTHANS, Jan (*LFPI/2.IK*) -

WOHLFAHRT, Peter - KRAJČOVIECHOVÁ, Alena - LÁNSKÁ, Věra - GELŽINSKÝ, Július (*LFPI/2.IK*) -

MATEŘÁNKOVÁ, Markéta (*LFPI/2.IK*) - MAREŠ, Štěpán (*LFPI/2.IK*) - FILIPOVSKÝ, Jan (*LFPI/2.IK*) -

MAYER, Otto (*LFPI/2.IK*) - SCHMIEDER, Roland E

Reference values of retinal microcirculation parameters derived from a population random sample.

In: Microvascular Research, 2021, 134(March):104117, 7 s. ISSN 0026-2862

IF = 3.514 (2020)

Financování: NV15-27109A; Q39;

Primární UK obor: Kardiologie

Anotace: Retinal microcirculation reflects retinal perfusion abnormalities and retinal arterial structural changes at relatively early stages of various cardiovascular diseases. Our objective has been to establish reference values for major functional and structural parameters of retinal microcirculation in a randomly selected urban population sample. A total of 398 randomly selected individuals from an urban population aged 25 to 65 years, resident in Pilsen, Czech Republic, were screened for major cardiovascular risk factors. Retinal microcirculation was assessed using scanning laser Doppler flowmetry (SLDF), with data evaluable in 343 patients. Of this number, complete data were available for 256 individuals free from manifest cardiovascular disease, diabetes and drug treatment for hypertension and/or dyslipidemia, constituting the reference value population. Juxtapapillary retinal capillary blood flow has increased significantly with age whereas vessel and luminal diameters have decreased. No sex differences in retinal microcirculation parameters have been found. Therefore, reference values for retinal microcirculation parameters have been

established by age groups. Unattended automated office systolic BP, after adjusting for age, correlated significantly with wall-to-lumen ratio (WLR) and wall thickness (WT). Moreover, after adjusting for age and mean BP, a positive relationship has been found between carotid femoral pulse wave velocity and WT, WLR and wall cross-sectional area, indicating the interaction between microand macro-vasculature. In conclusion, our study is the first to provide reference values of retinal microcirculation parameters in a random Caucasian population sample. Our results have shown that, at the population level, the first structural changes in retinal microcirculation are those in lumen diameters. Of note, a close relationship between BP and vascular remodeling of retinal arterioles and between aortic stiffness and WLR of retinal arterioles suggests an interaction between microand macro-vasculature.

Klíč. slova: Czech post-MONICA study; Scanning laser Doppler flowmetry; Juxtapapillary retinal capillary blood flow; Vessel diameter; Luminal diameter; Wall thickness; Wall-to-lumen ratio; Wall cross-sectional area; Retinal vascular resistance

WoS:[000613199800014](#) Scopus:[2-s2.0-85097053047](#) PubMed:[33245956](#) doi:[10.1016/j.mvr.2020.104117](#)

593782, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

VĚTROVSKÝ, Tomáš (1.LF/250, FTVS/FZL) - **FOŘTOVÁ, Tereza** (1.LF/1.LF) - CONESA-ROS, Elena - ŠTEFFL, Michal (FTVS/FZL) - **HECZKOVÁ, Jana** (1.LF/250) - **BĚLOHLÁVEK, Jan** (1.LF/520, VFN/N202) - COUREL-IBANEZ, Javier *Kor.*

Increased Cardiopulmonary Fitness Is Associated with a Greater Reduction in Depression among People Who Underwent Bariatric Surgery.

In: International Journal of Environmental Research and Public Health, 2021, 18(5):2508, 11 s. ISSN 1661-7827

IF = 3.390 (2020)

Financování: V-VFN; Q41;

Primární UK obor: Kardiologie

Další UK obory: Ošetrovatelství;

Anotace: The aim of this study was to determine the effect of changes in cardiopulmonary fitness on the mental health of patients with severe obesity who underwent gastric bypass surgery (prior to and 1, 3, and 6 months after surgery). Study participants were recruited from among patients of a regional hospital in Czechia who underwent gastric bypass surgery between April 2018 and October 2019. They were eligible if they (a) were between 18 and 65 years old, (b) provided written informed consent, and (c) were able to walk independently. Twenty-six patients (age 45.4 +/- 9.0 years, body mass index 45.1 +/- 7.4 kg center dot m(-2), body fat 43.8 +/- 4.8%) were included in the analysis. The key finding revealed that the greater the increase in cardiopulmonary fitness (i.e., longer distance walked in the six-minute walk test, 6MWT), the better the improvement in depression score among patients who underwent bariatric surgery. In particular, increments of 10 m in the 6MWT lead to the improvement of 0.5 points on the depression subscale of the Hospital Anxiety and Depression Scale (HADS) questionnaire. As the main implication, these results suggest that patients should participate in exercise training programs to increase their fitness status for optimal physical and mental outcomes of bariatric surgery.

Klíč. slova: gastric bypass; obesity; weight loss; mental health; comorbidity

WoS:[000628116400001](#) Scopus:[2-s2.0-85101826874](#) PubMed:[33802552](#) doi:[10.3390/ijerph18052508](#)

594178, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

FINGROVÁ, Zdeňka (1.LF/520, VFN/N202) - **AMBROŽ, David** (1.LF/520, VFN/N202) - **JANSA, Pavel** (1.LF/520, VFN/N202) - **KUCHAR, Jan** (1.LF/520, VFN/N202) - **LINDNER, Jaroslav** (1.LF/690, VFN/N723) - **KUNSTÝŘ, Jan** (1.LF/700, VFN/N225) - **ASCHERMANN, Michael** (1.LF/520, VFN/N202) - **LINHART, Aleš** (1.LF/520, VFN/N202) - **HAVRÁNEK, Štěpán** (1.LF/520, VFN/N202) *Kor.*

The prevalence and clinical outcome of supraventricular tachycardia in different etiologies of pulmonary hypertension.

In: PLoS One, 2021, 16(1):e0245752, 14 s. ISSN 1932-6203

IF = 3.240 (2020)

Financování: V-1LF; NV18-02-00027;

Primární UK obor: Kardiologie

Anotace: Purpose Patients with pulmonary hypertension (PH) frequently suffer from supraventricular tachycardias (SVT). The main purpose of our study was to identify the cumulative incidence of SVT in

patients with different etiologies of PH. The secondary objective was to analyse the clinical impact of SVT. **Methods** We retrospectively studied the prevalence of SVT and the clinical outcome in 755 patients (41% males; 60 +/- 15 years; mean follow-up 3.8 +/- 2.8 years) with PH of different etiologies. The prevalence of SVT was analysed separately in isolated pre-capillary PH (Ipc-PH) and in patients with combined post- and pre-capillary PH (Cpc-PH). **Results** The prevalence of SVT in the Ipc-PH group (n = 641) was 25% (n = 162). The most prevalent arrhythmias were atrial fibrillation followed by a typical atrial flutter (17% and 4.4% of all Icp-PH patients). An excessive prevalence of SVT was found in patients with pulmonary arterial hypertension associated with congenital heart disease (35%, p = 0.01). Out of the overall study population, Cpc-PH was present in 114 (15%) patients. Patients with Cpc-PH manifested a higher prevalence of SVT than subjects with Ipc-PH (58; 51% vs. 162; 25%; p < 0.0001) and were more likely to have persistent or permanent atrial fibrillation (38; 29% vs. 61; 10%; p < 0.0001). Parameters significantly associated with mortality in a multivariate analysis included age, male gender, functional exercise capacity and right atrial diameter (p < 0.05). Neither diagnosis of SVT nor type of arrhythmia predicted mortality. **Conclusions** The study detected a significant prevalence of SVT in the population of PH of different origins. Different spectrum and prevalence of arrhythmia might be expected in different etiologies of PH. Patients with an elevated post-capillary pressure showed a higher arrhythmia prevalence, predominantly due to an excessive number of atrial fibrillations. The diagnosis of SVT was not associated with mortality.

Klíč. slova: ATRIAL-FIBRILLATION; EUROPEAN-SOCIETY; TASK-FORCE; GUIDELINES; ARRHYTHMIAS; MANAGEMENT; DIAGNOSIS; RELEVANCE

WoS:[000639428800069](https://doi.org/10.1371/journal.pone.0245752) Scopus:[2-s2.0-85100229277](https://doi.org/10.1371/journal.pone.0245752) PubMed:[33471824](https://doi.org/10.1371/journal.pone.0245752) doi:[10.1371/journal.pone.0245752](https://doi.org/10.1371/journal.pone.0245752)

602830, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

TOMEK, Aleš (2.LF/NK, FNM/2118) *Kor.* - REKOVÁ, Petra (1.LF/600, VFN/N212) - PAULASOVÁ - SCHWABOVÁ, Jaroslava (2.LF/NK, FNM/2118) - OLŠEROVÁ, Anna (2.LF/NK) - ŠKORŇA, Miroslav - NEVŠÍMALOVÁ, Miroslava - ŠIMŮNEK, Libor (FNHK/NEUROL, LFHK/NEUROL) - HERZIG, Roman (FNHK/NEUROL, LFHK/NEUROL) - FAJEJTOVÁ, Štěpánka - MIKULENKA, Petr (3.LF/neurologie) - TÁBOŘÍKOVÁ, Alena - NEUMANN, Jiří - BRZEZNY, Richard - SOBOLOVÁ, Helena - BARTONÍK, Jan - VÁCLAVÍK, Daniel - VACHOVÁ, Marta - BECHYNĚ, Karel - HAVLÍKOVÁ, Hana - PRAX, Tomáš - ŠAŇÁK, Daniel - ČERNÍKOVÁ, Irena - ONDEČKOVÁ, Iva - PROCHÁZKA, Petr - RAJNER, Jan - ŠKODA, Miroslav - NOVÁK, Jan - ŠKODA, Ondřej - BAR, Michal - MIKULÍK, Robert - DOSTÁLOVÁ, Gabriela (1.LF/520, VFN/N202) - LINHART, Aleš (1.LF/520, VFN/N202)

Nationwide screening for Fabry disease in unselected stroke patients.

In: PLoS One, 2021, 16(12):e0260601, 12 s. ISSN 1932-6203

IF = 3.240 (2020)

Financování: I-FNFK; I-LFHK; I-FNM; V-1LF; V-VFN; I-3LF; Q33;

Primární UK obor: Neurologie a neurovědy

Anotace: BACKGROUND AND AIMS: Fabry disease (FD) is a rare X-linked lysosomal storage disorder caused by disease-associated variants in the alpha-galactosidase A gene (GLA). FD is a known cause of stroke in younger patients. There are limited data on prevalence of FD and stroke risk in unselected stroke patients. METHODS: A prospective nationwide study including 35 (78%) of all 45 stroke centers and all consecutive stroke patients admitted during three months. Clinical data were collected in the RES-Q database. FD was diagnosed using dried blood spots in a stepwise manner: in males-enzymatic activity, globotriaosylsphingosine (lyso-Gb3) quantification, if positive followed by GLA gene sequencing; and in females GLA sequencing followed by lyso-Gb3. RESULTS: 986 consecutive patients (54% men, mean age 70 years) were included. Observed stroke type was ischemic 79%, transient ischemic attack (TIA) 14%, intracerebral hemorrhage (ICH) 7%, subarachnoid hemorrhage 1% and cerebral venous thrombosis 0.1%. Two (0.2%, 95% CI 0.02-0.7) patients had a pathogenic variant associated with the classical FD phenotype (c.1235_1236delCT and p.G325S). Another fourteen (1.4%, 95% CI 0.08-2.4) patients had a variant of GLA gene considered benign (9 with p.D313Y, one p.A143T, one p.R118C, one p.V199A, one p.R30K and one p.R38G). The index stroke in two carriers of disease-associated variant was ischemic lacunar. In 14 carriers of GLA gene variants 11 strokes were ischemic, two TIA, and one ICH. Patients with positive as compared to negative GLA gene screening were younger (mean 60+-SD, min, max, vs 70+-SD, min, max, P = 0.02), otherwise there were no differences in other baseline variables. CONCLUSIONS: The prevalence of FD in unselected adult patients with acute stroke is 0.2%. Both patients who had a pathogenic GLA gene variant were younger than 50 years. Our results support FD screening in patients that had a stroke event before 50

years of age.

Klíč. slova: Fabry disease; X-linked inherited disorder; globotriaosylceramide; glycosphingolipids; stroke
WoS:[000754615500008](#) Scopus:[2-s2.0-85122064457](#) PubMed:[34905550](#) doi:[10.1371/journal.pone.0260601](#)

603833, jiný článek / RIV22: 1.LF NE / RIV22: VFN NE

DOSTÁLOVÁ, Gabriela (1.LF/520, VFN/N202) *Kor.* - **HŮLKOVÁ, Helena** (1.LF/310, 1.LF/650, VFN/N854) - **LINHART, Aleš** (1.LF/520, VFN/N202)

Anderson-Fabry disease: No histological signs of pathological accumulation in arterial and venous endothelium during pegunigalsidase alfa therapy.

In: Kardiologia Polska, 2021, 79(12):1385-1386, 2 s. ISSN 0022-9032

IF = 3.108 (2020)

Primární UK obor: Kardiologie

Anotace: A 43-year-old male patient with Anderson-Fabry disease (AFD) diagnosed in adulthood during a family screening (mutation c.734DEL61) was qualified for surgical removal (phlebectomy) of varicosities. This enzymatic defect results in pathological accumulation of glycolipids in lysosomes of the vascular endothelium and several cell types.

WoS:[000738323200001](#) PubMed:[34668177](#) doi:[10.33963/KP.a2021.0139](#)

595668, původní článek / RIV22: VFN ANO

MANG, Sebastian - KALENKA, Armin - BROMAN, Lars Mikael - SUPADY, Alexander - SWOL, Justyna - DANZIGER, Guy - BECKER, Andre - HOERSCH, Sabrina I. - MERTKE, Thilo - KAISER, Ralf - BRACHT, Hendrik - ZOTZMANN, Viviane - SEILER, Frederik - BALS, Robert - TACCONE, Fabio Silvio - MOERER, Onnen - LORUSSO, Roberto - **BĚLOHLÁVEK, Jan** (VFN/N202) - MUELLENBACH, Ralf M. - LEPPER, Philipp M. *Kor.* [COVEC Study Group - **Balík Martin** (1.LF/700, VFN/N225)]

Extracorporeal life support in COVID-19-related acute respiratory distress syndrome: A EuroELSO international survey.

In: Artificial Organs, 2021, 45(5):495-505, 11 s. ISSN 0160-564X

IF = 3.094 (2020)

Financování: V-VFN;

Primární UK obor: Kardiologie

Anotace: Extracorporeal life support (ECLS) is a means to support patients with acute respiratory failure. Initially, recommendations to treat severe cases of pandemic coronavirus disease 2019 (COVID-19) with ECLS have been restrained. In the meantime, ECLS has been shown to produce similar outcomes in patients with severe COVID-19 compared to existing data on ARDS mortality. We performed an international email survey to assess how ECLS providers worldwide have previously used ECLS during the treatment of critically ill patients with COVID-19. A questionnaire with 45 questions (covering, e.g., indication, technical aspects, benefit, and reasons for treatment discontinuation), mostly multiple choice, was distributed by email to ECLS centers. The survey was approved by the European branch of the Extracorporeal Life Support Organization (ELSO); 276 ECMO professionals from 98 centers in 30 different countries on four continents reported that they employed ECMO for very severe COVID-19 cases, mostly in veno-venous configuration (87%). The most common reason to establish ECLS was isolated hypoxemic respiratory failure (50%), followed by a combination of hypoxemia and hypercapnia (39%). Only a small fraction of patients required veno-arterial cannulation due to heart failure (3%). Time on ECLS varied between less than 2 and more than 4 weeks. The main reason to discontinue ECLS treatment prior to patient's recovery was lack of clinical improvement (53%), followed by major bleeding, mostly intracranially (13%). Only 4% of respondents reported that triage situations, lack of staff or lack of oxygenators, were responsible for discontinuation of ECLS support. Most ECLS physicians (51%, IQR 30%) agreed that patients with COVID-19-induced ARDS (CARDS) benefitted from ECLS. Overall mortality of COVID-19 patients on ECLS was estimated to be about 55%. ECLS has been utilized successfully during the COVID-19 pandemic to stabilize CARDS patients in hypoxemic or hypercapnic lung failure. Age and multimorbidity limited the use of ECLS. Triage situations were rarely a concern. ECLS providers stated that patients with severe COVID-19 benefitted from ECLS.

Klíč. slova: COVID-19; COVID-19-induced acute respiratory distress syndrome; extracorporeal membrane oxygenation; extracorporeal life support; SARS-CoV-2; survey

WoS:[000633880600001](#) Scopus:[2-s2.0-85103276461](#) PubMed:[33590542](#) doi:[10.1111/aor.13940](#)

582593, původní článek / RIV22: 1.LF ANO

MAYER, Otto (FNP/2.IK, LFPI/2.IK, LFPI/BC) *Kor.* - GELŽINSKÝ, Július (FNP/2.IK, LFPI/2.IK, LFPI/BC) - SEIDLEROVÁ, Jitka (FNP/2.IK, LFPI/2.IK, LFPI/BC) - MATERÁNKOVÁ, Markéta (FNP/2.IK, LFPI/2.IK) - MAREŠ, Štěpán (FNP/2.IK, LFPI/2.IK, LFPI/BC) - SVOBODOVÁ, Veronika (FNP/2.IK, LFPI/2.IK, LFPI/BC) - TREFIL, Ladislav (FNP/ÚKBH) - CÍFKOVÁ, Renata (1.LF/520) - FILIPOVSKÝ, Jan (FNP/2.IK, LFPI/2.IK, LFPI/BC)

The role of advanced glycation end products in vascular aging: which parameter is the most suitable as a biomarker?

In: Journal of Human Hypertension, 2021, 35(3):240-249, 10 s. ISSN 0950-9240

IF = 3.012 (2020)

Financování: I-FNP-51; NV15-27109A; Q39;

Primární UK obor: Kardiologie

Anotace: Advanced glycation end products (AGEs) are involved in several pathophysiologic processes in vascular diseases, including progressive loss of elasticity of the vessel wall (arterial stiffness). Circulating soluble receptors for AGEs (sRAGE) act as a decoy and counterbalanced the harmful properties of AGEs as the natural protective factor. We compared the role of circulating or skin-deposited AGEs and sRAGE regarding the natural course of arterial stiffening. In a prospective cohort study, we longitudinally followed 536 general population-based subjects (subsample of Czech post-MONICA study). Aortic pulse-wave velocity (PWV) was measured twice (at baseline and after 8 years of follow-up) using a SphygmoCor device (AtCor Medical Ltd), and the intraindividual change in PWV per year (increment PWV/year) was calculated. Concentrations of sRAGE and carboxymethyl lysine (circulating AGEs) were assessed at the follow-up visit by ELISA, while skin AGEs were measured using the autofluorescence-based device AGE Reader. Using multiple regressions, we found significant association between increment PWV/year as a dependent variable, and both, sRAGE and skin AGEs as independent ones (each on its own model). However, the closest associations to increment PWV/year were found for the ratio of these two factors (skin AGEs/sRAGE) [beta coeff = 0.0747 (SE 0.0189), $p < 0.0001$]. In a categorized manner, subjects with skin AGEs/sRAGE ratio ≥ 3.3 showed about twofold higher risk having Delta PWV/year ≥ 0.2 m/s [adjusted odds ratio was 2.09 (95% CI: 1.35-3.22), $p = 0.001$]. In contrast, neither circulating AGEs nor circulating AGEs/sRAGE showed any significant relation to Delta PWV/year. In conclusion, skin AGEs/sRAGE ratio seems to be a more sensitive biomarker of vascular aging than these single factors themselves or circulation status of AGEs.

Klíč. slova: pulse-wave velocity; arterial stiffness; soluble receptor; clinical-practice; disease; protein; autofluorescence; atherosclerosis; accumulation; endproducts

WoS:[000519421900002](#) Scopus:[2-s2.0-85082188266](#) PubMed:[32203073](#) doi:[10.1038/s41371-020-0327-3](#)

597088, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

PUDIL, Jan (1.LF/520, VFN/N202) - STEYEROVÁ, Petra (1.LF/620, VFN/N249) - MACOVÁ, Iva (1.LF/620, VFN/N249) - ZEMÁNEK, David (1.LF/520, VFN/N202) - KRÁL, Aleš (1.LF/520, VFN/N202) - PAĎOUR, Michal (1.LF/520, VFN/N202) - CHEN, Zhi - DANEŠ, Jan (1.LF/620, VFN/N249) - KOVÁRNÍK, Tomáš (1.LF/520, VFN/N202) *Kor.*

Coronary artery disease prediction based on breast arterial calcification in women undergoing mammography as a screening for breast cancer.

In: Menopause, 2021, 28(7):787-791, 5 s. ISSN 1072-3714

IF = 2.953 (2020)

Financování: V-VFN; GAUK552219;

Primární UK obor: Kardiologie

Anotace: Video Summary:. Objective: The aim of the study was to test the potential role of breast arterial calcification (BAC) in the prediction of coronary artery disease (CAD) in women. The criterion standard for CAD diagnostics was coronary angiography. Methods: This retrospective study enrolled 163 consecutive women, who underwent digital mammography and coronary angiography in our hospital. We assessed the presence and severity of BAC, and tested whether the presence and/or extent of BAC could be a predictor for CAD, quantified by Gensini score. Results: BAC was presented in 34 patients (21%). Neither the presence of CAD (17 patients, 50%, vs 55 42.6%, $P = 0.44$), nor the Gensini score (20.5 +/- 29.7 vs 15.4 +/- 24.1, $P = 0.3$) differed significantly between BAC-present and BAC-absent patients. A finding of triple-

vessel disease, however, more frequently occurred in the BAC-present (seven patients, 20.6%) than in the BAC-absent (nine patients, 7%) group, odds ratio (OR) 3.1, 95% CI 1-9.5, P = 0.049. The presence of BAC did not significantly increase the odds for the presence of CAD (OR = 1.29, P = 0.54). Among the subgroup of patients with CAD, BAC presence was associated with triple vessel disease (OR = 3.34, P = 0.049).

Conclusions: We did not confirm BAC as a predictor of CAD. However, BAC showed association with more severe forms of coronary atherosclerosis (triple vessel disease).

Klíč. slova: Breast arterial calcification; Coronary angiography; Coronary artery disease; Coronary artery disease risk markers

WoS:[000665116900009](#) PubMed:[33760780](#) doi:[10.1097/GME.0000000000001765](#)

597756, *doporučený postup* / RIV22: 1.LF ANO / RIV22: VFN ANO

LORUSSO, Roberto *Kor.* - SHEKAR, Kiran - MACLAREN, Graeme - SCHMIDT, Matthieu - PELLEGRINO, Vincent - MEYNS, Bart - HAFT, Jonathan - VERCAEMST, Leen - PAPPALARDO, Federico - BERMUDEZ, Christian - BĚLOHLÁVEK, Jan (*1.LF/520*, *VFN/N202*) - HOU, Xiaotong - BOEKEN, Udo - CASTILLO, Roberto - DONKER, Dirk W. - ABRAMS, Darryl - RANUCCI, Marco - HRYNIEWICZ, Kasia - CHAVEZ, Ivan - CHEN, Yih-Sharng - SALAZAR, Leonardo - WHITMAN, Glenn - BUSCHER, Hergen - DIAZ, Rodrigo - MUELLER, Thomas - COMBES, Alain

ELSO Interim Guidelines for Venoaerterial Extracorporeal Membrane Oxygenation in Adult Cardiac Patients.

In: ASAIO Journal, 2021, 67(8):827-844, 18 s. ISSN 1058-2916

IF = 2.872 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Over the past decade, the use of extracorporeal membrane oxygenation (ECMO) has increased exponentially, from approximately 30-40 patients per year in the United States 20 years ago, to over 2,000 per year currently, and rising. The increased utilization of ECMO has resulted from improved cannulation techniques, including percutaneous approach, as well as advances in the technology of the pumps, oxygenators, and cannulas. Despite these features, however, choosing appropriate candidates and managing their daily care can be extremely challenging. What follows is an in-depth discussion of the indications for venoarterial (VA) ECMO in adult patients affected by cardiac disease, the manner of its application, the physiology underlying the care for these patients, and the assessment and treatment of complications, including ethical and organizational issues. More in-depth material and information are provided in the Extracorporeal Life Support Organization (ELSO) 5th Edition Red Book. Furthermore, the recent ELSO indications about ECLS and cannulation nomenclature will be followed in this guideline.

Klíč. slova: life-support; ecmo; management; outcomes

WoS:[000680139500009](#) PubMed:[34339398](#) doi:[10.1097/MAT.0000000000001510](#)

595773, *doporučený postup* / RIV22: VFN ANO

RICHARDSON, Alexander Sacha C. - TONNA, Joseph E. - NANJAYYA, Vinodh - NIXON, Paul - ABRAMS, Darryl C. - RAMAN, Lakshmi - BERNARD, Stephen - FINNEY, Simon J. - GRUNAU, Brian - YOUNGQUIST, Scott T. - MCKELLAR, Stephen H. - SHINAR, Zachary - BARTOS, Jason A. - BECKER, Lance B. - YANNOPOULOS, Demetris - BĚLOHLÁVEK, Jan (*VFN/N202*) - LAMHAUT, Lionel - PELLEGRINO, Vincent *Kor.*

Extracorporeal Cardiopulmonary Resuscitation in Adults. Interim Guideline Consensus Statement From the Extracorporeal Life Support Organization.

In: ASAIO Journal, 2021, 67(3):221-228, 8 s. ISSN 1058-2916

IF = 2.872 (2020)

Financování: V-VFN;

Primární UK obor: Kardiologie

Anotace: Disclaimer: Veno-arterial extracorporeal membrane oxygenation (ECMO) is increasingly being deployed for selected patients in cardiac arrest who do not attain a native circulation with conventional CPR (ECPR). This ELSO guideline is intended to be a practical guide to implementing ECPR and the early management following establishment of ECMO support. Where a paucity of high-quality evidence exists, a consensus has been reached amongst the authors to provide guidance to the clinician. This guideline will be updated as further evidence in this field becomes available.

Klíč. slova: extracorporeal cardiopulmonary resuscitation; extracorporeal membrane oxygenation; cardiopulmonary resuscitation; resuscitation

WoS:[000639305100004](#) Scopus:[2-s2.0-85102097994](#) PubMed:[33627592](#)

doi:[10.1097/MAT.0000000000001344](#)

594948, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

PLASEK, Jiri *Kor.* - WICHTERLE, Dan (*1.LF/520, VFN/N202*) - PEICHL, Petr - CIHAK, Robert - JARKOVSKY, Patrik - ROUBICEK, Tomas - STOJADINOVIC, Predrag - HASKOVA, Jana - KAUTZNER, Josef

Gender differences in major vascular complications of catheter ablation for atrial fibrillation.

In: Journal of Cardiovascular Electrophysiology, 2021, 32(3):647-656, 10 s. ISSN 1045-3873

IF = 2.871 (2020)

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Aims: Catheter ablation (CA) for atrial fibrillation (AF) has a considerable risk of procedural complications. Major vascular complications (MVCs) appear to be the most frequent. This study investigated gender differences in MVCs in patients undergoing CA for AF in a high-volume tertiary center. Methods: A total of 4734 CAs for AF (65% paroxysmal, 26% repeated procedures) were performed at our center between January 2006 and August 2018. Patients (71% males) aged 60 +/- 10 years and had a body mass index of 29 +/- 4 kg/m² at the time of the procedure. Radiofrequency point-by-point ablation was employed in 96.3% of procedures with the use of three-dimensional navigation systems and facilitated by intracardiac echocardiography. Pulmonary vein isolation was mandatory; cavotricuspid isthmus and left atrial substrate ablation were performed in 22% and 38% procedures, respectively. MVCs were defined as those that resulted in permanent injury, required intervention, or prolonged hospitalization. Their rates and risk factors were compared between genders. Results: A total of 112 (2.4%) MVCs were detected: 54/1512 (3.5%) in females and 58/3222 (1.8%) in males (p < .0001). On multivariate analysis, lower body height was the only risk factor for MVCs in females (p = .0005). On the contrary, advanced age was associated with MVCs in males (p = .006). Conclusion: Females have a higher risk of MVCs following CA for AF compared to males. This difference is driven by lower body size in females. Low body height in females and advanced age in males are independent predictors of MVCs. Ultrasound-guided venipuncture lowered the MVC rate in males.

Klíč. slova: ablation; atrial fibrillation; catheter; complications; risk; ultrasound- guided venipuncture; vascular

WoS:[000613898500001](#) Scopus:[2-s2.0-85100171407](#) PubMed:[33428307](#) doi:[10.1111/jce.14878](#)

602852, *původní článek* / RIV22: 1.LF ANO

MAYER, Otto (*FNP/2.IK, LFPI/2.IK, LFPI/BC*) *Kor.* - BRUTHANS, Jan (*LFPI/2.IK*) - SEIDLEROVÁ, Jitka (*FNP/2.IK, LFPI/2.IK, LFPI/BC*) - GELŽINSKÝ, Július (*FNP/2.IK, LFPI/2.IK, LFPI/BC*) - KUČERA, Radek (*FNP/OID*) - KARNOSOVÁ, Petra (*FNP/2.IK, LFPI/2.IK, LFPI/BC*) - MATEŘÁNKOVÁ, Markéta (*FNP/2.IK, LFPI/2.IK*) - RYCHECKÁ, Martina (*LFPI/2.IK*) - WOHLFAHRT, Peter (*1.LF/520*) - CÍFKOVÁ, Renata (*1.LF/520*) - FILIPOVSKÝ, Jan (*FNP/2.IK, LFPI/2.IK, LFPI/BC*) - VERMEER, Cees
Low vitamin K status, high sclerostin and mortality risk of stable coronary heart disease patients.

In: Biomarkers in Medicine, 2021, 15(16):1465-1477, 13 s. ISSN 1752-0363

IF = 2.851 (2020)

Financování: Q39; NV17-29520A; SVV260537;

Primární UK obor: Kardiologie

Anotace: Aim: We explored whether matrix Gla protein (MGP, natural calcification inhibitor) and sclerostin (glycoprotein responsible for osteoblast differentiation) interact in terms of mortality risk in coronary patients. Methods: 945 patients after myocardial infarction and/or coronary revascularization were followed in a prospective study. All-cause death, fatal or nonfatal cardiovascular events and heart failure hospitalizations were registered. Results: Either high desphospho-uncarboxylated MGP (dp-ucMGP) or high sclerostin were independently associated with 5-year all-cause/cardiovascular mortality. However, we observed an additional mortality risk in the coincidence of both factors. Concomitantly high dp-ucMGP (>= 884 pmol/l) plus sclerostin (>= 589 ng/l) were associated with increased all-cause mortality risk compared with 'normal' concentrations of both factors (HRR 3.71 [95% CI: 2.07-6.62, p < 0.0001]), or if only one

biomarker has been increased. A similar pattern was observed for fatal, but not for nonfatal cardiovascular events. Conclusion: Concomitantly high MGP and sclerostin indicate increased mortality risk, which probably reflects their role in cardiovascular calcifications.

Klíč. slova: all-cause death; cardiovascular death; dp-ucMGP; EUROASPIRE; heart failure; matrix gamma-carboxyglutamate protein (MGP); nonfatal cardiovascular events; Wnt/beta-catenin pathway

WoS:[000708973300001](#) Scopus:[2-s2.0-85119173049](#) PubMed:[34668399](#) doi:[10.2217/bmm-2021-0168](#)

593577, *přehledový článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

LINHART, Aleš ([1.LF/520](#), [VFN/N202](#)) *Kor.* - PALEČEK, Tomáš ([1.LF/520](#), [VFN/N202](#))

Narrative review on Morbus Fabry: diagnosis and management of cardiac manifestations.

In: Cardiovascular Diagnosis and Therapy, 2021, 11(2):650-660, 11 s. ISSN 2223-3652

IF = 2.845 (2020)

Financování: V-VFN; Q38;

Primární UK obor: Kardiologie

Anotace: Fabry disease (FD) is an X-linked lysosomal storage disorder due to reduced or undetectable α -galactosidase A (AGAL-A) enzyme activity caused by pathogenic variants in the AGAL-A gene (GLA). Tissue and organ changes are caused by widespread progressive accumulation of globotriaosylceramide (Gb3) and globotriaosylsphingosine (lysoGb3). The classical form of FD is multisystemic with cutaneous (angiokeratomas), neurological (peripheral neuropathy, premature stroke), renal (proteinuria and renal insufficiency), and cardiac involvement. Later onset variants may be limited to the heart. The objective of this review is to summarize the current knowledge on cardiac manifestations of FD and effects of targeted therapy. Cardiac involvement is characterized by progressive hypertrophy, fibrosis, arrhythmias, heart failure and sudden cardiac death (SCD). Targeted therapy is based on enzyme replacement therapy (ERT). Recently, small molecular chaperone, migalstat, became available for patients carrying amenable pathogenic GLA variants. The management of cardiac complications requires a complex approach. Several measures differ from standard clinical guidelines. Betablockers should be used with caution due to bradycardia risk, amiodarone avoided if possible, and anticoagulation used from the first appearance of atrial fibrillation. In Fabry cardiomyopathy SCD calculators are inappropriate. The awareness of FD manifestations is essential for early identification of patients and timely treatment initiation.

Klíč. slova: Fabry disease (FD); hypertrophic cardiomyopathy (HCM); enzyme replacement therapy (ERT); molecular chaperones

<https://cdt.amegroups.com/article/view/53932/pdf>

WoS:[000644663600030](#) Scopus:[2-s2.0-85105073019](#) PubMed:[33968642](#) doi:[10.21037/CDT-20-593](#)

594083, *jiný článek* / RIV22: 1.LF NE

KREUTZ, Reinhold - CÍFKOVÁ, Renata ([1.LF/520](#)) - KJELDSSEN, Sverre E. *Kor.* - NARKIEWICZ, Krzysztof - BURNIER, Michel - OPARIL, Suzanne - MANCIA, Giuseppe

In memoriam: Jiri Widimsky Sr. 1925-2020.

In: Blood Pressure, 2021, 30(2):140-142, 3 s. ISSN 0803-7051

IF = 2.835 (2020)

Primární UK obor: Kardiologie

Anotace: The sad news came to us of the passing of Jiří Widimský Sr. on November 11, 2020 at the age of 95 years.

WoS:[000600477900001](#) PubMed:[33342305](#) doi:[10.1080/08037051.2020.1859212](#)

596981, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

ZEMÁNEK, David ([1.LF/520](#), [VFN/N202](#)) *Kor.* - MAREK, Josef ([1.LF/520](#), [VFN/N202](#)) -

DOSTÁLOVÁ, Gabriela ([1.LF/520](#), [VFN/N202](#)) - MAGAGE, Sudheera Akalanka ([1.LF/520](#),

[VFN/N202](#)) - ROBLOVÁ, Lenka ([1.LF/520](#), [VFN/N202](#)) - KOVÁRNÍK, Tomáš ([1.LF/520](#), [VFN/N202](#)) -

LINHART, Aleš ([1.LF/520](#), [VFN/N202](#))

Usefulness of Alcohol Septal Ablation in the Left Ventricular Outflow Tract Obstruction in Fabry Disease Cardiomyopathy.

In: The American Journal of Cardiology, 2021, 150(July):110-113, 4 s. ISSN 0002-9149

IF = 2.778 (2020)

Financování: N-VFN Z; Q38;

Primární UK obor: Kardiologie

Anotace: Fabry disease (FD) is an X-linked linked genetic disorder caused by alpha-galactosidase A deficiency. The typical clinical manifestation is left ventricular hypertrophy, often mimicking hypertrophic cardiomyopathy (HC). In contrast to sarcomeric HC, left ventricular outflow tract obstruction (LVOTO) is less frequent. We describe 6 male patients with genetically confirmed FD and symptomatic LVOTO. All of them underwent a transcatheter alcohol septal ablation with an immediate effect on the obstruction in all cases and without any serious complications. The median LVOT maximal pressure gradient was 85 (60 to 170) mm Hg. The hemodynamic effect persisted during subsequent follow-up (ranging from 6 months to 16 years). Five patients reported substantial symptomatic improvement. Four patients were receiving specific FD therapy before the interventional procedure. In conclusion, alcohol septal ablation appears to be effective in the treatment of LVOTO in patients with FD and appears to be comparable to the limited published experience with surgical septal myectomy. Despite some important differences between FD HC and sarcomeric HC, the recommendation for treating LVOTO should be similar.

Klíč. slova: myectomy; involvement; outcomes

WoS:[000659342900017](#) Scopus:[2-s2.0-85105872935](#) PubMed:[34011439](#)

doi:[10.1016/j.amjcard.2021.03.042](#)

587811, původní článek / RIV22: 1.LF ANO

KRHUT, Jan *Kor.* - WOHLFAHRT, Peter - PUDICH, Jiří - KUFOVÁ, Eliška - BOROVIČKA, Vladimír - BÍLKOVÁ, Karolína - SÝKORA, Radek - MOKRIŠ, Jan - CÍFKOVÁ, Renata (*1.LF/520*) - ZACHOVAL, Roman (*3.LF/URO3LFTN*) - ZVARA, Peter

Cardiovascular safety of mirabegron in individuals treated for spinal cord injury- or multiple sclerosis-induced neurogenic detrusor overactivity.

In: International Urology and Nephrology, 2021, 53(6):1089-1095, 7 s. ISSN 0301-1623

IF = 2.370 (2020)

Financování: V-1LF; V-3LF;

Primární UK obor: Neurologie a neurovědy

Anotace: PURPOSE: To analyze cardiovascular safety of mirabegron in patients with spinal cord injury (SCI)- and multiple sclerosis (MS)-induced neurogenic detrusor overactivity (NDO) in a prospective, randomized, double-blind, placebo-controlled study. METHODS: Seventy-eight patients were enrolled into the study, and 66 of them were included into the final analysis. In 49 (74.2%), NDO developed due to suprasacral SCI, 17 (25.8%) suffered from NDO due to MS. Eleven patients were previously treated for hypertension and one for arrhythmia. All study participants received placebo for 2 weeks run-in period. Subsequently, eligible subjects were randomized for 4 weeks of active treatment with mirabegron 50 mg once daily (Group A; n = 32) or placebo (Group B; n = 34). Data from resting electrocardiography (ECG), 24-h ECG and blood pressure monitoring, and echocardiographic examination, were used for cardiovascular safety assessment. All reported variables were evaluated at time of randomization and at the end of the study. Longitudinal changes of variables within the groups and differences between the groups were assessed using nonparametric Kruskal-Wallis test, and $p \leq 0.05$ was considered statistically significant. RESULTS: No statistically significant longitudinal changes were found in safety variables, except for prolongation of QT interval in placebo group ($p = 0.0328$) recorded by resting ECG. No significant difference between the Groups A and B, in any of the variables, was observed. A single cardiovascular study drug-related adverse event was recorded in a patient with cervical SCI (3.13%). CONCLUSIONS: Our results suggest that mirabegron can be safely used in the treatment of patients with SCI- and MS-induced NDO.

Klíč. slova: Cardiovascular safety; Mirabegron; Multiple sclerosis; Neurogenic detrusor overactivity; Spinal cord injury

WoS:[000606282300001](#) Scopus:[2-s2.0-85098961304](#) PubMed:[33417146](#) doi:[10.1007/s11255-020-02774-7](#)

584029, kazuistika / RIV22: 1.LF ANO / RIV22: VFN ANO

MAREK, Josef (*1.LF/520, VFN/N202*) - KUČHYNKA, Petr (*1.LF/520, VFN/N202*) - MIKULENKA, Vladimír (*1.LF/690, VFN/N723*) - PALEČEK, Tomáš (*1.LF/520, VFN/N202*) - SIKORA, Jakub (*1.LF/650, VFN/N854*) - HŮLKOVÁ, Helena (*1.LF/310, 1.LF/650, VFN/N854*) - LAMBERT, Lukáš (*1.LF/620, VFN/N249*) - LÍNKOVÁ, Hana (*3.LF/Kardiologie*) - ZEMÁNEK, David (*1.LF/520, VFN/N202*) - TESAŘOVÁ, Markéta (*1.LF/650, VFN/N216*) - LINHART, Aleš (*1.LF/520, VFN/N202*) -

ZEMAN, Jiří (1.LF/650, VFN/N216) - **MAGNER, Martin** (1.LF/430, 1.LF/650, VFN/N216) *Kor.*
Combined valve replacement and aortocoronary bypass in an adult mucopolysaccharidosis type VII patient.

In: Cardiovascular Pathology, 2021, 50(January-February):107297, 5 s. ISSN 1054-8807
IF = 2.185 (2020)

Financování: [RVO-VFN64165](#); [CZ.2.16/3.1.00/24509](#); [Q26](#); [Q32](#); [Q38](#);

Primární UK obor: [Kardiologie](#)

Anotace: Mucopolysaccharidosis type VII (MPS VII) is a rare autosomal recessive lysosomal storage disorder. MPS VII is caused by mutations in the GUSB gene that encodes β -glucuronidase. Adult MPS VII patients present with musculoskeletal abnormalities, coarse features, and corneal clouding. Cardiac and valvular impairment are common; however, severe valvular disease necessitating surgery has not yet been reported. We present a 32-year-old male MPS VII patient admitted to our hospital with decompensated heart failure. We identified aortic valve disease with severe stenosis (valve area 0.69 cm²) and moderate regurgitation. Severe mitral valve stenosis (valve area 1 cm²) with moderate to severe regurgitation was also found in the patient. In addition, an occlusion of the right coronary artery (RCA) was documented. The patient underwent surgical replacement of the mitral and aortic valves with mechanical prostheses and implantation of a venous bypass graft to his RCA. The surgery led to a significant improvement of his clinical symptoms. Six months after the procedure, both mechanical valves function normally.

Histopathological assessment identified chronic inflammatory infiltrates, fibrosis and calcifications in both resected valves. Foamy cytoplasmic transformation was most evident in the valvular interstitial cells. The ultrastructural vacuolar abnormality seen in these cells corresponded to storage changes observed in other MPSs. In conclusion, we describe clinical findings and valvular pathology in an MPS VII patient with the first-reported successful combined surgical valve replacement and myocardial revascularization. The histological and ultrastructural analyses revealed that the lysosomal storage predominantly affected the valvular interstitial cells.

Klíč. slova: Sly syndrome; cardiac surgery; cardiomyopathy; coronary artery disease; mucopolysaccharidosis type VII; valve replacement; valvular disease

WoS:[000600975900012](#) Scopus:[2-s2.0-85092668290](#) PubMed:[33045360](#)

doi:[10.1016/j.carpath.2020.107297](#)

601122, *původní článek* / **RIV22: 1.LF ANO** / **RIV22: VFN ANO**

MEANI, Paolo *Kor.* - **MLČEK, Mikuláš** (1.LF/150) - **KOWALEWSKI, Mariusz** - **RAFFA, Giuseppe** Maria - **POPKOVÁ, Michaela** (1.LF/150) - **PILATO, Michele** - **ARCADIPANE, Antonio** - **BĚLOHLÁVEK, Jan** (1.LF/150, 1.LF/520, VFN/N202) - **LORUSSO, Roberto**

Transaortic or Pulmonary Artery Drainage for Left Ventricular Unloading in Venoarterial Extracorporeal Life Support: A Porcine Cardiogenic Shock Model.

In: Seminars in Thoracic and Cardiovascular Surgery, 2021, 33(3):724-732, 9 s. ISSN 1043-0679
IF = 2.006 (2020)

Financování: [V-1LF](#); [V-VFN](#);

Primární UK obor: [Fyziologie a patofyziologie](#)

Další UK obory: [Kardiologie](#);

Anotace: The peripheral venoarterial extracorporeal life support (V-A ECLS) in cardiogenic shock (CS) may lead to LV overload. The transaortic suction device (Impella, ABIOMED Inc., Danvers, MA) was compared to the pulmonary artery (PA) drainage, for LV unloading efficacy during V-A ECLS in a porcine cardiogenic shock model. A dedicated CS model included 12 swine (21 +- 1.8-week-old and weighing 54.3 +- 4.6 kg) supported with V-A ECLS and randomized to Impella or PA-related LV drainage. LV unloading and end-organ perfusion were evaluated through the PA catheter and LV pressure/volume analysis. The LV end-diastolic volume sharply dropped with Impella (143.6 +- 67.4 vs 123 +- 75.7 mL) compared to a slight decrease in the PA cannula group (134.1 +- 39.9 vs 130.1 +- 34.7 mL), resulting in an overall stroke work and pressure-volume area reductions with both techniques. However, stroke work reduction was more significant in the Impella group (V-A ECLS 3998.8 +- 2027.6 vs V-A ECLS + Impella 1796.9 +- 1033.9 mm Hg x mL, P = 0.016), leading to a more consistent pressure-volume area reduction (Impella reduction 34.7% vs PA cannula reduction 9.7%) In terms of end organ perfusion, central and mixed O₂ saturation improved with V-A ECLS, and subsequently, remaining unchanged with either Impella or PA cannula as unloading strategy (SVmO₂: Impella 86.0 +- 5.8 vs 87.8 +- 5.8; PA cannula 82.5 +- 10.7 vs 82.5 +- 11.3 %).

Transaortic suction and PA drainage provided effective LV unloading during V-A ECLS while maintaining adequate end-organ perfusion. Impella provides a greater LV unloading effect and reduces more effectively the total LV stroke work.

Klíč. slova: ECLS; Cardiogenic shock; LV unloading; Impella; Pulmonary drainage; LV venting; CS porcine model

WoS:[000697874700024](#) Scopus:[2-s2.0-85098107508](#) PubMed:[33171234](#)

doi:[10.1053/j.semtcvs.2020.11.001](#)

604205, *původní článek* / RIV22: 1.LF ANO

KOŇÁŘÍK, Miroslav (1.LF/1.LF) - **ŠRAMKO, Marek** (1.LF/520) - DORAZILOVA, Zora - BLAHA, Martin - **NETUKA, Ivan** (1.LF/690) - **IVÁK, Peter** (1.LF/690, 3.LF/FYZ3LF) - MALY, Jiri - SZÁRSZOI, Ondrej (2.LF/Ústav patologické fyziologie) *Kor.*

Effects of Acute Pump Speed Changes on Cerebral Hemodynamics in Patients With an Implantable Continuous-Flow Left Ventricular Assist Devices.

In: Physiological Research, 2021, 70(6):831-839, 9 s. ISSN 0862-8408

IF = 1.881 (2020)

Financování: V-1LF; Q38;

Primární UK obor: Fyziologie a patofyziologie

Anotace: Mechanical circulatory support (MCS) with an implantable left ventricular assist device (LVAD) is an established therapeutic option for advanced heart failure. Most of the currently used LVADs generate a continuous stream of blood that decreases arterial pulse pressure. This study investigated whether a change of the pulse pressure during different pump speed settings would affect cerebral autoregulation and thereby affect cerebral blood flow (CBF). The study included 21 haemodynamically stable outpatients with a continuous-flow LVAD (HeartMate II, Abbott, USA) implanted a median of 6 months before the study (interquartile range 3 to 14 months). Arterial blood pressure (measured by finger plethysmography) was recorded simultaneously with CBF (measured by transcranial Doppler ultrasound) during baseline pump speed (8900 rpm [IQR 8800; 9200]) and during minimum and maximum tolerated pump speeds (8000 rpm [IQR 8000; 8200] and 9800 rpm [IQR 9800; 10 000]). An increase in LVAD pump speed by 800 rpm [IQR 800; 1000] from the baseline lead to a significant decrease in arterial pulse pressure and cerebral blood flow pulsatility (relative change -24 % and -32 %, both $p < 0.01$), but it did not affect mean arterial pressure and mean CBF velocity (relative change 1 % and -1.7 %, $p=0.1$ and 0.7). In stable patients with a continuous-flow LVAD, changes of pump speed settings within a clinically used range did not impair static cerebral autoregulation and cerebral blood flow.

Klíč. slova: LVAD; Continuous flow; Plethysmography; Cerebral autoregulation

WoS:[000735395600002](#) Scopus:[2-s2.0-85122438843](#) PubMed:[34717062](#) doi:[10.33549/physiolres.934738](#)

604208, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

DUSÍK, Milan (1.LF/520, VFN/N202) - **FINGROVÁ, Zdeňka** (1.LF/520, VFN/N202) - **AMBROŽ, David** (1.LF/520, VFN/N202) - **JANSA, Pavel** (1.LF/520, VFN/N202) - **LINHART, Aleš** (1.LF/520, VFN/N202) - **HAVRÁNEK, Štěpán** (1.LF/520, VFN/N202) *Kor.*

The Role of Pulmonary Artery Wedge Pressure on the Incidence of Atrial Fibrillation and Atrial Tachycardias in Patients With Isolated Pre-capillary Pulmonary Hypertension.

In: Physiological Research, 2021, 70(6):841-849, 9 s. ISSN 0862-8408

IF = 1.881 (2020)

Financování: V-1LF; NV18-02-00027;

Primární UK obor: Kardiologie

Anotace: Atrial fibrillation and atrial tachycardias (AF/AT) have been reported as a common condition in patients with pulmonary hypertension (PH). As yet, limited data exists about the significance of the borderline post-capillary pressure component on the occurrence of AF / AT in patients with isolated pre-capillary PH. We retrospectively studied the prevalence of AF / AT in 333 patients (mean age 61 +/- 15 years, 44 % males) with pre-capillary idiopathic / familiar pulmonary arterial hypertension, and inoperable chronic thromboembolic pulmonary hypertension. The prevalence of AF / AT was analyzed in different categories of pulmonary artery wedge pressure (PAWP). In the study population overall, the mean PAWP was 10.5 +/- 3 mmHg, median of 11 mmHg, range 2-15 mmHg. AF / AT was diagnosed in 79 patients (24 %). The proportion of AF / AT among patients with PAWP below the median (<11 mmHg) was lower than

in subjects with PAWP between 12 and 15 mmHg, 30 (16 %) vs. 46 (35 %), $p=0.0001$. Compared to the patients with PAWP < 11 mmHg, subjects with PAWP between 12 and 15 mmHg were older (65 +/- 13 years vs. 58 +/- 16), with more prevalent arterial hypertension [100 (70 %) vs. 106 (55 %)] and diabetes mellitus [50 (35 %) vs. 48 (25 %)], showed larger size of the left atrium (42 +/- 7 vs. 40 +/- 6 mm), and higher values of right atrium pressure (12 +/- 5 vs. 8 +/- 5 mmHg), $p<0.05$ in all comparisons. The prevalence of AF / AT in the group studied increased with the growing post-capillary component.

Klíč. slova: Pulmonary hypertension; Atrial fibrillation; Atrial tachycardia; Atrial flutter; Pulmonary artery wedge pressure

WoS:[000735395600003](#) Scopus:[2-s2.0-85122455661](#) doi:[10.33549/physiolres.934706](#)

596549, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

BĚLOHLÁVEK, Jan ([1.LF/520](#), [VFN/N202](#)) *Kor.* - HUNZIKER, Patrick - DONKER, Dirk W. *Left ventricular unloading and the role of ECPella.*

In: European Heart Journal: Supplements, 2021, 23(Suppl. A):A27-A34, 8 s. ISSN 1520-765X
IF = 1.803 (2020)

Financování: [V-1LF](#); [V-VFN](#);

Primární UK obor: [Kardiologie](#)

Anotace: The main reason for the emergency implantation of venoarterial extracorporeal membrane oxygenation (VA-ECMO) is the restoration of adequate systemic perfusion, while protecting the failing heart and promoting myocardial recovery are equally important goals. Following initial haemodynamic stabilization and often the urgent revascularization of the culprit lesion, the clinical focus is then directed towards the most efficient strategy for cardioprotection. Frequent echocardiography measurements may help to estimate the degree of unwanted left ventricular (LV) overloading during VA-ECMO. Additionally, the estimation of high LV filling pressures by Doppler echocardiography or their (in-)direct measurement using a dedicated surgical left atrial pressure line and conventional pulmonary artery catheter in a wedge position or a pigtail catheter in the left ventricle can be performed. Mechanical overload of the left ventricle is the major adverse effect and an obvious mechanistic and prognostic challenge of contemporary ECMO care. Many efforts are under way to overcome this phenomenon by LV unloading, which was effectively achieved by the current combined approach using an axial decompression device, while novel technical developments and approaches are tested and urgently anticipated. The aim of this report is to introduce in depth pathophysiological background, current concepts, and future perspectives in LV unloading strategies.

Klíč. slova: Cardiogenic shock; Venoarterial ECMO; Cardioprotection; Cardiac arrest; Oxygenation; Unloading

WoS:[000646252700006](#) PubMed:[33815012](#) doi:[10.1093/eurheartj/suab006](#)

593610, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

HOLÝ, Richard ([3.LF/orl](#)) - HLOZKOVA, Tereza - PROCHÁZKOVÁ, Klára ([3.LF/orl](#)) - **KALFEŘT, David** ([1.LF/730](#)) *Kor.* - HYBNEROVÁ, Františka ([3.LF/3.LF](#)) - **EBELOVÁ, Denisa** ([1.LF/520](#), [VFN/N202](#)) - STREUBEL, Berthold - CHOVANEC, Martin ([3.LF/orl](#)) - GAL, Bretislav - **LINHART, Aleš** ([1.LF/520](#), [VFN/N202](#)) - ASTL, Jaromír ([3.LF/orl](#))

Prevalence of Fabry disease in men with tinnitus and sensorineural hearing loss.

In: Journal of Applied Biomedicine, 2021, 19(1):57-61, 5 s. ISSN 1214-021X
IF = 1.797 (2020)

Financování: [V-1LF](#); [N-VFN_CZ](#); [V-3LF](#);

Primární UK obor: [Otorinolaryngologie](#)

Anotace: Fabry disease (FD) is a lysosomal storage disorder caused by pathogenic mutations in the alpha-galactosidase A (AGALA) encoding gene region. This rare disease affects several organs including the cochlea-vestibular system. Tinnitus and sensorineural hearing loss (SNHL) are reported among otoneurological symptoms. Early and correct diagnosis of FD is important with a view to available therapy. The aim of the study was to screen for alpha-galactosidase deficiency in men with tinnitus/SNHL. A prospective multicentric study including consecutive patients with SNHL confirmed by tone audiometry or tinnitus evaluated (10/2016-8/2019). The diagnosis of AGALA deficiency was done by dry blood spot method using a threshold of 1.2 mu mol/l/h. Only men aged 18-60 were included. 181 patients were subject to evaluation. SNHL was reported in 126 (70%) patients, 50 (28%) patients had unilateral, 76 (42%) patients had bilateral SNHL. Tinnitus was found in 161 (89%) patients, unilateral in 96 (53%) and bilateral in 65

(36%) patients. Suspected FD was not detected in any patient; alpha-galactosidase The AGALA values ranged 1.5-8.8 mu mol/l/h, an average of 3.4 mu mol/l/h. None of the 181 patients participating in the study had AGALA levels below the threshold 1.2 mu mol/l/h. The occurrence of tinnitus and sensorineural hearing loss in men appears to be an irrelevant clinical sign for FD systematic screening.

Klíč. slova: Alpha-galactosidase; Fabry disease; Screening; Sensorineural hearing loss; Tinnitus

WoS:[000625384900006](#) Scopus:[2-s2.0-85103001027](#) PubMed:[34907716](#) doi:[10.32725/jab.2021.003](#)

584242, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

PAZDERNÍK, Michal (2.LF/Kardiologická klinika) *Kor.* - BEDANOVA, Hekena - CHEN, Zhi - KAUTZNER, Josef - MELENOVSKY, Vojtěch - MALEK, Ivan - SLAVCEV, Anatolij - BARTONOVA, Michaela - KARMAZIN, Vladimír - ECKHARDT, Tomáš - TOMASEK, Aleš - OZABALOVA, Eva - KOVÁRNÍK, Tomáš (1.LF/520, VFN/N202) - WOHLFAHRT, Peter - SONKA, Milan

Donor specific anti-HLA antibodies and cardiac allograft vasculopathy: A prospective study using highly automated 3-D optical coherence tomography analysis.

In: Transplant Immunology, 2021, 65(April):101340, 8 s. ISSN 0966-3274

IF = 1.708 (2020)

Financování: [V-VFN](#); [Q38](#);

Primární UK obor: [Kardiochirurgie](#)

Další UK obory: [Imunologie](#);

Anotace: INTRODUCTION: Recent studies suggested potential positive correlations between HLA-specific antibodies and development of cardiac allograft vasculopathy (CAV). METHODS: This prospective two-center study investigated early progression of CAV by coronary optical coherence tomography in 1 month and 12 months after heart transplantation (HTx) in 104 patients. Detection and characterization of donor specific (DSA) and MHC class-I polypeptide-related sequence A (MICA) antibodies were performed before, 1, 6 and 12 months after transplantation. RESULTS: During the first post-HTx year, we observed a significant reduction in the mean coronary luminal area ($P < .001$), and progression in mean intimal thickness (IT) ($P < .001$). DSA and anti-MICA occurred in 17% of all patients, but no significant relationship was observed between presence of DSA/anti-MICA and IT progression within 12 months after HTx. In contrast, we observed significant association between presence of DSA ($p=0.031$), de-novo DSA ($p=0.031$), HLA Class II DSA ($p=0.017$) and media thickness (MT) progression. CONCLUSION: Results of our study did not identify a direct association between presence of DSA/anti-MICA and intimal thickness progression in an early period after HTx. However, we found significant relationships between DSA and media thickness progression that may identify a newly recognized immune-pathological aspect of CAV.

Klíč. slova: Cardiac allograft vasculopathy; Donor specific antibodies; Heart transplant; Intimal thickness
WoS:[000633033800006](#) Scopus:[2-s2.0-85094857312](#) PubMed:[33069814](#) doi:[10.1016/j.trim.2020.101340](#)

594179, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

NÍZNANSKÝ, Matúš (1.LF/690, VFN/N723) *Kor.* - KAVÁN, Jan (1.LF/620, VFN/N249) - ZEMÁNKOVÁ, Petra (1.LF/140) - PRSKAVEC, Tomáš (1.LF/690, VFN/N723) - AMBROŽ, David (1.LF/520, VFN/N202) - JANSÁ, Pavel (1.LF/520, VFN/N202) - LINDNER, Jaroslav (1.LF/690, VFN/N723)

Computed tomography angiographic parameters of pulmonary artery as prognostic factors of residual pulmonary hypertension after pulmonary endarterectomy.

In: Journal of International Medical Research, 2021, 49(3):03000605211002024, 12 s. ISSN 0300-0605
IF = 1.671 (2020)

Financování: [V-VFN](#); [SVV260518](#);

Primární UK obor: [Kardiochirurgie](#)

Další UK obory: [Zobrazovací metody v lékařství](#);

Anotace: Objectives: This study aimed to retrospectively assess using computed tomography pulmonary angiography (CTPA) for predicting residual pulmonary hypertension (RPH) in patients with chronic thromboembolic pulmonary hypertension (CTEPH) after pulmonary endarterectomy (PEA). Methods: We retrospectively analyzed data of 131 patients with CTEPH who underwent PEA in our center (2008-2015). We measured several diameters of the pulmonary artery and thoracic aorta preoperatively. We evaluated the relationship between these measurements (and their indices) and signs of RPH represented by pulmonary artery systolic pressure (PASP) estimated by echocardiography. Results: Significant correlations were

observed between the aortopulmonary index and prediction of any residual hypertension and moderate/severe hypertension 1 year after PEA, and any residual hypertension and severe hypertension 2 years after PEA. The aortopulmonary index was significantly related to a reduction in PASP 1 year after the operation. A lower aortopulmonary index (≤ 0.88 for the ascending aorta and ≤ 0.64 for the descending aorta) predicted lower RPH. Conclusions: Preoperative CTPA parameters can be used to assess the risk of RPH after PEA. The aortopulmonary index has significant predictive value for RPH and a reduction in PASP after PEA. Lower values of the aortopulmonary index suggest a better outcome after PEA.

Klíč. slova: Chronic thromboembolic pulmonary hypertension; pulmonary endarterectomy; computed tomography angiography; residual pulmonary hypertension; aortopulmonary index; pulmonary artery systolic pressure

WoS:[000635628100001](#) Scopus:[2-s2.0-85103271466](#) PubMed:[33761801](#) doi:[10.1177/03000605211002024](#)

595049, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

PAZDERNÍK, Michal (2.LF/Kardiologická klinika) *Kor.* - HOLICKÁ, Mária - PELOUCH, Radek (FNHK/IKK) - PRECEK, Jan - WIDIMSKÝ, Jiří - PUDICH, Jiří - VANČATA, Radek (FNP/KARD, LFPI/KK) - ŠIRANEC, Michal (1.LF/520, VFN/N202) - BÖHM, Anna - BLECHOVÁ, Kamila (3.LF/Kardiologie) - BUTTA, Tadeáš (2.LF/Kardiologická klinika) - MIKULCOVÁ, Markéta - MIKULICA, Michal - WOHLFAHRT, Peter (1.LF/520)

Characteristics, management, and outcome of infective endocarditis in the Czech Republic: prospective data from the ESC EORP EURO-ENDO registry.

In: Bratislavské lekárske listy / Bratislava Medical Journal, 2021, 122(2):95-100, 6 s. ISSN 0006-9248 IF = 1.278 (2020)

Financování: I-FNHNK; V-VFN; Q38; I-FNP-05;

Primární UK obor: Kardiologie

Anotace: INTRODUCTION: Data describing contemporary profile of infective endocarditis (IE) in the Czech Republic are lacking. The aim of this study was to describe the current profile and outcomes of IE patients. METHODS: Prospectively collected data on consecutive patients admitted for IE diagnosis between April 2016 and March 2018 to 11 main tertiary care cardiac centers in the Czech Republic were used for this analysis. RESULTS: Among 208 patients, 88 patients (42.3 %) had native valve IE (NVIE), 56 patients (26.9 %) had prosthetic valve IE (PVIE), and 57 patients (27.4 %) had intracardiac device-related IE (CDRIE). The mean age was 61.66±15.54 years. Staphylococcus aureus was the most common etiological agent of IE (27.4 %), whereas Culture negative IE was present in 26.4 % patients. Surgery was performed during hospitalization in 112 (53.8 %) patients. In-hospital death occurred in 21.2 % patients, while 1-year mortality was 40.3 %. In patients, who had an indication for surgery, but the procedure was not performed, mortality was significantly higher ($p=0.002$). CONCLUSION: High proportion of culture negative IE and IE related to artificial intra-cardiac materials calls for action. Furthermore, we show that cardiac surgery should be more often contemplated, especially in the presence of risk factors as septic shock and congestive heart failure (Tab. 6, Fig. 1, Ref. 32).

Klíč. slova: infective endocarditis; mortality; surgery; Czech Republic

WoS:[000637614100002](#) Scopus:[2-s2.0-85100675247](#) PubMed:[33502876](#) doi:[10.4149/BLL_2021_014](#)

602330, *přehledový článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

KYŠPERSKÁ, Kristýna (1.LF/520) - KUČHYNKA, Petr (1.LF/520, VFN/N202) - PALEČEK, Tomáš (1.LF/520, VFN/N202) *Kor.*

Cardiac sarcoidosis: from diagnosis to treatment.

In: Biomedical Papers, 2021, 165(4):347-359, 13 s. ISSN 1213-8118

IF = 1.245 (2020)

Financování: V-VFN; Q38;

Primární UK obor: Kardiologie

Anotace: Sarcoidosis is a systemic granulomatous disease of unknown cause. Its clinical presentations are heterogeneous and virtually any organ system can be affected, most commonly lungs. The manifestations of cardiac sarcoidosis (CS) are heterogeneous depending on the extent and location of the disease and range from asymptomatic forms to life-threatening arrhythmias as well as to progressive heart failure. Cardiac involvement is associated with a worse prognosis. The diagnosis of CS is often challenging and requires a multimodality approach based on current international recommendations. Pharmacological treatment of CS

is based on administration of anti-inflammatory therapy (mainly corticosteroids), which is often combined with heart failure medication and/or antiarrhythmics. Nonpharmacological therapeutic approaches in CS cover pacemaker or defibrillator implantation, catheter ablations and heart transplantation. This review aims to summarize the current understanding of CS including its epidemiology, etiopathogenesis, clinical presentations, diagnostic approaches, and therapeutic possibilities.

Klíč. slova: granulomas; FDG-PET; CT; conduction disorders; ventricular arrhythmias; heart failure
WoS:[000722224100001](#) PubMed:[34671170](#) doi:[10.5507/bp.2021.057](#)

597365, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

JANSA, Pavel (1.LF/520, VFN/N202) *Kor.* - AMBROŽ, David (1.LF/520, VFN/N202) - KUCHAR, Jan - DYTRYCH, Vladimír (1.LF/520, VFN/N202) - LINDNER, Jaroslav (1.LF/690, VFN/N723) - LINHART, Aleš (1.LF/520, VFN/N202)

The impact of riociguat on clinical parameters and quality of life in patients with chronic thromboembolic pulmonary hypertension - results of a retrospective clinical registry.

In: Biomedical Papers, 2021, 165(2):157-161, 5 s. ISSN 1213-8118

IF = 1.245 (2020)

Financování: V-VFN; Q38;

Primární UK obor: Kardiologie

Anotace: Aims. The primary objective of the registry was to assess the impact of riociguat on clinical parameters and quality of life in patients with chronic thromboembolic pulmonary hypertension (CTEPH) that was inoperable or persistent/recurrent after pulmonary endarterectomy (PEA). In contrast to randomized pivotal trials, this non-interventional registry evaluated the effectiveness and safety of riociguat in a real-world setting. Methods. Retrospective data were collected from patients' charts as recorded in routine clinical practice from the initiation of riociguat therapy up to approximately 5 months and 1 year after this initiation. Results. In total, 51 patients from a single site were enrolled. After 5 months (mean duration) of riociguat treatment, the following improvements from baseline were observed: change of distance in the 6-minute walking distance (6MWD) (P=0.066); change of score from the quality of life questionnaire (EQ5D-5L) (P=0.020), and overall self-assessment of health status (P=0.001). New York Heart Association (NYHA) class improved in 24.3% of patients. After 11.2 months (mean duration) of riociguat treatment, the following improvements from baseline were observed: change of distance in the 6MWD test (P=0.006), and overall self-assessment of health status (P=0.009). NYHA class improved in 46.4% of patients. Riociguat was well tolerated. In total, 4 patients reported side effects, with hospitalization required in one case and 2 patients who had to discontinue the treatment. Annual survival rate was 89.1%. Conclusion. Riociguat improves functional NYHA class, distance in the 6MWD test and quality of life in a real-world patient population.

Klíč. slova: riociguat; chronic thromboembolic pulmonary hypertension; clinical parameters; quality of life; real-world population

WoS:[000660244900007](#) Scopus:[2-s2.0-85094180857](#) PubMed:[31974533](#) doi:[10.5507/bp.2019.061](#)

602819, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

SKALICKÁ, Pavlína (1.LF/650, 1.LF/750, VFN/N238) - ĎUĐÁKOVÁ, Ľubica (1.LF/650) - KLÍMOVÁ, Aneta (1.LF/750, VFN/N238) - HUŇA, Lukáš (1.LF/750, VFN/N238) - EVANS, J. - FORGÁČ, Martin (1.LF/600, VFN/N212) - ULMANOVÁ, Olga (1.LF/600, VFN/N212) - MEČÍŘ, Petr (1.LF/600, VFN/N212) - PALEČEK, Tomáš (1.LF/520, VFN/N202) - BEDNÁŘOVÁ, Vladimíra (1.LF/511, VFN/N205) - SKOVAJSA, V. - SKALNÍKOVÁ, V. - LIŠKOVÁ, Petra (1.LF/650, VFN/N238) *Kor.*

Hereditární gelsolinová amyloidóza - klinické projevy a molekulárně genetická příčina.

(AJ název: *Hereditary gelsolin amyloidosis - clinical symptoms and molecular genetic cause*)

In: Česká a slovenská neurologie a neurochirurgie, 2021, 84(5):449-455, 7 s. ISSN 1210-7859

IF = 0.350 (2020)

Financování: Q26; Q27; UNCE/MED/007; NV17-32318A; SVV260516;

Primární UK obor: Medicínská genetika

Další UK obory: Neurologie a neurovědy; Oftalmologie;

Anotace: Cíl: Cílem této studie bylo popsat klinické nálezy a molekulárně genetickou příčinu hereditární gelsolinové amyloidózy v rodině českého původu a u probandky slovenského původu. Soubor a metody:

Jedinci účastníci se studie podstoupili oční, neurologické, nefrologické a kardiologické vyšetření. Pomocí Sangerova sekvenování byl proveden screening genu gelsolin (GSN). Výsledky: Identifikovány byly dvě mutace, které byly již dříve popsány v souvislosti s hereditární gelsolinovou amyloidózou. Konkrétně u sedmi jedinců českého původu byla v heterozygotním stavu zjištěna c.640G>T p. (Asp214Tyr) a u probandky slovenského původu c.640G>A p. (Asp214Asn). U většiny nositelů patogenních variant byla přítomna lineární průhledná depozita v rohovkách, tato nebyla patrná pouze u dvou nejmladších mužů ve věku 24 a 14 let. U jedinců ve čtvrté dekádě života dominovaly jako klinické známky onemocnění kromě rohovkových depozit povislá oční víčka a syndrom karpálního tunelu. Dva nejstarší pacienti ve věku 65 a 68 let měli i další typické znaky gelsolinové amyloidózy: syndrom suchého oka, cutis laxa a parézu n. facialis. U 68letého muže byly dále zjištěny těžká polyneuropatie, ataxie, dysartrie a arytmie s nutností implantace kardiostimulátoru. Závěr: Hereditární gelsolinovou amyloidózu je třeba zahrnovat do diferenciální diagnózy neuropatií a amyloidóz neznámé etiologie. Vzhledem k tomu, že ukládání amyloidu v rohovkách je možné snadno detekovat, má oční vyšetření nezastupitelnou úlohu v diagnostickém procesu.

AJ anotace: Aim: The aim of this study was to describe the clinical findings and molecular genetic cause of hereditary gelsolin amyloidosis in a family of Czech origin and a proband of Slovak origin. Patients and methods: Study participants underwent ophthalmic, neurological, nephrological, and cardiological examination. Sanger sequencing was used to screen the gelsolin gene (GSN). Results: Two mutations previously reported to be associated with hereditary gelsolin amyloidosis were identified; c.640G>T p. (Asp214Tyr) in a heterozygous state was found in seven individuals of Czech origin and c.640G>A p. (Asp214Asn) in the proband of Slovak origin. Linear corneal deposits were observed in the majority of affected subjects with the exception of two men aged 24 and 14 years. In addition to corneal deposits, patients in their fourth decade of life had drooping eyelids and carpal tunnel syndrome. Two oldest patients, aged 65 and 68 years, had also other typical signs of gelsolin amyloidosis, including dry eye syndrome, cutis laxa, and facial nerve lesion. The 68-year-old subject also had severe polyneuropathy, ataxia, dysarthria, and arrhythmia necessitating pacemaker implantation. Conclusion: Hereditary gelsolin amyloidosis should be included in the differential diagnosis of neuropathies and amyloidosis of unknown etiology. Since amyloid deposition in the cornea is easily detectable, ophthalmic examination has a crucial role in the diagnosis of this disease.

Klíč. slova: hereditární gelsolinová amyloidóza; lineární depozita v rohovce; léze n. facialis; polyneuropatie

AJ klíč. slova: polyneuropathy; hereditary gelsolin amyloidosis; linear corneal deposits; facial nerve lesion

WoS:[000744166000003](https://www.scopus.com/search/formula?query=000744166000003) Scopus:[2-s2.0-85122544727](https://www.scopus.com/search/formula?query=2-s2.0-85122544727) doi:[10.48095/cccsnm2021449](https://doi.org/10.48095/cccsnm2021449)

603179, *kazuistika* / RIV22: 1.LF ANO / RIV22: VFN ANO

RÁDLOVÁ, Monika *Kor.* - ROSMUSOVÁ, Jana (1.LF/310, VFN/N854) - AMBROŽ, David (1.LF/520, VFN/N202) - ROUBÍČEK, Tomáš - POLÁŠEK, Rostislav

Těžká plicní hypertenze jako první projev karcinomu žaludku u mladého pacienta.

(AJ název: *Severe pulmonary hypertension as the first manifestation of gastric cancer in a young man*)

In: Cor et Vasa, 2021, 63(5):608-611, 4 s. ISSN 0010-8650

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Další UK obory: Patologie;

Anotace: Plicní hypertenze na podkladě plicní tumorózní mikroembolizace nebo plicní nádorové trombotické mikroangiopatie je vzácnou komplikací známého či dosud nedignostikovaného onkologického onemocnění. Uvádíme případ 37letého, dosud zdravého pacienta, který byl hospitalizován pro nově zachycené pravostranné srdeční selhání na podkladě těžké plicní hypertenze. Jednalo se o první projev dosud nedignostikovaného generalizovaného karcinomu žaludku. Pro rychlou progresi obtíží pacienta a jeho úmrtí do 48 hodin od příchodu do nemocničního zařízení byla příčina stavu zjištěna až při pitvě.

AJ anotace: Pulmonary hypertension caused by pulmonary tumor microembolism or pulmonary tumor thrombotic microangiopathy is a rare complication of already known or yet undiagnosed malignancy. We present a case of a 37-year-old previously healthy man who was diagnosed with right heart failure due to severe pulmonary hypertension. The underlying condition was an undiagnosed gastric cancer with micrometastases into lung arterioles. This was diagnosed at autopsy since the patient died within 48 hours of admission to the hospital.

Klíč. slova: Karcinom žaludku; Plicní nádorová hypertenze

AJ klíč. slova: Gastric cancer; Pulmonary tumor hypertension

WoS:[000731320800014](#) Scopus:[2-s2.0-85122144719](#) doi:[10.33678/cor.2021.059](#)

604551, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

HALUZÍK, Martin - KUBÍČKOVÁ, Markéta (*FNHK/IGMK, LFHK/IGMK*) - VESELÝ, Jiří - LINHART, Aleš (*1.LF/520, VFN/N202*) - PRÁZNÝ, Martin (*1.LF/530, VFN/N203*) - ŠKRHA, Jan (*1.LF/530, VFN/N203*) - TÁBORSKÝ, Miloš - MÁLEK, Filip (*3.LF/Interna*)

Expertní konsensus k praktickým aspektům spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí.

In: Hypertenze a kardiovaskulární prevence, 2021, 11(2):91-96, 6 s. ISSN 1805-4129

Primární UK obor: Kardiologie

Anotace: Diabetes mellitus je významným rizikovým faktorem rozvoje srdečního selhání a přítomnost diabetu zároveň zhoršuje prognózu nemocných se srdečním selháním. Jednou z významných novinek v léčbě srdečního selhání jsou glifloziny, které blokadou reabsorpce glukózy v proximálním tubulu díky inhibici sodíko-glukózového kotransporteru 2 vedou ke snížení glykemie navozením glykosurie. Glifloziny byly a stále jsou primárně využívány jako účinná antidiabetika, která kromě zlepšení kompenzace diabetu snižují tělesnou hmotnost a krevní tlak bez zvýšení rizika hypoglykemie. Studie z posledních let prokázaly, že glifloziny u diabetiků významně snižují riziko kardiovaskulárních komplikací a hospitalizace pro srdeční selhání. Nedávno ukončené studie s dapagliflozinem a empagliflozinem navíc ukázaly významné snížení kombinace smrti z kardiovaskulárních příčin a hospitalizace pro srdeční selhání u pacientů se srdečním selháním s redukovanou ejekční frakcí, a to jak u diabetiků, tak i nediabetiků. Cílem tohoto článku je formou expertního konsenzu shrnout praktické aspekty spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí v kontextu současných doporučení a dalších léčebných možností.

Klíč. slova: Srdeční selhání s redukovanou ejekční frakcí; glifloziny; kardiovaskulární komplikace; diabetes mellitus 2. typu

<http://www.hypertension.cz/sqlcache/hypertenze-2-2021.pdf>

604554, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

DOSTÁLOVÁ, Gabriela (*1.LF/520, VFN/N202*) *Kor.* - ROBLOVÁ, Lenka (*1.LF/520, VFN/N202*) - KYŠPERSKÁ, Kristýna (*1.LF/520*) - SVOBODOVÁ MACHAJOVÁ, Eva (*1.LF/520*) - KŘEČKOVÁ, Markéta (*VFN/N202*) - LINHART, Aleš (*1.LF/520, VFN/N202*)

Fabryho choroba z pohledu ambulantního kardiologa.

In: Acta Medicinæ, 2021, 10(1-2):58-62, 3 s. ISSN 1805-398X

Primární UK obor: Kardiologie

Anotace: Aktuální dvojčíslo časopisu Acta medicinae je zaměřeno na téma kardiologie a diabetologie.

Klíč. slova: Fabryho choroba; postižení myokardu

595558, *recenze* / RIV22: 1.LF NE

TUKA, Vladimír (*1.LF/520*) *Kor.*

František Várnay a kol: Spiroergometrie v kardiologii a sportovní medicíně.

In: Cor et Vasa, 2021, 63(2):287-287, 1 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Anotace: Zpráva o knize: František Várnay a kol: Spiroergometrie v kardiologii a sportovní medicíně.

Praha: Grada Publishing, a.s., 2020, 312 s. ISBN: 978-80-271-2552-4 (P), ISBN 978-80-271-1447-4 (E).

<https://www.e-corevasa.cz/pdfs/cor/2021/02/10.pdf>

WoS:[000647674600010](#)

596237, *kazuistika* / RIV22: 1.LF ANO

PEICHL, Petr *Kor.* - ŠRAMKO, Marek (*1.LF/520*) - CVEK, Jakub - KAUTZNER, Josef

A case report of successful elimination of recurrent ventricular tachycardia by repeated stereotactic radiotherapy: the importance of accurate target volume delineation.

In: European Heart Journal - Case Reports [online], 2021, 5(2):ytaa516, 5 s. ISSN 2514-2119

Financování: V-1LF;

Primární UK obor: Kardiologie

Anotace: Background: Stereotactic body radiotherapy (SBRT) has emerged recently as a novel therapeutic alternative for patients with ventricular tachycardias (VTs) resistant to conventional treatment. Nevertheless, many aspects related to SBRT are currently unknown. Case summary: A 66-year-old man with ischaemic heart disease, a history of coronary artery bypass graft surgery and left ventricular dysfunction was referred for recurrent symptomatic episodes of slow VT (108 b.p.m.). The arrhythmia was resistant to antiarrhythmic drug therapy with amiodarone and repeated catheter ablation. The patient was scheduled to SBRT, however, the first session failed to suppress VT recurrences. After 20 months, the patient underwent re-do ablation procedure that revealed a newly developed scar with its core adjacent to the presumed critical part of the VT substrate. Catheter ablation again failed to eliminate VT and the second session of SBRT was scheduled. To improve targeting of the VT substrate for SBRT, we applied our recently developed original method for integration of data from the electroanatomical mapping system with computer tomography images. The second session of SBRT with precise targeting using the novel strategy led within 3 months to the successful elimination of VT. Discussion: This case report describes a patient in whom the recurrent VT was abolished only by properly targeted SBRT. Above all, the case highlights the importance of precise identification and targeting for SBRT. Our case also documents in vivo, by electroanatomical voltage mapping, the development of SBRT-related myocardial lesion. This represents an important mechanistic proof of the concept of SBRT.

Klíč. slova: Ventricular tachycardia; Catheter ablation; Stereotactic radiotherapy; Case report

WoS:[000646067400015](https://doi.org/10.1093/ehjcr/ytaa516) PubMed:[33598611](https://doi.org/10.1093/ehjcr/ytaa516) doi:[10.1093/ehjcr/ytaa516](https://doi.org/10.1093/ehjcr/ytaa516)

597494, jiný článek / RIV22: 1.LF NE / RIV22: VFN NE

TÁBORSKÝ, Miloš *Kor.* - KAUTZNER, Josef - FEDORCO, Marián - ČURILA, Karol (3.LF/Kardiologie) - WÜNSCHOVÁ, Hanka - PYSZKO, Jan - NOVÁK, Miroslav - KOZÁK, Milan - VÁLEK, Martin (1.LF/520, VFN/N202) - POLÁŠEK, Rostislav - KEPRT, Patrik - KUBÍČKOVÁ, Milena - PLÁŠEK, Jiří - GLOGER, Vít - BULAVA, Alan - VANČURA, Vlastimil (FNP/KARD, LFPI/KK) - SKÁLA, Tomáš *Konsenzuální dokument expertů Evropské asociace srdečního rytmu (EHRA) a praktický průvodce po optimální technice implantace kardiostimulátorů a implantabilních kardioverterů-defibrilátorů. Překlad dokumentu připravený Českou kardiologickou společností.*

(AJ název: *EHRA expert consensus statement and practical guide on optimal implantation technique for conventional pacemakers and implantable cardioverter-defibrillators. Translation of the document prepared by the Czech Society of Cardiology*)

In: Cor et Vasa, 2021, 63(3):396-416, 21 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Anotace: Celosvětový nárůst počtu implantovaných zařízení zvyšuje potřebu školení a výcviku v oblasti implantace kardiostimulátorů a implantabilních kardioverterů-defibrilátorů. I když existují mezinárodní doporučení pro indikování a programování těchto zařízení, zatím nebylo dosaženo konsenzu ohledně techniky implantace. Tento dokument je výsledkem systematické rešerše a přehledů literatury a konsenzu mezinárodní pracovní skupiny. Jeho cílem je vyplnit tuto mezeru vypracováním standardů pro implantaci uvedených zařízení

AJ anotace: With the global increase in device implantations, there is a growing need to train physicians to implant pacemakers and implantable cardioverter-defibrillators. Although there are international recommendations for device indications and programming, there is no consensus to date regarding implantation technique. This document is founded on a systematic literature search and review, and on consensus from an international task force. It aims to fill the gap by setting standards for device implantation.

AJ klíč. slova: Consensus document; Implantable cardioverter-defibrillator; Implantation; Pacemaker; Recommendations

WoS:[000742851900017](https://doi.org/10.1093/ehjcr/ytaa516) Scopus:[2-s2.0-85111518543](https://doi.org/10.1093/ehjcr/ytaa516) doi:[10.33678/cor.2021.083](https://doi.org/10.1093/ehjcr/ytaa516)

602356, přehledový článek / RIV22: 1.LF NE / RIV22: VFN NE

HALUZÍK, Martin *Kor.* - KUBÍČKOVÁ, Markéta (FNHK/IGMK, LFHK/IGMK) - VESELÝ, Jiří - LINHART, Aleš (1.LF/520, VFN/N202) - PRÁZNÝ, Martin (1.LF/530, VFN/N203) - ŠKRHA, Jan (1.LF/530, VFN/N203) - TÁBORSKÝ, Miloš - MÁLEK, Filip (3.LF/Interna)

Expertní konsenzus k praktickým aspektům spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí.

In: Acta Medicinæ, 2021, 10(14):25-30, 6 s. ISSN 1805-398X

Primární UK obor: Kardiologie

Další UK obory: Endokrinologie, diabetologie a metabolismus;

Anotace: Diabetes mellitus je významným rizikovým faktorem rozvoje srdečního selhání a přítomnost diabetu zároveň zhoršuje prognózu nemocných se srdečním selháním. Jednou z významných novinek v léčbě srdečního selhání jsou glifloziny, které blokádu reabsorpce glukózy v proximálním tubulu díky inhibici sodíko-glukózového kotransporteru 2 vedou ke snížení glykemie navozením glykosurie. Glifloziny byly a stále jsou primárně využívány jako účinná antidiabetika, která kromě zlepšení kompenzace diabetu snižují tělesnou hmotnost a krevní tlak bez zvýšení rizika hypoglykemie. Studie z posledních let prokázaly, že glifloziny u diabetiků významně snižují riziko kardiovaskulárních komplikací a hospitalizace pro srdeční selhání. Nedávno ukončené studie s dapagliflozinem a empagliflozinem navíc ukázaly významné snížení kombinace smrti z kardiovaskulárních příčin a hospitalizace pro srdeční selhání u pacientů se srdečním selháním s redukovanou ejekční frakcí, a to jak u diabetiků, tak i nediabetiků. Cílem tohoto článku je formou expertního konsenzu shrnout praktické aspekty spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí v kontextu současných doporučení a dalších léčebných možností.

Klíč. slova: srdeční selhání s redukovanou ejekční frakcí; glifloziny; kardiovaskulární komplikace; diabetes mellitus 2.typu

603174, *editorial* / RIV22: 1.LF NE / RIV22: VFN NE

ASCHERMANN, Michael ([1.LF/520](#), [VFN/N202](#)) Kor.

Číslo Cor et Vasa věnované poosmé kazuistickým sdělením.

(AJ název: *Issue of Cor et Vasa dedicated for the eighth time to case reports*)

In: Cor et Vasa, 2021, 63(5):534-534, 1 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Anotace: Kazuistická sdělení patří mezi uznávané publikace, které představují jednak příspěvky zaměřené na vzácné klinické případy, jednak často jsou první publikací studujících lékařů, kteří tak vstupují do oblasti publikační činnosti. Již poosmé proto věnujeme páté číslo ročníku Cor et Vasa publikaci kazuistik.

WoS:[000731320800001](#) Scopus:[2-s2.0-85122148570](#) doi:[10.33678/cor.2021.116](#)

603865, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

HALUZÍK, Martin Kor. - KUBÍČKOVÁ, Markéta (*FNHK/IGMK, LFHK/IGMK*) - VESELÝ, Jiří -

LINHART, Aleš ([1.LF/520](#), [VFN/N202](#)) - PRÁZNÝ, Martin ([1.LF/530](#), [VFN/N203](#)) - ŠKRHA, Jan

([1.LF/530](#), [VFN/N203](#)) - TÁBORSKÝ, Miloš - MÁLEK, Filip (*3.LF/Interna*)

Expertní konsenzus k praktickým aspektům spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí.

(AJ název: *Expert consensus on the practical aspects of the cooperation of cardiologist and diabetologist in the management of the patients with chronic heart failure and reduced ejection fraction*)

In: Diabetologie, metabolismus, endokrinologie, výživa, 2021, 24(4):152-157, 6 s. ISSN 1211-9326

Primární UK obor: Kardiologie

Anotace: Diabetes mellitus je významným rizikovým faktorem rozvoje srdečního selhání a přítomnost diabetu zároveň zhoršuje prognózu nemocných se srdečním selháním. Jednou z významných novinek v léčbě srdečního selhání jsou glifloziny, které blokádu reabsorpce glukózy v proximálním tubulu díky inhibici sodíko-glukózového kotransporteru 2 vedou ke snížení glykemie navozením glykosurie. Glifloziny byly a stále jsou primárně využívány jako účinná antidiabetika, která kromě zlepšení kompenzace diabetu snižují tělesnou hmotnost a krevní tlak bez zvýšení rizika hypoglykemie. Studie z posledních let prokázaly, že glifloziny u diabetiků významně snižují riziko kardiovaskulárních komplikací a hospitalizace pro srdeční selhání. Nedávno ukončené studie s dapagliflozinem a empagliflozinem navíc ukázaly významné snížení kombinace smrti z kardiovaskulárních příčin a hospitalizace pro srdeční selhání u pacientů se srdečním selháním s redukovanou ejekční frakcí, a to jak u diabetiků, tak i nediabetiků. Cílem tohoto článku je formou expertního konsenzu shrnout praktické aspekty spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí v kontextu současných doporučení a dalších léčebných možností.

AJ anotace: Diabetes mellitus is an important risk factor for the development of heart failure and presence of diabetes significantly worsens heart failure outcome. Introduction of gliflozins to the therapy of heart

failure is one of the most important novelty. Gliflozins reduce glucose level by the sodium-glucose cotransporter 2 inhibition in proximal tubulus in the kidney. Gliflozins are used as effective antidiabetic drugs with improvement of glycemic control without risk of hypoglycemia, gliflozins decrease blood pressure and patients weight. Recent studies have shown that gliflozins significantly reduce risk of cardiovascular complications and heart failure hospitalizations in diabetic patients. Clinical trials with dapagliflozin and empagliflozin have shown reduction of the risk of cardiovascular death and heart failure hospitalization in the patients with heart failure and reduced ejection fraction both in the patients with diabetes and in the patients without diabetes. The aim of the expert consensus is to summarize practical aspects in the cooperation of cardiologist and diabetologist in the management of the patients with heart failure and reduced ejection fraction in the context of the current guidelines and other treatment options.

AJ klíč. slova: heart failure with reduce ejection fraction; gliflozins; cardiovascular complications; type 2 diabetes mellitus

https://www.tigis.cz/images/stories/DMEV/2021/DMEV_4_2021/haluz_DMEV_4_2021.pdf

604586, přehledový článek / RIV22: 1.LF NE / RIV22: VFN NE

KRAJČOVIECHOVÁ, Alena - WOHLFAHRT, Peter - BRUTHANS, Jan (*LFPI/2.IK*) - ŠULC, Pavel - LÁNSKÁ, Věra - EREMIÁŠOVÁ, Lenka (*1.LF/520, VFN/N202*) - PUDIL, Jan (*1.LF/520, VFN/N202*) - LINHART, Aleš (*1.LF/520, VFN/N202*) - FILIPOVSKÝ, Jan (*FNP/2.IK, LFPI/2.IK*) - MAYER, Otto (*FNP/2.IK, LFPI/2.IK*) - WIDIMSKÝ, Jiří (*1.LF/530, VFN/N203*) - BLAHA, Milan - BORGHI, Claudio - CÍFKOVÁ, Renata (*1.LF/520*)

Kyselina močová a kardiovaskulární riziko.

In: Hypertenze a kardiovaskulární prevence, 2021, 11(2):100-101, 2 s. ISSN 1805-4129

Primární UK obor: Kardiologie

Anotace: V poslední dekádě je věnována zvýšená pozornost kyselině močové (KM) jako nezávislému rizikovému faktoru kardiovaskulární (KV) morbidity a mortality. Rutinní stanovení sérové KM je doporučováno u všech hypertoniků. Význam KM v etiologii KV onemocnění byl prokázán i při hladině sérové KM pod horním limitem standartního referenčního rozmezí. Naším cílem bylo stanovit, jaká mezní hodnota (cut-off) sérové KM je spojena se zvýšenou KV a celkovou mortalitou v obecné české populaci.

Klíč. slova: kyselina močová; kardiovaskulární onemocnění;

<http://www.hypertension.cz/sqlcache/hypertenze-2-2021.pdf>

596416, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

LINHART, Aleš (*1.LF/520, VFN/N202*) *Kor.*

Jak prodloužit životy našich pacientů ve zdraví? A lze to?

(AJ název: *How to prolong the lives of our patients in health? And is it possible?*)

In: Vnitřní lékařství, 2021, 67(2):125-129, 5 s. ISSN 0042-773X

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Zdá se, že zatím dokážeme kardiovaskulární (KV) onemocnění spíše zaléčit než vyléčit. Prodlužujeme tak pacientům život, nikoliv ale život ve zdraví. Jak ukázala analýza dat z britské BioBank, dlouhodobá expozice geneticky determinované nízké hladině LDL cholesterolu a nízkému tlaku krve je spojena s nižším KV rizikem. To je velmi příznivá zpráva v situaci, kdy má medicína prostředky pro časný záchyt a intervenci těchto KV rizikových faktorů. Dokážeme tak předcházet časnému stárnutí cév. Stačí tyto prostředky uplatňovat v praxi a u osob s včas zachycenou hypertenzí a dyslipidemií vést léčbu rychle k doporučeným cílovým hodnotám při využití násobícího se přínosu současné kompenzace více rizikových faktorů. To vše u informovaného pacienta.

AJ anotace: Recent data suggest that cardiovascular diseases are treatable but not curable. We are prolonging our patients lives, unfortunately not their life years spent in health. As shown by the British BioBank trial a longstanding exposition to genetically determined low LDL substantially lower cardiovascular risk. This is particularly relevant considering that modern medicine makes possible to detect and safely intervene these risk factors in a timely fashion. This approach should be able to prevent early vascular aging. These methods should be applied in patients early after detection of high blood pressure and hypercholesterolemia and treat them to target levels. This approach may be particularly rewarding in a well informed patient considering the mutual potentiation of multiple risk factors.

Klíč. slova: časná stárnutí cév; arteriální hypertenze; hypercholesterolemie

AJ klíč. slova: early vascular aging; arterial hypertension; hypercholesterolemia
Scopus:[2-s2.0-85107447198](https://doi.org/10.36290/VNL.2021.026) doi:[10.36290/VNL.2021.026](https://doi.org/10.36290/VNL.2021.026)

596466, komentář / RIV22: 1.LF NE / RIV22: VFN NE

KARETOVÁ, Debora ([1.LF/520](#), [VFN/N202](#))

Venofarmaka s flavonoidy základem léčby chronického žilního onemocnění.

In: Remedia, 2021, 31(1):98-98, 1 s. ISSN 0862-8947

Primární UK obor: Angiologie a vaskulární chirurgie

Další UK obory: Farmakologie a toxikologie;

Anotace: Komentář k analýze složení směsi flavonoidů v tabletách Diozen 500 mg metodou UHPLC.

596523, komentář / RIV22: 1.LF NE / RIV22: VFN NE

KARETOVÁ, Debora ([1.LF/520](#), [VFN/N202](#))

Venofarmaka s flavonoidy základem léčby chronického žilního onemocnění.

In: Farmakoterapie, 2021, 17(1):98-98, 1 s. ISSN 1801-1209

Primární UK obor: Farmakologie a toxikologie

Anotace: Komentář k analýze složení směsi flavonoidů v tabletách Diozen 500 mg metodou UHPLC.

597468, *přehledový článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

ŠIMEK, Stanislav ([1.LF/150](#), [1.LF/520](#), [VFN/N202](#)) *Kor.*

Problémy péče o nemocné se STEMI v době koronavirové pandemie.

(AJ název: *Problems of care for STEMI patients in coronavirus pandemic*)

In: Intervenční a akutní kardiologie, 2021, 20(2):93-97, 5 s. ISSN 1213-807X

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: STEMI u nemocného s covid-19 není stejná nemoc jako STEMI bez covid-19. Nemocní s covid-19 a STEMI mají častěji srdeční selhání a srdeční zástavu, rozsáhlejší intrakoronární trombózu, významně vyšší riziko akutní trombózy stentu, kardiogenního šoku po PCI a významně vyšší nemocniční kardiální i nekardiální mortalitu. Je indikována agresivnější antitrombotická léčba. I v covidové době je nutná maximální snaha o co nejrychlejší zajištění reperfuze léčby a dodržení časových limitů pro její provedení. Velmi důležité jsou nácvik používání ochranných pomůcek proti šíření infekce a vakcinace.

AJ anotace: It is apparent that STEMI in covid-19 infected patients is not the same disease process as STEMI that without covid-19 infection. Patients with STEMI and covid-19 have a higher risk of heart failure, cardiac arrest, cardiogenic shock, greater intracoronary thrombosis and stent thrombosis, resulting in higher cardiac and non-cardiac mortality. Aggressive antithrombotic treatment is recommended. Even in the covid era it is essential to insist on timely treatment of STEMI. Training of cardiac catheterization personnel on how to use personal protective equipment as well as vaccination are crucial to limit the risk of acquiring infection.

Klíč. slova: STEMI; covid; léčba; prognóza

AJ klíč. slova: STEMI; covid; treatment; prognosis

Scopus:[2-s2.0-85111989900](https://doi.org/10.36290/kar.2021.027) doi:[10.36290/kar.2021.027](https://doi.org/10.36290/kar.2021.027)

601281, *přehledový článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

TUKA, Vladimír ([1.LF/520](#)) *Kor.* - **LINHART, Aleš** ([1.LF/520](#), [VFN/N202](#))

Proč stále nedosahujeme cílových hodnot krevního tlaku.

(AJ název: *Why we still don't achieve blood pressure targets*)

In: Vnitřní lékařství, 2021, 67(6):368-371, 4 s. ISSN 0042-773X

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Arteriální hypertenze je jedním z hlavních ovlivnitelných rizikových faktorů aterosklerotického kardiovaskulárního onemocnění. Prevalence hypertenze zůstává vysoká a její kompenzace je stále neuspokojivá. U většiny pacientů bychom se měli snažit dosáhnout hodnot krevního tlaku v ordinaci pod 140/90 mmHg a u těch, kteří léčbu dobře tolerují, i hodnoty okolo 130/80 mmHg, a to co nejdříve, ideálně do 3 měsíců od diagnózy. Zatímco režimová opatření jsou důležitá a neměli bychom je opomíjet, u většiny hyperteniků se nevyhneme farmakoterapii, převážně s využitím kombinace dvou a více antihypertenziv.

Dosahování cílových hodnot krevního tlaku, které rozhodují o prognóze pacienta, stále není ideální. Na dosahování cílových hodnot TK se podílí faktory jak na straně lékaře, tak na straně pacienta. V předkládaném článku jsou nabízeny různé přístupy k dosažení cílových hodnot krevního tlaku, např. použití fixních kombinací.

AJ anotace: Arterial hypertension is one of the main modifiable risk factors for atherosclerotic cardiovascular disease. The prevalence of hypertension remains high, and its compensation is still unsatisfactory. In most patients, we should try to achieve office blood pressure values below 140/90 mm Hg, and in those who tolerate treatment well, values around 130/80 mm Hg, as soon as possible, ideally within three months of diagnosis. While lifestyle interventions are essential and should not be overlooked, most hypertensive patients cannot avoid pharmacotherapy, primarily using a combination of two or more antihypertensives. Achieving blood pressure targets, which determine the patient's prognosis, is still not ideal. Factors on both the physician's side and the patient's side contribute to achieving blood pressure targets. The review article offers various approaches to achieving blood pressure targets, such as using fixed combinations.

Klíč. slova: adherence k léčbě; arteriální hypertenze; fixní kombinace; perzistence v léčbě; terapeutická inercie

AJ klíč. slova: arterial hypertension; fixed combination; therapeutic inertia; treatment adherence; treatment persistence

Scopus:[2-s2.0-85119702154](#) doi:[10.36290/vnl.2021.095](#)

603178, *doporučený postup* / RIV22: 1.LF ANO / RIV22: VFN ANO

MELENOVSKÝ, Vojtěch *Kor.* - TÁBORSKÝ, Miloš - LINHART, Aleš ([1.LF/520](#), [VFN/N202](#)) - MALÍK, Jan ([1.LF/530](#), [VFN/N203](#)) - MÁLEK, Filip - PUDIL, Radek (*FNHK/IKK*, *LFHK/IKK*) - KREJČÍ, Jan - ŠIRANEC, Michal ([1.LF/520](#), [VFN/N202](#))

Expertní konsenzus k významu deficitu železa a možnosti jeho korekce u pacientů se srdečním selháním.
(AJ název: *Expert consensus statement on the significance of iron deficiency and the possibilities of its correction in patients with heart failure*)

In: Cor et Vasa, 2021, 63(5):627-629, 3 s. ISSN 0010-8650

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Mezi časté nekardiovaskulární komorbidity srdečního selhání patří anémie a deficit železa. Deficit železa se vyskytuje u pacientů s chronickým srdečním selháním nezávisle na anémii až u 55 % nemocných, v případě akutního srdečního selhání včetně akutní dekompenzace chronického srdečního selhání až u 80 % pacientů. Intravenózní aplikace železa u pacientů se srdečním selháním a deficitem železa je nyní součástí Doporučení pro diagnostiku a léčbu srdečního selhání Evropské kardiologické společnosti 2021 s cílem zlepšit symptomy, toleranci zátěže a kvalitu života nemocných s chronickým srdečním selháním a snížit riziko následné hospitalizace u pacientů po akutní dekompenzaci.

AJ anotace: Anemia and iron deficiency are common non-cardiovascular comorbidities of heart failure. The prevalence of iron deficiency is up to 55 % of patients with chronic heart failure and up to 80 % subjects with acute heart failure including acute decompensated heart failure, independently on anemia. The European Society of Cardiology Heart Failure Guidelines 2021 recommend intravenous iron replacement in patients with heart failure and iron deficiency to improve symptoms, stress tolerance and quality of life in chronic heart failure and to reduce risk of subsequent hospitalization after acute decompensation.

Klíč. slova: srdeční selhání; deficit železa; intravenózní substituce

AJ klíč. slova: heart failure; iron deficiency; intravenous replacement

WoS:[000731320800018](#) Scopus:[2-s2.0-85122124886](#) doi:[10.33678/cor.2021.114](#)

603180, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

MÁLEK, Filip *Kor.* - MÁLEK, Ivan - TÁBORSKÝ, Miloš - VÍTOVEC, Jiří - KREJČÍ, Jan - ŠPINAROVÁ, Lenka - ŠPINAR, Jindřich - PALEČEK, Tomáš ([1.LF/520](#), [VFN/N202](#)) - VESELÝ, Jiří - MELENOVSKÝ, Vojtěch - PUDIL, Radek (*FNHK/IKK*, *LFHK/IKK*) - OŠTÁDAL, Petr - LINHART, Aleš ([1.LF/520](#), [VFN/N202](#))

Praktické aspekty zakládání ambulancí srdečního selhání.

(AJ název: *Practical aspects of establishing of heart failure clinics*)

In: Cor et Vasa, 2021, 63(5):619-625, 7 s. ISSN 0010-8650

Financování: I-FNHK; I-LFHK; V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Tento dokument je vypracován výborem České asociace srdečního selhání a navazuje na "Stanovisko výboru České asociace srdečního selhání ČKS k organizaci ambulancí srdečního selhání", které bylo publikováno v Cor et Vasa v roce 2020.

AJ anotace: This document was prepared by the Board of the Czech Heart Failure Association and it follows "the Expert consensus statement of the Czech Heart Failure Association of the Czech Society of Cardiology on the management of heart failure clinics" that was published in the Cor et Vasa journal in 2020.

Klíč. slova: Organizace péče; Srdeční selhání

AJ klíč. slova: Heart failure; Organization of care

WoS:[000731320800017](https://www.scopus.com/search/form.do?query=000731320800017) Scopus:[2-s2.0-85122136064](https://www.scopus.com/search/form.do?query=2-s2.0-85122136064) doi:[10.33678/cor.2021.106](https://doi.org/10.33678/cor.2021.106)

587542, *přehledový článek* / **RIV22: 1.LF NE** / **RIV22: VFN NE**

KRAML, Pavel (3.LF/Interna) *Kor.* - VRABLÍK, Michal (1.LF/530, VFN/N203) - BLAHA, Vladimír (FNHK/IGMK, LFHK/IGMK) - CÍFKOVÁ, Renata (1.LF/520) - FREIBERGER, Tomáš - KARÁSEK, David - PÍTHA, Jan (2.LF/Interní klinika) - ROSOLOVÁ, Hana (FNP/2.IK, LFPI/2.IK) - SOŠKA, Vladimír - ŠTULC, Tomáš - TICHÝ, Lukáš - URBANOVÁ, Zuzana (VFN/N216)

Druhý konsensus EAS o lipoproteinech o nízké hustotě: stanovisko výboru České společnosti pro aterosklerózu.

(AJ název: *Second consensus statement of European Atherosclerosis Society on low-density lipoproteins: statement of Czech Society for Atherosclerosis*)

In: AtheroReview, 2021, 6(1):9-16, 8 s. ISSN 2464-6555

Financování: I-LFP; I-FNP-51;

Primární UK obor: Endokrinologie, diabetologie a metabolismus

Anotace: Panel odborníků Evropské aterosklerotické společnosti vydal v lednu 2020 v pořadí již druhé společné stanovisko týkající se lipoproteinů o nízké hustotě a jejich vztahu ke kardiovaskulárním onemocněním na podkladě aterosklerózy. Tento proces začíná v dětství a bylo prokázáno, že 71 % mužů a 43 % žen ve středním věku již vykazuje známky subklinické aterosklerózy.

AJ anotace: In January 2020, the expert panel of the European Atherosclerosis Society released already its second consensus regarding Low Density Lipoproteins and their relation to cardiovascular diseases based on atherosclerosis. This process begins in childhood and it has been proven that 71 % middle-aged males and 43 % middle-aged females already present the signs of subclinical atherosclerosis.

Klíč. slova: kardiovaskulární onemocnění na podkladě aterosklerózy; lipoproteiny o nízké hustotě; lipoproteiny o intermediární hustotě

AJ klíč. slova: cardiovascular diseases based on atherosclerosis; low-density lipoproteins; intermediate-density lipoproteins

<https://www.prolekare.cz/linkout/125826>

595557, *doporučený postup* / **RIV22: 1.LF NE** / **RIV22: VFN NE**

ŠPINAR, Jindřich *Kor.* - MÁLEK, Filip - ŠPINAROVÁ, Lenka - VÍTOVEC, Jiří - TÁBORSKÝ, Miloš - LINHART, Aleš (1.LF/520, VFN/N202)

Úprava guidelines ACC pro léčbu srdečního selhání v roce 2021.

(AJ název: *2021 ACC update of the heart failure guidelines*)

In: Cor et Vasa, 2021, 63(2):264-270, 7 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Anotace: Na začátku roku 2021 vydala American College of Cardiology (ACC) update k léčbě srdečního selhání v časopise Journal of the American College of Cardiology. Přinášíme stručné informace z tohoto dokumentu. Očekává se, že Evropská kardiologická společnost (ESC) vydá v tomto roce nová guidelines, která pravděpodobně potvrdí tento update, především co je nového v postavení sacubitril/valsartanu (inhibitoru receptoru angiotenzinu a neprilysinu, ARNI) a inhibitorů sodíkglukózového kontrtransportéru 2 (SGLT2) jako nové lékové skupiny pro léčbu srdečního selhání. Nový je i perkutánní přístup k léčbě mitrální regurgitace. Celý dokument má 32 stran.

AJ anotace: The American College of Cardiology has published an update of the heart failure guidelines treatment in the beginning of the year 2021. We bring short information about this document. It is expected that the European Society of Cardiology will publish new European guidelines this year, which will

probably confirm the increasing indication for sacubitril valsartan (ARNI) and for SGLT2 inhibitors, as a new drug class for heart failure treatment. The percutaneous access for the treatment of mitral regurgitation is also a new one. The whole document has 32 pages.

Klíč. slova: ARNI; Guidelines; Inhibitory SGLT2; Srdeční selhání

AJ klíč. slova: ARNI; Guidelines; Heart failure; SGLT2 inhibitors

<https://www.e-corevasa.cz/pdfs/cor/2021/02/05.pdf>

WoS:[000647674600005](https://www.e-corevasa.cz/pdfs/cor/2021/02/05.pdf) Scopus:[2-s2.0-85106510219](https://www.e-corevasa.cz/pdfs/cor/2021/02/05.pdf) doi:[10.33678/cor.2021.033](https://www.e-corevasa.cz/pdfs/cor/2021/02/05.pdf)

596015, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

KUCHYNKA, Petr (*1.LF/520, VFN/N202*) *Kor.*

Novinky v léčbě transthyretinové amyloidózy srdce.

(AJ název: *New therapies in transthyretin cardiac amyloidosis*)

In: Farmakoterapeutická revue, 2021, 6(2):148-152, 5 s. ISSN 2533-6878

Financování: Q38;

Primární UK obor: Kardiologie

Anotace: Transthyretinová amyloidóza představuje nejčastější typ amyloidózy srdce. Projevuje se zejména srdečním selháním a arytmiemi. U většiny nemocných lze diagnózu stanovit neinvazivními metodami bez nutnosti provádění endomyokardiální biopsie. V konvenční léčbě srdečního selhání se uplatňují především kličková diuretika a inhibitory mineralokortikoidních receptorů. Specifická léčba transthyretinové amyloidózy srdce zahrnuje léky snižující syntézu transthyretinu, stabilizující transthyretin a farmaka ovlivňující degradaci již existujícího amyloidu. Za nejnadějnější je v současnosti považován tafamidis, který by měl být v brzké budoucnosti dostupný v běžné klinické praxi.

AJ anotace: Transthyretin amyloidosis represents the most common type of amyloidosis involving heart. Heart failure and arrhythmias are the most frequent manifestations of the disease. In majority of the patients the diagnosis can be established based on the non-invasive imaging methods and endomyocardial biopsy is usually not needed. Heart failure treatment is usually based on loop diuretics and mineralocorticoid receptor blockers administration. Specific treatment of transthyretin cardiac amyloidosis consists of gene expression silencers, transthyretin stabilizers and amyloid extractors. Tafamidis represents currently the most promising drug in the treatment of transthyretin cardiac amyloidosis. This drug will be hopefully available in clinical practise in near future.

Klíč. slova: transthyretin; amyloidóza; srdeční selhání; tafamidis

AJ klíč. slova: transthyretin; amyloidosis; heart failure; tafamidis

<https://farmakoterapeutickarevue.cz/cs/novinky-v-lecbe-transthyretinove-amyloidozy-srdce>

602124, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

HALUZÍK, Martin - KUBÍČKOVÁ, Markéta (*FNHK/IGMK, LFHK/IGMK*) - VESELÝ, Jiří - LINHART, Aleš (*1.LF/520, VFN/N202*) - PRÁZNÝ, Martin (*1.LF/530, VFN/N203*) - ŠKRHA, Jan (*1.LF/530, VFN/N203*) - TÁBORSKÝ, Miloš - MÁLEK, Filip (*3.LF/Interna*) *Kor.*

Expertní konsenzus k praktickým aspektům spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí.

(AJ název: *Expert consensus on the practical aspects of the cooperation of cardiologist and diabetologist in the management of the patients with chronic heart failure and reduced ejection fraction*)

In: Vnitřní lékařství, 2021, 67(7):404-410, 7 s. ISSN 0042-773X

Primární UK obor: Kardiologie

Anotace: Diabetes mellitus je významným rizikovým faktorem rozvoje srdečního selhání a přítomnost diabetu zároveň zhoršuje prognózu nemocných se srdečním selháním. Jednou z významných novinek v léčbě srdečního selhání jsou glifloziny, které blokadou reabsorpce glukózy v proximálním tubulu díky inhibici sodíko-glukózového kotransporteru 2 vedou ke snížení glykemie navozením glykosurie. Glifloziny byly a stále jsou primárně využívány jako účinná antidiabetika, která kromě zlepšení kompenzace diabetu snižují tělesnou hmotnost a krevní tlak bez zvýšení rizika hypoglykemie. Studie z posledních let prokázaly, že glifloziny u diabetiků významně snižují riziko kardiovaskulárních komplikací a hospitalizace pro srdeční selhání. Nedávno ukončené studie s dapagliflozinem a empagliflozinem navíc ukázaly významné snížení kombinace smrti z kardiovaskulárních příčin a hospitalizace pro srdeční selhání u pacientů se srdečním selháním s redukovanou ejekční frakcí, a to jak u diabetiků, tak i nediabetiků. Cílem tohoto článku je formou expertního konsenzu shrnout praktické aspekty spolupráce kardiologa a diabetologa v péči o pacienty s

chronickým srdečním selháním s redukovanou ejekční frakcí v kontextu současných doporučení a dalších léčebných možností.

AJ anotace: Diabetes mellitus is an important risk factor for the development of heart failure and presence of diabetes significantly worsens heart failure outcome. Introduction of gliflozins to the therapy of heart failure is one of the most important novelty. Gliflozins reduce glucose level by the sodium-glucose cotransporter 2 inhibition in proximal tubulus in the kidney. Gliflozins are used as effective antidiabetic drugs with improvement of glycemic control without risk of hypoglycemia, gliflozins decrease blood pressure and patients weight. Recent studies have shown that gliflozins significantly reduce risk of cardiovascular complications and heart failure hospitalizations in diabetic patients. Clinical trials with dapagliflozin and empagliflozin have shown reduction of the risk of cardiovascular death and heart failure hospitalization in the patients with heart failure and reduced ejection fraction both in the patients with diabetes and in the patients without diabetes. The aim of the expert consensus is to summarize practical aspects in the cooperation of cardiologist and diabetologist in the management of the patients with heart failure and reduced ejection fraction in the context of the current guidelines and other treatment options.

AJ klíč. slova: heart failure with reduce ejection fraction; gliflozins; cardiovascular complications; type 2 diabetes mellitus

Scopus:[2-s2.0-85121146044](https://scopus.com/record/display?id=2-s2.0-85121146044) doi:[10.36290/vnl.2021.108](https://doi.org/10.36290/vnl.2021.108)

595555, doporučený postup / RIV22: 1.LF NE

TUKA, Vladimír (1.LF/520) *Kor.* - JIRAVSKÝ, Otakar - KUBUŠ, Peter (2.LF/DK, FNM/2129) - SOVOVÁ, Eliška

Doporučené postupy ESC pro sportovní kardiologii a pohybovou aktivitu pacientů s kardiovaskulárním onemocněním, 2020. Souhrn dokumentu připravený Českou kardiologickou společností.

(AJ název: 2020 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation. Summary of the document prepared by the Czech Society of Cardiology)

In: Cor et Vasa, 2021, 63(2):235-262, 28 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Anotace: Autoři originálního textu ESC: Antonio Pelliccia, Sanjay Sharma jménem pracovní skupiny The Task Force on sports cardiology and exercise in patients with cardiovascular disease Evropské kardiologické společnosti (ESC).

<https://www.e-corevasa.cz/pdfs/cor/2021/02/04.pdf>

WoS:[000647674600004](https://www.scopus.com/record/display?id=2-s2.0-85106744992) Scopus:[2-s2.0-85106744992](https://scopus.com/record/display?id=2-s2.0-85106744992) doi:[10.33678/cor.2021.009](https://doi.org/10.33678/cor.2021.009)

594283, komentář / RIV22: 1.LF NE / RIV22: VFN NE

SLÍVA, Jiří (3.LF/Farmakologie) *Kor.* - KARETOVÁ, Debora (1.LF/520, VFN/N202)

Komentáře k analýze složení směsi flavonoidů v tabletách Diozen 500 mg metodou UHPLC.

In: Vnitřní lékařství, 2021, 67(1):63-66, 4 s. ISSN 0042-773X

Primární UK obor: Farmakologie a toxikologie

Anotace: Analýza léčivého přípravku Diozen potvrdila, že vedle diosminu obsahuje i jiné flavonoidy (hesperidin, isorhoifolin, linarin a diosmetin), a sice v kvantitativním souladu s výše zmiňovaným Evropským lékopisem. Oproti referenčnímu přípravku obsahoval více primárně účinného diosminu i jeho aktivního metabolitu diosmetinu. Veškeré zjištěné substance splňovaly požadované limity a byly plně v souladu s Evropským lékopisem. Jestliže by se měl k lékopisu vztahovat i referenční přípravek, pak by tento výrazně limit hesperidinu překročil. Je známo, že diosmin je modifikovaný hesperidin (tj. je získáván procesem dehydrogenace z hesperidinu) a oba mají velmi podobný farmakologický účinek. Žádná relevantní data nalezená v publikované odborné literatuře nenaznačují aditivní nebo synergický účinek hesperidinu na diosmin, jakkoliv je předpokládán přínos všech obsažených flavonoidů

<https://www.casopisvnitnilekarstvi.cz/pdfs/vnl/2021/01/11.pdf>

Scopus:[2-s2.0-85104291393](https://scopus.com/record/display?id=2-s2.0-85104291393)

603991, přehledový článek / RIV22: 1.LF NE / RIV22: VFN NE

KOŘÍNEK, Josef (1.LF/520, VFN/N202) *Kor.* - DOBIÁŠ, Miloš (1.LF/700, VFN/N225)

Inhibitory SGLT2 a ateroskleróza na pozadí účinků gliflozinů u srdečního selhání.

(AJ název: SGLT2 inhibitors and atherosclerosis in a background of effect of gliflozins and heart failure)

In: AtheroReview, 2021, 6(2):76-83, 7 s. ISSN 2464-6555

Primární UK obor: Kardiologie

Anotace: Inhibitory zpětného vstřebávání glukózy v proximálním tubulu (sodium/glucose cotransporter 2 inhibitors - SGLT2-inhibitory), glifloziny reprezentují relativně novou skupinu antidiabetik, které demonstrovaly své schopnosti významným způsobem redukovat mortalitu a morbiditu kardiovaskulárních onemocnění (KVO) u diabetiků 2. typu. Jejich efekt byl ukázán u pacientů se srdečním selháním se sníženou ejekční frakcí u diabetiků i nediabetiků. Navíc vykazují také významný nefroprotektivní účinek. Přehledový článek se zabývá účinky SGLT2-inhibitorů nejen u srdečního selhání, ale i potenciální benefity a mechanismy účinku u aterosklerózy. Poukazuje též na komplexnost, mnohvrstevnost a vzájemnou provázanost těchto mechanismů, které se odrážejí v terapeutických efektech inhibice SGLT2.

AJ anotace: Sodium/glucose cotransporter 2 inhibitors, gliflozins represent a relatively new class of antidiabetic drugs, which demonstrated its capabilities to significantly reduce mortality and morbidity of cardiovascular diseases in type 2 diabetes mellitus. Their effect was shown in patients with heart failure with reduced ejection fraction in diabetics as well as in non-diabetics. Moreover, gliflozins have also a major nephroprotective actions. This review article describes the effects of SGLT2 inhibitors not only in heart failure, but also mentions potential benefits and mechanisms of action in atherosclerosis. The review also points out the complexity, multilevel character and mutual interconnections of these mechanisms which are reflected in therapeutic effects of the SGLT2 inhibition.

Klíč. slova: ateroskleróza; diabetes mellitus; dyslipidemie; glifloziny; kardiovaskulární benefit; nefroprotektce; SGLT2-inhibitory; srdeční selhání

AJ klíč. slova: Atherosclerosis; cardiovascular benefit; diabetes mellitus; dyslipidemia; gliflozins; nephroprotection; SGLT2 inhibitors; heart failure

<https://www.prolekare.cz/linkout/127325>

596522, komentář / **RIV22: 1.LF NE / RIV22: VFN NE**

SLÍVA, Jiří (3.LF/Farmakologie) - KARETOVÁ, Debora (1.LF/520, VFN/N202)

Laboratorní analýza léčivého přípravku Diozen potvrdila složení z flavonoidní směsi.

In: Farmakoterapie, 2021, 17(1):97-98, 2 s. ISSN 1801-1209

Primární UK obor: Farmakologie a toxikologie

Anotace: Komentář k analýze složení směsi flavonoidů v tabletách Diozen 500 mg metodou UHPLC.

596462, přehledový článek / **RIV22: 1.LF ANO / RIV22: VFN ANO**

HAVRÁNEK, Štěpán (1.LF/520, VFN/N202) *Kor.* - MAREK, Josef (1.LF/520, VFN/N202)

Biomarker GDF-15 v kardiologii.

(AJ název: *Biomarker GDF-15 in cardiology*)

In: Vnitřní lékařství, 2021, 67(e3):e11-e14, 4 s. ISSN 0042-773X

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: GDF-15 (growth differentiation factor 15) je protein, který se fyziologicky vyskytuje v nízkých koncentracích v řadě tkání a orgánů včetně jater, ledvin, srdce nebo plic. Hladiny GDF-15 stoupají v odpovědi na přítomnost zánětu, hypoxie, poškození tkáně, nádorové bujení nebo při probíhající remodelaci myokardu. Zvýšené koncentrace cirkulujícího GDF-15 jsou spojeny s nárůstem mortality u nemocných s akutními koronárními syndromy nebo srdečním selháním. Vyšší hladiny GDF-15 mohou být prediktorem i dalších komplikací akutních koronárních syndromů, včetně krvácení, rizika reinfarktu nebo rozvoje srdečního selhání. Hodnoty GDF-15 je také možné využít jako ukazatele rizika krvácivých komplikací antikoagulační léčby a rizika celkové mortality u nemocných s fibrilací síní. Role GDF-15 jako biomarkeru v kardiologii není však pevně stanovena. Článek přináší přehled aktuálních poznatků o využití GDF-15 v diagnostice kardiovaskulárních onemocnění.

AJ anotace: GDF-15 (Growth differentiation factor 15) is a protein synthesised in some tissues including liver, kidney, heart, or lung. GDF-15 a stress-responsive cytokine. GDF-15 is emerging as a biomarker of cardiometabolic risk and disease burden. GDF-15 is linked to the incidence and prognosis of heart failure. In acute coronary syndromes GDF-15 identifies risk of complications including bleeding, reinfarction, development of heart failure or mortality. In patients with atrial fibrillation, GDF-15 is a potent marker of bleeding adverse events in anticoagulated patients and a predictor of overall mortality. Role of GDF-15 in cardiology is not definitively constituted.

Klíč. slova: GDF-15; biomarker; srdeční selhání; ischemická choroba srdeční; fibrilace síní
AJ klíč. slova: GDF-15; biomarker; heart failure; coronary artery disease; atrial fibrillation
Scopus:[2-s2.0-85108212247](https://doi.org/10.36290/VNL.2021.045) doi:[10.36290/VNL.2021.045](https://doi.org/10.36290/VNL.2021.045)

596375, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

SKOPCOVÁ, Hana - DOSTÁLOVÁ, Gabriela (*1.LF/520, VFN/N202*) - PALEČEK, Tomáš (*1.LF/520, VFN/N202*) - LINHART, Aleš (*1.LF/520, VFN/N202*) - HONSOVÁ, Eva *Kor.*

Fabryho choroba s kardiovaskulární manifestací u pacienta s terminálním selháním ledvin.

(AJ název: *Fabry disease with cardiovascular manifestation in a patient with end-stage renal disease*)

In: Česko-slovenská patologie a Soudní lékařství, 2021, 57(1):49-52, 4 s. ISSN 1210-7875

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Fabryho choroba je vzácné X-vázané hereditární střádavé onemocnění, jehož příčinou je mutace genu kódujícího alfa-galaktosidázu A. Obraz klasické formy je pestrý v závislosti na míře postižení jednotlivých orgánů, mezi které patří především ledviny, myokard, centrální nervový systém (CNS) a kůže. Referujeme případ 51letého muže, jehož diagnostickou manifestací bylo kardiální postižení. Následná endomyokardiální biopsie významně přispěla k diagnóze, ačkoli v té době byl pacient již 9 let v dialyzační léčbě s terminálním selháním ledvin.

AJ anotace: Fabry disease is a rare X-linked hereditary storage disease caused by a mutation of the gene encoding alpha-galactosidase A. The clinical manifestation of the classical disease form is variable depending on the degree of individual organs involvement, including especially kidney, myocardium, central nervous system (CNS) and skin. We report a case of a 51-year-old man whose diagnostic manifestation was cardiac involvement leading to endomyocardial biopsy, which significantly contributed to the diagnosis. Although at that time he was already 9 years dependent on dialysis with terminal renal failure.

Klíč. slova: Fabryho choroba; histopatologie; selhání ledvin; hypertrofická kardiomyopatie

AJ klíč. slova: Fabry disease; histopathology; kidney failure; hypertrophic cardiomyopathy

<http://www.cspatologie.cz/docs/1185-fulltext.pdf>

Scopus:[2-s2.0-85105053132](https://doi.org/10.36290/VNL.2021.045) PubMed:[33910349](https://pubmed.ncbi.nlm.nih.gov/33910349/)

596049, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

AMBROŽ, David (*1.LF/520, VFN/N202*)

Žilní otoky v kardiologii.

In: Practicus, 2021, 20(1):11-15, 4 s. ISSN 1213-8711

Primární UK obor: Kardiologie

Anotace: Otoky dolních končetin se v obecné populaci vyskytují u velkého množství pacientů. Tento symptom je nespecifický a je společný pro mnoho desítek chorob a stavů, a to od banálních, jako je dlouhodobé sezení, až po život ohrožující situace, jako je žilní tromboembolismus či srdeční selhání. Nutné je si uvědomit i možnost kombinované etiologie vzniku otoků. Dobře provedená diferenciální diagnostika je základem správné terapie.

<http://www.practicus.eu/file/443f33ea02ea8000dce89aa96e64f404/94/Practicus2021-01-br.pdf>

606387, *původní článek* / RIV22: 1.LF ANO / RIV22: VFN ANO

MAHMOODURRAHMAN, Mohammed - MAREK, Josef (*1.LF/520, VFN/N202*) - JUHARDEEN, Hamzah Ruxshan - AL OTAIBI, Talal - CURY SALEMI, Vera Maria - ECHAHIDI, Najmeddine - AL BURAIKI, Jehad - FADEL, Bahaa M. - MOHTY, Dania *Kor.*

Diagnostic Accuracy of Dobutamine Stress Echocardiography for Detection of Cardiac Allograft Vasculopathy in Orthotopic Heart Transplant Patients.

In: Journal of the Saudi Heart Association, 2021, 33(4):279-285, 7 s. ISSN 1016-7315

Financování: V-1LF; V-VFN;

Primární UK obor: Kardiologie

Anotace: Objective: Cardiac allograft vasculopathy is one of the leading causes of late graft failure and subsequent death in orthotopic heart transplant. Although invasive coronary angiography is the gold standard modality for detection of cardiac allograft vasculopathy, dobutamine stress echocardiography has been recently frequently used as an alternative. Our aim was to evaluate the diagnostic performance of dobutamine stress echocardiography for detection of cardiac allograft vasculopathy in transplant patients.

Methods: A retrospective analysis was conducted using a total of 150 dobutamine stress echocardiographic exams that were performed on 99 patients in our institution, with paired coronary angiogram and no acute rejection, within a median of 538 [interquartile range 371-816] days. Sensitivity and specificity of dobutamine echocardiography to detect allograft vasculopathy was evaluated. Allograft vasculopathy was defined as Grade 1 or higher based on ISHLT criteria. A positive dobutamine stress echo result was defined by new or worsening wall motion abnormality. Results: Median age of the population at transplant was 34 [interquartile range 22-46] years; 76 (77%) patients were male. Allograft vasculopathy was present in 31 (20.6%) out of 150 coronary angiograms. Only 7 (4.6%) of that number were positive on dobutamine stress echocardiography. Sensitivity and specificity for allograft vasculopathy detection was 3% and 94%, respectively. Out of 7 false positive dobutamine stress echocardiograms, two were in patients with myocardial bridging. Two patients with mild acute rejection had both negative dobutamine stress echo. Conclusions: Overall, positivity of dobutamine stress echocardiography in patients after heart transplant is low. It has high specificity, but very low sensitivity for detection of cardiac allograft vasculopathy. Dobutamine stress echocardiography should only be cautiously used as an alternative to coronary angiography.

Klíč. slova: Dobutamine echocardiography; Stress echocardiography; Cardiac allograft vasculopathy; Heart transplantation; Myocardial ischemia; Diagnostic imaging tools;
WoS:[000749848500007](https://www.scopus.com/search/auth/mapping?eid=2-s2.0-85118956429) Scopus:[2-s2.0-85118956429](https://www.scopus.com/search/auth/mapping?eid=2-s2.0-85118956429) PubMed:[35083117](https://pubmed.ncbi.nlm.nih.gov/35083117/) doi:[10.37616/2212-5043.1265](https://doi.org/10.37616/2212-5043.1265)

604629, *kazuistika* / RIV22: 1.LF NE / RIV22: VFN NE

DUBSKÁ, Zora (1.LF/750, VFN/N238) *Kor.* - DOSTÁLOVÁ, Gabriela (1.LF/520, VFN/N202) - REKOVÁ, Petra (1.LF/600, VFN/N212) - FIALOVÁ, Vladimíra - RAJS, Patrik

Oční příznaky Fabryho choroby v praxi.

In: Acta Medicinæ, 2021, 10(17):10-14, 3 s. ISSN 1805-398X

Financování: Q25;

Primární UK obor: Oftalmologie

Anotace: Aktuální číslo časopisu Acta medicinae je zaměřeno na téma "Kazuistiky".

Klíč. slova: Fabryho choroba; oční příznaky

603911, *doporučený postup* / RIV22: VFN NE

MELENOVSKÝ, Vojtěch - TÁBORSKÝ, Miloš - LINHART, Aleš (VFN/N202) - MALÍK, Jan (VFN/N203) - MÁLEK, Filip *Kor.* - PUDIL, Radek (FNHK/IKK) - KREJČÍ, Jan - ŠIRANEC, Michal (VFN/N202)

Expertní konsenzus k významu deficitu železa a možnosti jeho korekce u pacientů se srdečním selháním.
(AJ název: *Expert consensus on the importance of iron deficiency and the possibility of its correction in patients with heart failure*)

In: Vnitřní lékařství, 2021, 67(8):495-497, 3 s. ISSN 0042-773X

Primární UK obor: Kardiologie

Anotace: Mezi časté nekardiovaskulární komorbidity srdečního selhání patří anémie a deficit železa. Deficit železa se vyskytuje u pacientů s chronickým srdečním selháním nezávisle na anémii až u 55 % nemocných, v případě akutního srdečního selhání včetně akutní dekompenzace chronického srdečního selhání až u 80 % pacientů. Intravenózní aplikace železa u pacientů se srdečním selháním a deficitem železa je nyní součástí Doporučení pro diagnostiku a léčbu srdečního selhání Evropské kardiologické společnosti 2021 s cílem zlepšit symptomy, toleranci zátěže a kvalitu života nemocných s chronickým srdečním selháním a snížit riziko následné hospitalizace u pacientů po akutní dekompenzaci.

AJ anotace: Anemia and iron deficiency are common non-cardiovascular comorbidities of heart failure. The prevalence of iron deficiency is up to 55 % of patients with chronic heart failure and up to 80 % subjects with acute heart failure including acute decompensated heart failure, independently on anemia. The European Society of Cardiology Heart Failure Guidelines 2021 recommend intravenous iron replacement in patients with heart failure and iron deficiency to improve symptoms, stress tolerance and quality of life in chronic heart failure and to reduce risk of subsequent hospitalization after acute decompensation.

Klíč. slova: srdeční selhání; deficit železa; intravenózní substituce

AJ klíč. slova: heart failure; iron deficiency; intravenous replacement

<https://www.casopisvnitrnilekarstvi.cz/pdfs/vnl/2021/08/09.pdf>

Scopus:[2-s2.0-85122184924](https://www.scopus.com/search/auth/mapping?eid=2-s2.0-85122184924) doi:[10.36290/vnl.2021.126](https://doi.org/10.36290/vnl.2021.126)

603260, doporučený postup / RIV22: 1.LF NE / RIV22: VFN NE

KUCHYNKA, Petr (1.LF/520, VFN/N202) *Kor.* - ADLA, Theodor (2.LF/Klinika zobrazovacích metod) - BAXA, Jan (FNP/KZM, LFPI/KZM) - **ZEMÁNEK, David** (1.LF/520, VFN/N202) - KAMÍNEK, Milan - LÍNKOVÁ, Hana (3.LF/Kardiologie) - KOČKOVÁ, Radka

Vhodné indikace k provedení výpočetní tomografie (CT) srdce: odborné stanovisko Sekce výpočetní tomografie srdce České asociace kardiovaskulárních zobrazovacích metod České kardiologické společnosti.

(AJ název: *Appropriate indications to cardiac computed tomography (CT): expert consensus statement of the Section of Cardiac Computed Tomography of the Czech Association of Cardiovascular Imaging Methods of the Czech Society of Cardiology*)

In: Cor et Vasa, 2021, 63(6):745-747, 3 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Další UK obory: Zobrazovací metody v lékařství;

Anotace: Tento dokument vznikl na základě potřeby definovat rozsah vhodných indikací k vyšetření srdce výpočetní tomografií (CT). Toto odborné stanovisko nehodnotí využití CT u extrakardiálních patologií kardiovaskulárního systému (nevztahuje se tedy k onemocnění aorty, plicnice a nevyjadřuje se k problematice plicní embolizace).

WoS:[000732661400018](https://doi.org/10.33678/cor.2021.122) Scopus:[2-s2.0-85122130699](https://doi.org/10.33678/cor.2021.122) doi:[10.33678/cor.2021.122](https://doi.org/10.33678/cor.2021.122)

603259, překlad článku / RIV22: 1.LF NE / RIV22: VFN NE

TÁBORSKÝ, Miloš *Kor.* - **LINHART, Aleš** (1.LF/520, VFN/N202) - **KARETOVÁ, Debora** (1.LF/520, VFN/N202) - SKÁLA, Tomáš - MOŤOVSKÁ, Zuzana (3.LF/Kardiologie) - KÖCHER, Martin - ŠTADLER, Petr

Antitrombotická léčba u onemocnění aorty a periferních tepen v roce 2021: konsenzuální dokument Pracovní skupiny ESC pro onemocnění aorty a periferních tepen, Pracovní skupiny ESC pro trombózu a Pracovní skupiny ESC pro kardiovaskulární farmakoterapii. Překlad dokumentu připravený Českou kardiologickou společností a Českou angiologickou společností ČLS JEP.

(AJ název: *Antithrombotic therapies in aortic and peripheral arterial diseases in 2021: a consensus document from the ESC working group on aorta and peripheral vascular diseases, the ESC working group on thrombosis, and the ESC working group on cardiovascular pharmacotherapy. Translation of the document prepared by the Czech Society of Cardiology and the Czech Society of Angiology of CLS JEP*)

In: Cor et Vasa, 2021, 63(6):748-759, 12 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Další UK obory: Angiologie a vaskulární chirurgie;

Anotace: Cílem tohoto dokumentu je poskytnout klinickým lékařům aktuální informace o nejlepší antitrombotické strategii u pacientů s onemocněním aorty a/nebo periferních tepen. Antitrombotická medikace je pilířem optimální léčby těchto pacientů s velmi vysokým kardiovaskulárním rizikem. Zatímco počet klinických studií antitrombotické léčby u pacientů s onemocněním aorty nebo periferních tepen je podstatně menší než u pacientů s ischemickou chorobou srdeční, nedávno získané důkazy si zaslouží být začleněny do klinické praxe. V případě absence indikace chronické perorální antikoagulace z důvodu jiného kardiovaskulárního onemocnění je u pacientů s onemocněním aorty nebo periferních tepen základem pro dlouhodobou antitrombotickou medikaci léčba jedním protidestičkovým lékem (SAPT). Kombinace této medikace s jiným protidestičkovým lékem nebo nízkou dávkou antikoagulancia budou probrány na základě pacientova rizika ischemie a krvácení, stejně jako další terapeutické postupy (např. endovaskulární terapie). Cílem tohoto konsenzuálního dokumentu je poskytnout návod pro antitrombotickou léčbu dle lokalizace onemocnění tepen a jeho klinické prezentace. Nemůže však nahradit multidisciplinární týmovou diskusi, která je zvláště důležitá u pacientů s nejistým poměrem rizika krvácení a ischemie. A protože se tento poměr u jednotlivých pacientů v průběhu času může měnit, nezbytné je pravidelné přehodnocení strategie antitrombotické terapie.

AJ anotace: The aim of this collaborative document is to provide an update for clinicians on best antithrombotic strategies in patients with aortic and/or peripheral arterial diseases. Antithrombotic therapy is a pillar of optimal medical treatment for these patients at very high cardiovascular risk. While the number of trials on antithrombotic therapies in patients with aortic or peripheral arterial diseases is substantially smaller than for those with coronary artery disease, recent evidence deserves to be incorporated into clinical

practice. In the absence of specific indications for chronic oral anticoagulation due to concomitant cardiovascular disease, a single antiplatelet agent is the basis for long-term antithrombotic treatment in patients with aortic or peripheral arterial diseases. Its association with another antiplatelet agent or low-dose anticoagulants will be discussed, based on patient's ischaemic and bleeding risk as well therapeutic paths (e.g. endovascular therapy). This consensus document aims to provide a guidance for antithrombotic therapy according to arterial disease localizations and clinical presentation. However, it cannot substitute multidisciplinary team discussions, which are particularly important in patients with uncertain ischaemic/bleeding balance. Importantly, since this balance evolves over time in an individual patient, a regular reassessment of the antithrombotic therapy is of paramount importance.

Klíč. slova: Antiagregační medikace; Antikoagulancia; Antitrombotická terapie; Aorta; Karotida; Mezenterická tepna; Onemocnění periferních tepen; Onemocnění tepen dolních končetin; Podklíčková tepna; Renální tepna; Trombóza; Vertebální tepna

AJ klíč. slova: Anticoagulant; Antiplatelet drug; Antithrombotic therapy; Aorta; Artery; Lower-extremity artery disease; Mesenteric artery; Peripheral arterial disease; Renal artery; Subclavian artery; Vertebral artery; Thrombosis

WoS:[000732661400019](https://www.scopus.com/search/form.do?query=000732661400019) Scopus:[2-s2.0-85122151361](https://www.scopus.com/search/form.do?query=2-s2.0-85122151361) doi:[10.33678/cor.2021.131](https://doi.org/10.33678/cor.2021.131)

603177, původní článek / RIV22: 1.LF ANO / RIV22: VFN ANO

HALUZÍK, Martin - KUBÍČKOVÁ, Markéta (FNHK/IGMK, LFHK/IGMK) - VESELÝ, Jiří - LINHART, Aleš (1.LF/520, VFN/N202) - PRÁZNÝ, Martin (1.LF/530, VFN/N203) - ŠKRHA, Jan (1.LF/530, VFN/N203) - TÁBORSKÝ, Miloš *Kor.* - MÁLEK, Filip (3.LF/Interna)

Expertní konsenzus k praktickým aspektům spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí.

(AJ název: *Expert consensus on the practical aspects of collaboration between cardiologists and diabetologists in the management of patients with chronic heart failure with reduced ejection fraction*)

In: Cor et Vasa, 2021, 63(5):630-636, 7 s. ISSN 0010-8650

Financování: I-FNHK; I-LFHK; V-1LF; V-VFN; V-3LF;

Primární UK obor: Kardiologie

Další UK obory: Endokrinologie, diabetologie a metabolismus;

Anotace: Diabetes mellitus je významným rizikovým faktorem rozvoje srdečního selhání a přítomnost diabetu zároveň zhoršuje prognózu nemocných se srdečním selháním. Jednou z významných novinek v léčbě srdečního selhání jsou glifloziny, které blokadou reabsorpce glukózy v proximálním tubulu díky inhibici sodíko-glukózového kotransportéru 2 vedou ke snížení glykemie navozením glykosurie. Glifloziny byly a stále jsou primárně využívány jako účinná antidiabetika, která kromě zlepšení kompenzace diabetu snižují tělesnou hmotnost a krevní tlak bez zvýšení rizika hypoglykemie. Studie z posledních let prokázaly, že glifloziny u diabetiků významně snižují riziko kardiovaskulárních komplikací a hospitalizace pro srdeční selhání. Nedávno ukončené studie s dapagliflozinem a empagliflozinem navíc ukázaly významné snížení kombinace úmrtí z kardiovaskulárních příčin a hospitalizace pro srdeční selhání u pacientů se srdečním selháním s redukovanou ejekční frakcí, a to jak u diabetiků, tak i nediabetiků. Cílem toho článku je formou expertního konsenzu shrnout praktické aspekty spolupráce kardiologa a diabetologa v péči o pacienty s chronickým srdečním selháním s redukovanou ejekční frakcí v kontextu současných doporučení a dalších léčebných možností.

AJ anotace: While diabetes mellitus per se is a major risk factor for heart failure, development of diabetes in patients with heart failure makes their prognosis even worse. A breakthrough in the treatment of heart failure came with the discovery of gliflozins, which, by blocking glucose reabsorption in the proximal tubule through the action of sodium-glucose co-transporter 2 inhibitors, lower blood glucose levels by inducing glycosuria. Gliflozins have been and continue to be used primarily as efficient antidiabetic drugs, which, in addition to improving diabetes control, help reduce body weight and blood pressure while not raising the risk of hypoglycemia. Recent studies have shown that gliflozins in diabetic patients significantly reduce the risk of cardiovascular complications and hospitalization for heart failure. Moreover, trials with dapagliflozin and empagliflozin conducted in recent years have demonstrated significant decreases in the composite endpoint of cardiovascular death and hospitalization for heart failure in patients with heart failure with reduced ejection fraction, both with and without diabetes. The aim of this article is to summarize, as an expert consensus document, practical aspects of collaboration of cardiologists and diabetologists in the management of patients with chronic heart failure with reduced ejection fraction in the context of current

guidelines and other therapeutic options.

Klíč. slova: Diabetes mellitus 2. typu; Glifloziny; Kardiovaskulární komplikace; Srdeční selhání s redukovanou ejekční frakcí

AJ klíč. slova: Cardiovascular complications; Gliflozins; Heart failure with reduced ejection; fraction; Type-2 diabetes mellitus

WoS:[000731320800019](https://www.scopus.com/search/form.do?query=2-s2.0-85122123682) Scopus:[2-s2.0-85122123682](https://www.scopus.com/search/form.do?query=2-s2.0-85122123682) doi:[10.33678/cor.2021.108](https://doi.org/10.33678/cor.2021.108)

602727, *kazuistika* / RIV22: 1.LF NE / RIV22: VFN NE

VAHANČÍKOVÁ, Natália *Kor.* - LINHART, Aleš ([1.LF/520](#), [VFN/N202](#)) - GRUS, Tomáš ([1.LF/690](#), [VFN/N723](#)) - ADLA, Theodor ([2.LF/Klinika zobrazovacích metod](#)) - PLOCOVÁ, Kateřina Magdaléna ([1.LF/690](#), [VFN/N723](#))

Kardiální sarkoidóza, myslíme na ni v diagnostice?

(AJ název: *Cardiac sarcoidosis, don't we forget about it in diagnostics?*)

In: Cor et Vasa Case Reports, 2021, 4(3):45-49, 5 s. ISSN 2571-0648

Primární UK obor: Kardiochirurgie

Další UK obory: Kardiologie;

Anotace: Sarkoidóza je vzácné systémové zánětlivé onemocnění nejasné etiologie, s multiorgánovým postižením. Nejčastější lokalizací onemocnění jsou plíce, kůže a lymfatické uzliny. Extrapulmonální postižení je vzácnější. Speciálně kardiální sarkoidóza (CS) se může klinicky manifestovat variabilně, zejména v podobě srdečního selhání (HF), arytmií a postižení perikardu. Její diagnostika vyžaduje složitější zobrazovací metody, jako je magnetická rezonance myokardu (CMR) a pozitronová emisní tomografie/výpočetní tomografie (PET/CT). Kromě standardních kardiologických přístupů v terapii je nutno zvážit i léčbu kortikoidy nebo jinou formu imunoterapie.

AJ anotace: Sarcoidosis is a rare systemic inflammatory disease, with multiorgan involvement and the exact cause of sarcoidosis is unknown. The most commonly affected are lungs, skin or lymph nodes. Extrapulmonary involvement is less common. Especially cardiac sarcoidosis (CS) has variable clinical manifestations, causing heart failure (HF), arrhythmias, and involvement of pericardium. Diagnosis of cardiac sarcoidosis depends on more complex imaging methods such as myocardial magnetic resonance imaging (CMR) and positron emission tomography (PET/CT). In addition to standard cardiology procedures, corticosteroid therapy or other immunotherapy should be considered.

Klíč. slova: Atrioventrikulární blokáda; kardiální sarkoidóza; léčba kortikoidy; sarkoidóza; srdeční selhání

AJ klíč. slova: Atrioventricular block; cardiac sarcoidosis; corticosteroid therapy; heart failure; sarcoidosis
<http://www.cksonline.cz/coretvasa-case-reports/clanky.php?p=detail&id=153&pid=1611>

597149, *editorial* / RIV22: 1.LF NE / RIV22: VFN NE

ASCHERMANN, Michael ([1.LF/520](#), [VFN/N202](#)) *Kor.*

The year in cardiovascular medicine 2020.

In: Cor et Vasa, 2021, 63(Supl. 1):5-5, 1 s. ISSN 0010-8650

Primární UK obor: Kardiologie

Anotace: Evropská kardiologická společnost (ESC) sdružuje celkem 56 národních kardiologických společností, které vydávají celkem 42 národních kardiologických časopisů - patří mezi ně i Cor et Vasa. V letošním roce nabídla ESC pro všechny národní časopisy možnost publikovat celkem osm článků z European Heart Journal, které jsou nazvány: The year in cardiovascular medicine 2020.

WoS:[000669523400001](https://www.scopus.com/search/form.do?query=000669523400001) doi:[10.33678/cor.2021.075](https://doi.org/10.33678/cor.2021.075)

596471, *přehledový článek* / RIV22: 1.LF NE

ZEMÁNEK, David ([1.LF/520](#))

EXPLORER-HCM – nové možnosti v léčbě obstrukce ve výtokovém traktu u hypertrofické kardiomyopatie.

(AJ název: *EXPLORER-HCM – new possibilities in the treatment of outflow tract obstruction in hypertrophic cardiomyopathy*)

In: Remedia, 2021, 31(2):160-163, 4 s. ISSN 0862-8947

Primární UK obor: Kardiologie

Anotace: Randomizovaná dvojitě zaslepená, placebem kontrolovaná studie fáze III EXPLORER-HCM zkoumala efekt mavacamtenu, inhibitoru srdečního myozinu, u symptomatických pacientů s hypertrofickou

kardiomyopatií s obstrukcí ve výtokovém traktu. Celkem bylo zařazeno 251 pacientů, kteří byli randomizováni k léčbě mavacamtenem (n = 123) a placebem (n = 128) trvající 30 týdnů. Léčba mavacamtenem pak vedla ke zmírnění obstrukce ve výtokovém traktu levé komory, ke zvýšení zátěžové kapacity, zlepšení funkční klasifikace dle NYHA (New York Heart Association) a subjektivního hodnocení zdravotního stavu.

AJ anotace: Phase 3, multicentre, randomized, double-blind, placebo-controlled EXPLORER-HCM trial evaluated mavacamten, a cardiac myosin inhibitor, in symptomatic patients with hypertrophic cardiomyopathy and outflow tract obstruction. In total, 251 patients were enrolled and randomly assigned to mavacamten (n = 123) or placebo (n = 128) and treated for 30 weeks. The treatment with mavacamten improved exercise capacity, left ventricular outflow tract obstruction, NYHA functional class, and subjectively assessed health status in these patients.

AJ klíč. slova: hypertrophic cardiomyopathy; left ventricular outflow tract obstruction; mavacamten

596528, *přehledový článek* / RIV22: 1.LF NE / RIV22: VFN NE

DANZIG, Vilém (1.LF/520, VFN/N202)

Management pacientů s chronickým srdečním selháním.

(AJ název: *Management of patients with chronic heart failure*)

In: Farmakoterapie, 2021, 17(1):130-135, 5 s. ISSN 1801-1209

Primární UK obor: Kardiologie

Anotace: Chronické srdeční selhání je závažné a poměrně časté srdeční onemocnění. Nejvíce probádána je forma se sníženou ejekční frakcí levé komory, jež má rovněž největší léčebné možnosti. Diagnostika je založena na anamnéze, fyzikálním vyšetření, echokardiografii a laboratorním stanovení hladin natriuretických peptidů. Péče o nemocné se srdečním selháním je založena na spolupráci praktického lékaře, internisty, a zejména kardiologa - jak běžného ambulantního, tak specializovaného v ambulancích srdečního selhání. Léčba srdečního selhání zahrnuje režimová opatření a farmakologické a nefarmakologické postupy. Základem farmakoterapie je použití vhodného β -blokátoru a inhibitoru angiotenzin konvertujícího enzymu, případně sartanu. K této léčbě se následně přidávají další látky včetně diuretik. Prognózu nemocných vylepšilo v posledních letech využití sakubitril/valsartanu.

AJ anotace: Chronic heart failure is serious and often common heart disease. The most studied form is that with reduced left ventricular ejection fraction, in which there are also the largest treatment options. Diagnosis of heart failure is based on medical history, physical examination, echocardiography and laboratory investigation of natriuretic peptide levels. The care of patients with heart failure relies on cooperation of a general practitioner, an internist and especially a cardiologist - both general outpatient and specialized cardiologist in heart failure outpatient clinics. Therapy of heart failure includes regime measures and pharmacologic as well as non-pharmacologic treatment. The cornerstone of pharmacotherapy is the use of a suitable β -blocker and an angiotensin converting enzyme inhibitor or an angiotensin receptor blocker. These are combined with other drugs including diuretics. Prognosis of heart failure patients has recently improved with the introduction of sacubitril/valsartan.

KAPITOLA V KNIZE

608935, *kapitola v učebnici pro VŠ* / RIV22: 1.LF NE / RIV22: VFN NE

RUSINOVÁ, Kateřina (1.LF/591) *Kor.* - **BĚLOHLÁVEK, Jan** (1.LF/520, VFN/N202)

Conflict Management in the Cardiac Intensive Care Unit.

In: Palliative Care in Cardiac Intensive Care Units, 1. vyd. Chan : Springer, 2021, 165-171, 7 s. ISBN 978-3-030-80111-3

Primární UK obor: Klinická psychologie a psychologie zdraví

Forma vyd.: P - tištěná verze "print"

Anotace: Conflicts and disagreements are normal part of human communication in stressful situations. Current understanding of conflicts labels them having both negative and positive impacts. The question of conflict is primarily addressed and largely explored by social sciences, mainly psychology. The term "conflict" in a psychological background is usually defined as a process that begins when one party perceives its interests, norms, and values or opinions and viewpoints being opposed, hurt, or encountered by another.

Klíč. slova: Conflicts; Coronary intensive care unit; Communication skills; Cognitive bias; Family
doi:[10.1007/978-3-030-80112-0_12](https://doi.org/10.1007/978-3-030-80112-0_12)

KNIHA

608645, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

BAXA, Jan (FNP/KZM, LFPI/KZM) - FERDA, Jiří (FNP/KZM, LFPI/KZM) - KALA, Petr - KAMÍNEK, Milan - KAŇOVSKÝ, Jan - KAUTZNEROVÁ, Dana - KOČKOVÁ, Radka - LINHART, Aleš (1.LF/520, VFN/N202) - PEICHL, Petr - PLÁŠEK, Jiří - ŠPINAR, Jindřich - ŠTÁSEK, Josef (FNHK/IKK, LFHK/IKK) - TINTĚRA, Jaroslav - TUKA, Vladimír (1.LF/520) - VÍTOVEC, Jiří

Kardiologie. II. Vyšetřovací metody v kardiologii.

3. vyd. Praha : Česká kardiologická společnost, 2021, 360 s. ISBN 978-80-271-1439-9

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. V prvním boxu jsou zařazeny svazky I-V s následujícími tématy: základní elementy kardiovaskulárních onemocnění, vyšetřovací metody v kardiologii, aterosklerotická a žilní onemocnění, srdeční selhání a arytmiologie.

602456, kolektivní monografie / RIV22: 1.LF NE / RIV22: VFN NE

ROKYTA, Richard (3.LF/FYZ3LF) - HÖSCHL, Cyril (3.LF/psychiatrie a psychologie) - BENEŠ, Vladimír (1.LF/860) - DANZIG, Vilém (1.LF/520, VFN/N202) - FRICOVÁ, Jitka (1.LF/700, VFN/N225) - HAČKAJLO, David - HLUBOCKÁ, Zuzana (1.LF/520, VFN/N202) - KARETOVÁ, Debora (1.LF/520, VFN/N202) - KUČERA, Pavel - LÁNSKÁ, Věra - MAREŠOVÁ, Vilma (2.LF/Klinika infekčních nemocí) - OŠTÁDAL, Bohuslav - PIRK, Jan - ROKYTA, Richard (FNP/KARD, LFPI/KK) - SVACINA, Štěpán (1.LF/530, VFN/N203) - ŠEBLOVÁ, Jana - ŠKRHA, Jan (1.LF/530, VFN/N203) - ŠTĚPÁN, Jan - ŠULSOVÁ, Alexandra - VÁCHA, Marek (3.LF/Etika) - VLASÁK, René

Stárnutí jako výzva a všechny odstíny šedi.

1. vyd. Mlečice : Axonite, 2021, 144 s. ISBN 978-80-88046-28-8

Primární UK obor: Geriatric a gerontologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha přináší výběr pozoruhodných přednášek, které zazněly na celostátních kongresech České lékařské akademie konaných v Mariánských Lázních ještě před pandemií COVID-19 (v letech 2018 a 2019). Nosným tématy jsou stáří a stárnutí a otázky týkající se krve. Kniha je rozdělena do částí, které jsou zaměřeny na etiku, vakcinaci, léčbu otoků, tromboembolii, kardiologii, neurochirurgii, léčbu bolesti, osteoporózu, výživu, diabetes, lékařské využití kanabinoidů a urgentní medicínu - to vše ve vztahu ke stáří nebo krvi. Vzhledem k mimořádnému zájmu publika o tato témata se autoři - editoři této knihy - rozhodli zpracovat obsah setkání knižně a zpřístupnit jej tak širší odborné veřejnosti. Kniha přináší na 144 stranách celkem 19 příspěvků, na jejichž zpracování se podílelo 20 autorů. Mohutný záběr a sestava velmi různorodých autorů, povětšinou předních odborníků a všeobecně známých osobností, činí tuto knihu atraktivní pro všechny lékaře a mediky bez rozdílu zaměření.

Klíč. slova: stárnutí; etika; vakcinace; otoky; tromboembolie; kardiologie; neurochirurgie; bolest; osteoporóza; výživa; diabetes; kanabinoidy; urgentní medicína

608669, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

HATALA, Robert - KREJČÍ, Jan - KUCHYNKA, Petr (1.LF/520, VFN/N202) - PALEČEK, Tomáš (1.LF/520, VFN/N202) - PUDIL, Radek (FNHK/IKK, LFHK/IKK) - SKALICKÁ, Hana

Kardiologie. VII. Kardiomyopatie.

3. vyd. Praha : Česká kardiologická společnost, 2021, 112 s. ISBN 978-80-271-1997-4

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. Ve druhém boxu

jsou zařazeny svazky VI-X s následujícími tématy: chlopenní vady, kardiomyopatie, preventivní kardiologie, plicní kardiovaskulární onemocnění a kardiovaskulární onemocnění v definovaných populacích.

608648, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

BĚLOHLÁVEK, Jan (1.LF/520, VFN/N202) - **HAVRÁNEK, Štěpán** (1.LF/520, VFN/N202) - **HELLER, Samuel** (1.LF/520, VFN/N202) - **CHOCHOLA, Miroslav** (1.LF/520, VFN/N202) - **KARETOVÁ, Debora** (1.LF/520, VFN/N202) - **KOVÁRNÍK, Tomáš** (1.LF/520, VFN/N202) - **MATES, Martin** - **OŠTÁDAL, Petr** - **PIŤHA, Jan** - **POLEDNE, Rudolf** - **ROB, Daniel** (1.LF/520, VFN/N202) - **SLUKA, Martin** - **SVOBODOVÁ, Iveta** (1.LF/520) - **ŠMALCOVÁ, Jana** (1.LF/520, VFN/N202) - **URBANEC, Tomáš** (1.LF/520, VFN/N202) - **VAŘEJKA, Petr** (1.LF/520)

Kardiologie. III. Aterosklerotická a žilní onemocnění.

3. vyd. Praha : Česká kardiologická společnost, 2021, 240 s. ISBN 978-80-271-1439-9

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. V prvním boxu jsou zařazeny svazky I-V s následujícími tématy: základní elementy kardiovaskulárních onemocnění, vyšetřovací metody v kardiologii, aterosklerotická a žilní onemocnění, srdeční selhání a arytmiologie.

608672, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

BĚLOHLÁVEK, Jan (1.LF/520, VFN/N202) - **BRADÁČ, Pavel** - **DANZIG, Vilém** (1.LF/520, VFN/N202) - **GÜTTER, Zdeněk** - **HALUZÍK, Martin** - **HELLER, Samuel** (1.LF/520, VFN/N202) - **HLAVINKA, Antonín** - **JAKUBEC, Petr** - **JIRAVSKÝ, Otakar** - **KAREL, Ivan** - **KREBSOVÁ, Alice** - **KULA, David** - **LOSSE, Stanislav** - **LOŠŤÁKOVÁ, Vladimíra** - **MALÍK, Jan** (1.LF/530, VFN/N203) - **MERTA, Čeněk** - **POKORNÁ, Eva** - **RAJNOCHOVÁ BLOUDÍČKOVÁ, Silvie** - **SEDLÁČEK, Kamil** (FNHK/IKK, LFHK/IKK) - **SKALICKÁ, Hana** - **STANKE, Ladislav** - **ŠTÝBNAR, Michal** - **ŠUSTEK, Petr** (PF/Centrum zdravotnického práva, PF/KOP) - **TÁBORSKÝ, Miloš** - **TESAŘ, Vladimír** (1.LF/511, VFN/N205) - **TUKA, Vladimír** (1.LF/520) - **VÁCLAVÍK, Jan** - **VIKLICKÝ, Ondřej** - **VOLÁKOVÁ, Eva** - **VRABLÍK, Michal** (1.LF/530, VFN/N203) - **ZATLOUKAL, Jaromír**

Kardiologie. VIII. Preventivní kardiologie.

3. vyd. Praha : Česká kardiologická společnost, 2021, 272 s. ISBN 978-80-271-1997-4

Financování: RVO-VFN64165;

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. Ve druhém boxu jsou zařazeny svazky VI-X s následujícími tématy: chlopenní vady, kardiomyopatie, preventivní kardiologie, plicní kardiovaskulární onemocnění a kardiovaskulární onemocnění v definovaných populacích.

602520, kolektivní monografie / RIV22: 1.LF NE / RIV22: VFN NE

KRŠKA, Zdeněk (1.LF/660, VFN/N220) *Kor.* - **FRÝBA, Vladimír** (1.LF/660, VFN/N220) *Kor.* - **ZAVORAL, Miroslav** (1.LF/861) *Kor.* - **ADÁMKOVÁ, Václava** (1.LF/410, VFN/N846) - **ASTL, Jaromír** (3.LF/orl) - **BEČVÁŘ, Radim** - **BERAN, Tomáš** - **BRŮHA, Radan** (1.LF/540, VFN/N204) - **BŘÍZA, Jan** (1.LF/660, VFN/N220) - **ČAPOV, Ivan** - **ČERMÁK, Jaroslav** (1.LF/660, VFN/N220) - **DANZIG, Vilém** (1.LF/520, VFN/N202) - **DYTRYCH, Petr** (1.LF/660, VFN/N220) - **FEYEREISL, Jaroslav** - **FOLTÁN, René** (1.LF/770, VFN/N232) - **HOCH, Jiří** (2.LF/Chirurgická klinika, FNM/2134) - **HOŘEJŠ, Josef** (1.LF/620, VFN/N249) - **HOSKOVEC, David** (1.LF/660, VFN/N220) - **HRADEC, Tomáš** (1.LF/720, VFN/N227) - **HROBOŇ, Miloslav** (VFN/N228) - **KITTAR, Otomar** (1.LF/150) - **KLEIN, Jiří** - **KLOBUSICKY, Pavol** - **KONEČNÁ, Ellen** (1.LF/660, VFN/N220) - **KRÁL, Vladimír** - **KŘEPELKA, Petr** - **KŘIVÁNEK, Jiří** (1.LF/620, VFN/N249) - **KVASNIČKA, Jan** (1.LF/510) - **KVASNIČKA, Tomáš** (1.LF/410, VFN/N846) - **MAZÁNEK, Jiří** (1.LF/770, VFN/N232) - **MICHÁLEK, Pavel** (1.LF/700, VFN/N225) - **MINÁRIKOVÁ, Petra** (1.LF/861) - **PETRÝL, Jaromír** (1.LF/540, VFN/N204) - **PRÁŠEK, Jiří** - **SEDLÁŘ, Martin** (1.LF/660, VFN/N220) - **SOUKUP, Viktor** (1.LF/720, VFN/N227) - **SUCHÁNEK, Štěpán** (1.LF/861) - **ŠNAJDAUF, Jiří** (2.LF/Klinika dětské chirurgie, FNM/2135) - **ŠNAJDR, Pavel** (1.LF/110) - **ŠPAČEK, Miroslav** (1.LF/690, VFN/N723) - **ŠPIČÁK, Julius** - **ŠTOLFA,**

Jiří - ŠVÁB, Jan (1.LF/660, VFN/N220) - TERŠÍP, Tomáš - TESAŘ, Vladimír (1.LF/511, VFN/N205) - TŘEŠKA, Vladislav (FNP/CHK, LFPI/CHK) - URBÁNEK, Petr (1.LF/861) - VOJTĚCHOVÁ, Gabriela (1.LF/861) - VOŠKA, Michal (1.LF/861) - ZÁVADA, Josef (1.LF/700, VFN/N225) - ZEMAN, Miroslav (1.LF/660, VFN/N220)

Krvácení do trávicího traktu : aktuální poznatky v diagnostice a léčbě.

1. vyd. Praha : Triton, 2021, 410 s. ISBN 978-80-7553-852-9

Primární UK obor: Gastroenterologie a hepatologie

Forma vyd.: P - tištěná verze "print"

Anotace: Monografie přináší aktuální a dostatečně reprezentativní přehled problematiky krvácení do trávicího traktu s důrazem na diagnostický algoritmus a terapii jednotlivých chorobných stavů. Ke spolupráci na vzniku knihy byli vyzváni přední odborníci jednotlivých oborů, kteří se vybranými určenými otázkami skutečně zabývají v denní praxi. Jsou tak schopni předat nejen aktuální stav poznání, ale i praktické zkušenosti a dovednosti. Vydávaná kniha je komplexní dílo, které je svým rozsahem určeno jak pro pregraduální, tak i pro pokročilou postgraduální přípravu a studium. Velkou předností publikace je bohatá fotografická a obrazová dokumentace.

608658, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

RUBÁČKOVÁ POPELOVÁ, Jana - KAMASOVÁ, Monika - LÁTAL, Jan - KOUBEK, Filip - BRŤKO, Miroslav (FNHK/KCH) - ČERNÝ, Štěpán - ŽÁČEK, Pavel (FNHK/KCH, LFHK/KCH) - VOJÁČEK, Jan (FNHK/KCH, LFHK/KCH) - ZEMÁNEK, David (1.LF/520, VFN/N202) - PŘEČEK, Jan

Kardiologie. VI. Chlopenní vady.

3. vyd. Praha : Česká kardiologická společnost, 2021, 264 s. ISBN 978-80-271-1997-4

Financování: I-FNM;

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. Ve druhém boxu jsou zařazeny svazky VI-X s následujícími tématy: chlopenní vady, kardiomyopatie, preventivní kardiologie, plicní kardiovaskulární onemocnění a kardiovaskulární onemocnění v definovaných populacích.

609463, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

HAINER, Vojtěch Kor. - ALDHOON HAINEROVÁ, Irena (3.LF/kdd) - BENDLOVÁ, Běla - BRŮHA, Radan (1.LF/540, VFN/N204) - CÍFKOVÁ, Renata (1.LF/520) - FLACHS, Pavel - FRIED, Martin - HALUZÍK, Martin - KOPECKÝ, Jan - KRCH, František (1.LF/610, VFN/N213) - KUNEŠOVÁ, Marie - MÁLKOVÁ, Iva - MÜLLEROVÁ, Dana (FNP/1.IK, LFPI/ÚHPM) - PÁVKOVÁ MÁLKOVÁ, Hana - PELIKÁNOVÁ, Terezie - ŠONKA, Karel (1.LF/600, VFN/N212) - ŠTICH, Vladimír (3.LF/PATFYZ3LF) - VRBÍKOVÁ, Jana - WAGENKNECHT, Martin - ZOUHAR, Petr - ŽÁK, Aleš (1.LF/540, VFN/N204)

Základy klinické obezitologie.

3. vyd. Praha : Grada, 2021, 519 s. ISBN 978-80-271-1302-6

Financování: RVO-VFN64165; Q25; Q27; NV17-31670A;

Primární UK obor: Endokrinologie, diabetologie a metabolismus

Forma vyd.: P - tištěná verze "print"

Anotace: Publikace je stěžejní učební pomůckou pro všechny, kteří se podílejí na vytváření systému komplexní diferencované péče o obezitu. Je proto určena nejen obezitologům, endokrinologům, diabetologům a bariatrickým chirurgům, ale i internistům, pediatrům, praktickým lékařům, psychiatrům, psychologům, nutričním terapeutům a fyziatřům.

Klíč. slova: obezita; epidemiologie; patogeneze; zdravotní rizika; léčba; prevence

AJ klíč. slova: obesity; epidemiology; pathogenesis; health risks; treatment; prevention

603378, kolektivní monografie / RIV22: 1.LF NE / RIV22: VFN NE

FAIT, Tomáš (2.LF/Gynekologicko) Kor. - VRABLÍK, Michal (1.LF/530, VFN/N203) Kor. - ČEŠKA, Richard (1.LF/530, VFN/N203) Kor. - ANDERS, Martin (1.LF/610, VFN/N213) - ASTL, Jaromír (3.LF/orl) - BERAN, Jiří - BOJAR, Martin (2.LF/NK, FNM/2118) - BÜCHLER, Tomáš (1.LF/451) - BULTAS, Jan (3.LF/Farmakologie) - FUCHS, Martin - HONZÁK, Radkin - HROMÁDKA, Rastislav (FNM/2146) - HUBÁČEK, Jaroslav A. - HUGO, Jan (3.LF/Kozni) - JAHODA, David (1.LF/710)

FNM/2146) - JAHODOVÁ, Ivana - JAKUBIČKA, Juraj (1.LF/710) - KABÍČEK, Pavel (1.LF/650) - KARETOVÁ, Debora (1.LF/520, VFN/N202) - KLÍMOVÁ, Aneta (1.LF/750, VFN/N238) - KRÁLÍKOVÁ, Eva (1.LF/200, VFN/N203) - KRŠEK, Michal (1.LF/530, VFN/N203) - LAJBL VEČEŘOVÁ, Katarína - LENČOVÁ, Erika (1.LF/770) - MIOVSKÝ, Michal (1.LF/611, VFN/N713) - PAUK, Norbert (3.LF/Pneumologie) - POKORNÝ, David (1.LF/710, FNM/2146) - ROSA, Jan - RYŠAVÁ, Romana (1.LF/511, VFN/N205) - SEIFERT, Bohumil (1.LF/260) - SEIFERTO VÁ, Jarmila - STRÍŽ, Ilja - SVAČINA, Štěpán (1.LF/530, VFN/N203) - SVOZÍLKOVÁ, Petra (1.LF/750, VFN/N238) - ŠVESTKA, Tomislav (1.LF/540) - TOMEK, Aleš (2.LF/NK, FNM/2118) - TUKA, Vladimír (1.LF/520, VFN/N203) - UZEL, Radim - VANIŠTA, Jiří

Preventivní medicína.

3. vyd. Praha : Maxdorf, 2021, 431 s. ISBN 978-80-7345-680-1

Financování: RVO-VFN64165; Q27; Q28;

Primární UK obor: Veřejné zdravotnictví, hygiena a epidemiologie, pracovní lékařství

Forma vyd.: P - tištěná verze "print"

Anotace: Třetí, aktualizované vydání knihy, kterou lze dnes již považovat za klasický medicínský bestseller. První vydání této knihy získalo prestižní cenu České lékařské společnosti J. E. Purkyně za rok 2008. Myšlenka, že prevence v medicíně je účinnější než léčba, je stará více než 100 let, přičemž se jednotlivé medicínské obory významně liší v účinnosti preventivních opatření. Když pomineme očkování, je v prevenci jedním z neúspěšnějších oborů gynekologie. Naproti tomu v interních oborech byla po mnoho desetiletí účinnost prevence spíše teoretická, neboť stála na doporučeních. A k těm mívají pacienti nízkou adhezenci, přestože jde zpravidla o opatření účinná a málo nákladná. Pravdou proto je, že úspěch moderní preventivní medicíny souvisí s tím, jak se do prevence naplno zapojila farmakoterapie. Ať se nám to líbí, nebo ne, adherence pacientů k užívání léků je podstatně vyšší než k dodržování rad týkajících se životního stylu nebo diety. Kniha je praktickým kompendiem shrnujícím vše, co by měl lékař vědět o dostupných preventivních opatřeních v oblasti diagnostiky, rad týkajících se životního stylu a diety (tyto rady jsou lékaři povinni nemocným dávat, i když vědí o jejich malé efektivitě) a veškeré farmakoterapie aplikované s cílem zabránit vážným a nevratným poškozením. Je určena pro lékaře všech oborů - internisty, gynekology, dermatology či praktické lékaře.

603387, kolektivní monografie / RIV22: 1.LF ANO / RIV22: VFN ANO

LINHART, Aleš (1.LF/520, VFN/N202) *Kor.* - ADÁMKOVÁ, Václava (1.LF/410, VFN/N846) - AMBROŽ, David (1.LF/520, VFN/N202) - BALÍK, Martin (1.LF/700, VFN/N225) - BENEŠ, Jiří (1.LF/620, VFN/N249) - BOUČEK, Tomáš (1.LF/520, VFN/N202) - CERAL, Jiří (FNHK/IKK, LFHK/IKK) - DANZIG, Vilém (1.LF/520, VFN/N202) - DOBIÁŠ, Miloš (1.LF/700, VFN/N225) - DOSTÁLOVÁ, Gabriela (1.LF/520, VFN/N202) - EREMIÁŠOVÁ, Lenka (1.LF/520, VFN/N202) - FIKRLE, Antonín (1.LF/330, VFN/N852) - FILIPOVSKÝ, Jan (FNP/2.IK, LFPI/2.IK) - GANDALOVIČOVÁ, Jana (1.LF/520, VFN/N202) - HABER, Jan (1.LF/510, VFN/N201) - HAVRÁNEK, Štěpán (1.LF/520, VFN/N202) - HEISSIGEROVÁ, Jarmila (1.LF/750, VFN/N238) - HERIBANOVÁ, Lucie (1.LF/870) - HLUBOCKÁ, Zuzana (1.LF/520, VFN/N202) - CHOCHOLA, Miroslav (1.LF/520, VFN/N202) - JANOTA, Tomáš (1.LF/530, VFN/N203) - JANSÁ, Pavel (1.LF/520, VFN/N202) - JEŘÁBEK, Štěpán (1.LF/520, VFN/N202) - JIRÁT, Simon - KALOUSOVÁ, Marta (1.LF/410, VFN/N846) - KALVODOVÁ, Bohdana (1.LF/750, VFN/N238) - KARETOVÁ, Debora (1.LF/520, VFN/N202) - KMOCH, Stanislav (1.LF/650, VFN/N216) - KNOTKOVÁ, Valérie (1.LF/330, VFN/N852) - KOŘÍNEK, Josef (1.LF/520, VFN/N202) - KOTLAS, Jaroslav (1.LF/160, VFN/N880) - KOUSAL, Bohdan (1.LF/750, VFN/N238) - KOVÁRNÍK, Tomáš (1.LF/520, VFN/N202) - KOZIAR VAŠÁKOVÁ, Martina (1.LF/870) - KUCHYNKA, Petr (1.LF/520, VFN/N202) - KVASNIČKA, Jan (1.LF/510) - KVASNIČKA, Tomáš (1.LF/410, VFN/N846) - LAHODA BRODSKÁ, Helena (1.LF/410, VFN/N846) - LAMBERT, Lukáš (1.LF/620, VFN/N249) - LUBANDA, Jean-Claude (1.LF/520, VFN/N202) - MALÍK, Jan (1.LF/530, VFN/N203) - MAREK, Josef (1.LF/520, VFN/N202) - MAŠEK, Martin (1.LF/620, VFN/N249) - MATOUŠEK, Vojtěch (VFN/N225) - MATUŠKA, Jiří - MUSIL, Dalibor - OTÁHAL, Michal (1.LF/700, VFN/N225) - PALEČEK, Tomáš (1.LF/520, VFN/N202) - PIHEROVÁ, Lenka (1.LF/650) - PŠENIČKA, Miroslav (1.LF/520, VFN/N202) - PTÁČNÍK, Václav (1.LF/330, VFN/N852) - ROB, Daniel (1.LF/520, VFN/N202) - SLOVÁKOVÁ, Alena (1.LF/570, VFN/N211) - ŠETINA, Marek - ŠIMEK, Jan (1.LF/520, VFN/N202) - ŠIMEK, Stanislav (1.LF/520, VFN/N202) - ŠIRANEC, Michal (1.LF/520, VFN/N202) - ŠKRHA, Jan (1.LF/530, VFN/N203) - TESAŘ, Vladimír

(1.LF/511, VFN/N205) - **TUKA, Vladimír** (1.LF/520, VFN/N203) - **VITÁK, Tomáš** (1.LF/620, VFN/N249) - **VÍTKOVÁ, Ivana** (1.LF/310, VFN/N854) - **VRABLÍK, Michal** (1.LF/530, VFN/N203) - **WIDIMSKÝ, Jiří** (1.LF/530, VFN/N203) - **ZELINKA, Tomáš** (1.LF/530, VFN/N203) - **ZEMÁNEK, David** (1.LF/520) - **ZIMA, Tomáš** (1.LF/410, VFN/N846) - **ZOGALA, David** (1.LF/330, VFN/N852)
Vyšetřovací postupy u kardiovaskulárních onemocnění.

(AJ název: *Diagnostic methods in cardiovascular diseases*)

1. vyd. Praha : Maxdorf, 2021, 690 s. ISBN 978-80-7345-640-5

Financování: RVO-VFN64165; I-LFP; I-FNHK; I-LFHK; I-FNP-51; Q25; NV16-28525A;

Primární UK obor: Kardiologie

Další UK obory: Angiologie a vaskulární chirurgie;

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha "Vyšetřovací postupy u kardiovaskulárních onemocnění" představuje ucelenou publikaci věnující se celé šíři vyšetřovacích metod v kardiologii a angiologii.

AJ anotace: The textbook "Diagnostic methods in cardiovascular diseases" represents a complete review of examination methods in cardiology and vascular medicine.

AJ klíč. slova: diagnostic methods; cardiovascular diseases; cardiology; vascular medicine

608649, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

KREJČÍ, Jan - LAZÁROVÁ, Marie - **LINHART, Aleš** (1.LF/520, VFN/N202) - MÁLEK, Filip - PUDIL, Radek (FNHK/IKK, LFHK/IKK) - ŠPINAR, Jindřich - ŠPINAROVÁ, Lenka - TÁBORSKÝ, Miloš - VÍTOVEC, Jiří

Kardiologie. IV. Srdeční selhání.

3. vyd. Praha : Česká kardiologická společnost, 2021, 136 s. ISBN 978-80-271-1439-9

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. V prvním boxu jsou zařazeny svazky I-V s následujícími tématy: základní elementy kardiovaskulárních onemocnění, vyšetřovací metody v kardiologii, aterosklerotická a žilní onemocnění, srdeční selhání a arytmologie.

608644, učebnice pro VŠ / RIV22: 1.LF NE

CÍFKOVÁ, Renata (1.LF/520) - GRIVA, Martin - JARKOVSKÝ, Jiří - VÁCHA, Marek (3.LF/Etika) - VÍTOVEC, Jiří

Kardiologie. I. Základní elementy kardiovaskulárních onemocnění.

3. vyd. Praha : Česká kardiologická společnost, 2021, 71 s. ISBN 978-80-271-1439-9

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. V prvním boxu jsou zařazeny svazky I-V s následujícími tématy: základní elementy kardiovaskulárních onemocnění, vyšetřovací metody v kardiologii, aterosklerotická a žilní onemocnění, srdeční selhání a arytmologie.

595369, kolektivní monografie / RIV22: 1.LF ANO / RIV22: VFN ANO

HIRMEROVÁ, Jana (FNP/2.IK, LFPI/2.IK, LFPI/BC) - BULTAS, Jan (3.LF/Farmakologie) - DULÍČEK, Petr (FNHK/IHK, LFHK/IHK) - FÍNEK, Jindřich (FNP/ORO, LFPI/ORAK) - GUMOLEC, Jaromír - HOLUBEC, Luboš - **CHOCHOLA, Miroslav** (1.LF/520, VFN/N202) - **KARETOVÁ, Debora** (1.LF/520, VFN/N202) - KESSLER, Petr - MALÝ, Radovan (FNHK/IKK, LFHK/IKK) - MATUŠKA, Jiří - MUSIL, Dalibor - PÍŤHA, Jan (2.LF/Interní klinika) - ROZTOČIL, Karel - **TESAŘOVÁ, Petra** (1.LF/630, VFN/N236)

Trombóza a malignita.

(AJ název: *Thrombosis and Malignancy*)

1. vyd. Praha : Grada, 2021, 192 s. ISBN 978-80-271-3051-1

Financování: I-LFP; I-FNHK; I-LFHK; I-FNP-51; V-1LF; V-VFN; Q36;

Primární UK obor: Kardiologie

Další UK obory: Onkologie;

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha podává víceborový přehled o tromboembolické nemoci (TEN) asociované s malignitou. Epidemiologický úvod přináší informace o výskytu a následcích TEN v populaci obecně a zvláště u pacientů s malignitou. Následuje stručný výklad etiopatogenetických souvislostí trombotického a nádorového procesu a přehled možných protrombotických účinků různých typů protinádorové léčby. Dalším tématem je onkologický screening u pacientů s idiopatickou tromboembolickou příhodou, jeho indikace a rozsah. Autoři se také zabývají možnostmi prevence TEN u onkologicky nemocných - jednak hospitalizovaných, jednak ambulantně léčených chemoterapií, včetně nových dat o přímých orálních antikoagulanciích v této indikaci. Dále se kniha věnuje diagnostice a léčbě TEN u onkologických, uvádí aktuální doporučení odborných společností, týkajících se také možného použití přímých orálních antikoagulancií. Je podán přehled o možných lékových interakcích antikoagulancií s léky používanými v onkologii. Autoři také zmiňují probíhající studie prevence a léčby TEN u pacientů s malignitou. Probrány jsou i možné situace komplikující léčbu TEN v onkologii - trombocytopenie či krvácení. Specifickým tématy jsou intervenční léčba syndromu horní duté žíly; použití filtru dolní duté žíly u nemocných s malignitou; trombózy v neobvyklých lokalitách a trombóza centrálního žilního katétru. Autoři se věnují i méně obvyklým projevům, jako je trombóza povrchových žil či aterotrombóza u onkologických nemocných. Diskutovány jsou též etické otázky související s prevencí či léčbou TEN u pacientů v terminálním stadiu nádorového onemocnění. Závěrem kniha předkládá praktický pohled na organizaci péče o nemocné s malignitou a trombózou v podmínkách ambulantní péče

AJ anotace: The book presents a multidisciplinary review of cancer associated thrombosis (CAT). The introduction contributes with epidemiologic data about the incidence and consequences of venous thromboembolism (VET) in general population and particularly in cancer patients. The following part explains the etiopathogenic links between thrombosis and cancer, including the overview of potential prothrombotic effects of various types of antitumor treatment. The next topic is cancer screening in patients with unprovoked VTE, its indications and extent. The authors also describe the possibilities of CAT prevention in hospitalized patients as well as in ambulatory patients with chemotherapy, including new data about direct oral anticoagulants in the indication. Later on, the book deals with the diagnosis and treatment of CAT, informs about recent guidelines, concerning also the use of direct oral anticoagulants and oncology mediations. Some situations complicating the treatment of CAT are mentioned, e.g. thrombocytopenia or bleeding. Specific topics are the interventional treatment of superior vena cava syndrome; the use of inferior vena cava filters in cancer patients; thromboses in unusual sites and central venous catheter thrombosis. The authors mention also some less common manifestations, as superficial vein thrombosis or atherothrombosis in cancer patients. Moreover, some ethical dilemmas associated with the prevention and treatment of CAT in terminal stages of cancer are discussed. Finally, the book submits a practical view on the care of patients with CAT on an outpatient basis in our healthcare system.

Klíč. slova: žilní trombóza; tromboembolická nemoc

AJ klíč. slova: venous thromboembolism; cancer associated thrombosis

608676, učebnice pro VŠ / RIV22: 1.LF NE / RIV22: VFN NE

HERČÍKOVÁ, Regina (1.LF/520, VFN/N202) - HUTYRA, Martin - JANSKA, Pavel (1.LF/520, VFN/N202) - KÁRA, Tomáš - LUDKA, Ondřej - PŘEČEK, Jan - SOUČEK, Miroslav - ŠIMEK, Martin - TÁBORSKÝ, Miloš

Kardiologie. IX. Plicní kardiovaskulární onemocnění.

3. vyd. Praha : Česká kardiologická společnost, 2021, 128 s. ISBN 978-80-271-1997-4

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Kniha Kardiologie, sestávající z deseti svazků ve dvou boxech, je výjimečným dílem. Je určena pro kardiology, internisty a další související obory, užitečná je i pro studenty medicíny. Ve druhém boxu jsou zařazeny svazky VI-X s následujícími tématy: chlopenní vady, kardiomyopatie, preventivní kardiologie, plicní kardiovaskulární onemocnění a kardiovaskulární onemocnění v definovaných populacích.

PŘÍSPĚVEK V KONFERENCEČNÍM SBORNÍKU

602792, jiný příspěvek v konferenčním sborníku / RIV22: 1.LF NE

CÍFKOVÁ, Renata (1.LF/520)

Statiny a krevní tlak.

In: Arteriální hypertenze - současné klinické trendy XIX, 1. vyd. Praha : Triton, 2021, 11-19, 9 s. ISBN 978-80-7553-882-6

Konference: Arteriální hypertenze – současné klinické trendy XIX

Datum a místo konání: 07.04.2021, Praha, CST - celostátní akce

Primární UK obor: Kardiologie

Forma vyd.: P - tištěná verze "print"

Anotace: Příspěvek ve sborníku, který vyšel u příležitosti konání XIX. Symposia arteriální hypertenze - současné klinické trendy.