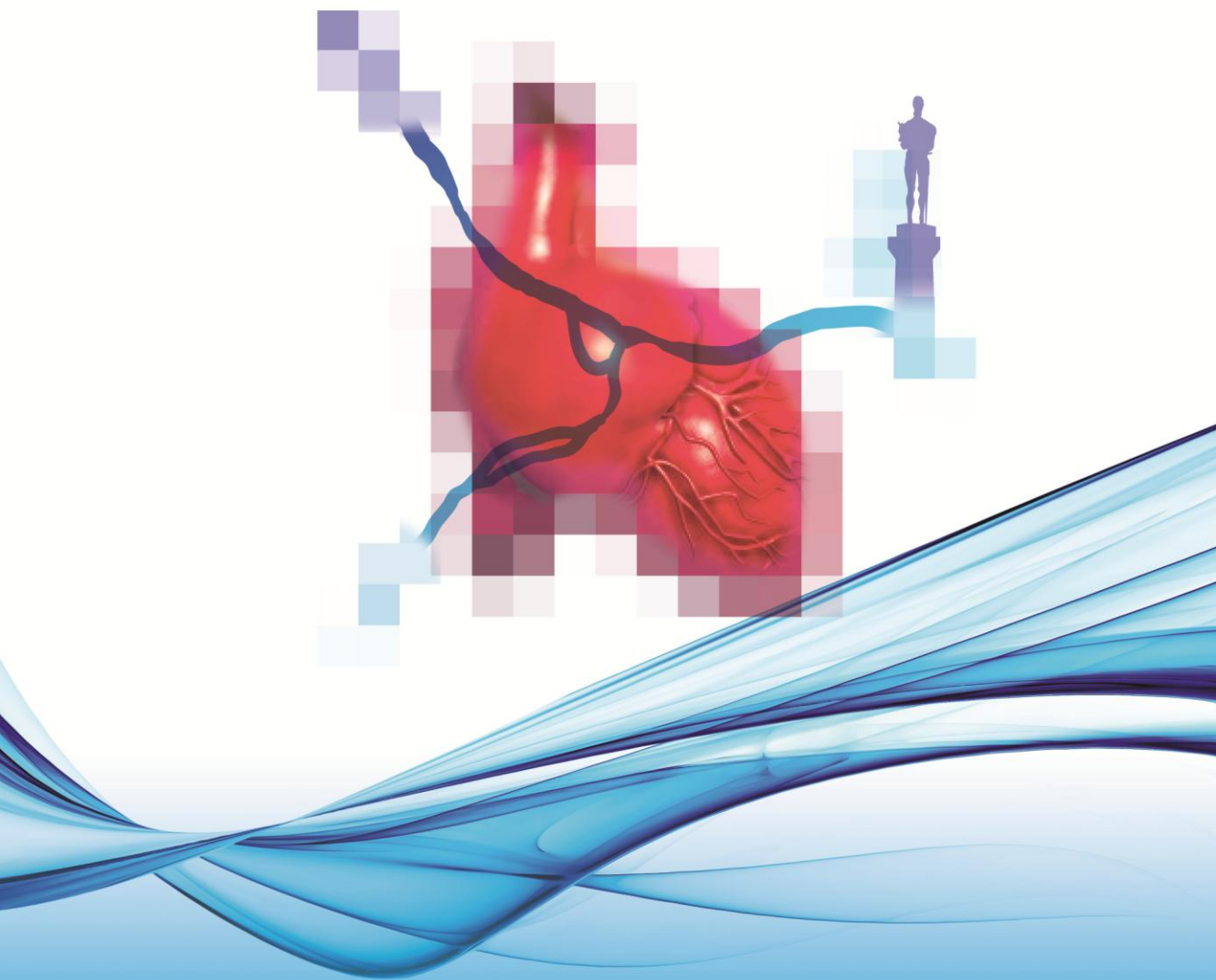


Udruženje za srčanu slabost Srbije

12. Internacionalni kongres kliničke kardiologije i srčane insuficijencije

CardioS 2014



12th International Congress on Clinical Cardiology and Heart Failure

April 25-26, 2014 / Hotel Hyatt Regency / Belgrade / Serbia



Heart Failure Society of Serbia

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Reč dobrodošlice

Želeli smo da Vas srdačno pozdravimo na početku XII Internacionalnog Kongresa kliničke kardiologije i srčane insuficijencije, CardioS 2014, koji se održava u Beogradu, 25.-26. aprila, 2014. godine. Kongres zajednički organizuju Udruženje za srčanu slabost Srbije, Medicinski fakultet Univerziteta u Beogradu, Srpska Akademija nauka i umetnosti i Asocijacija za srčanu slabost Evropskog udruženja kardiologa.

I ove godine, Kongres će predstaviti najnovije dijagnostičke i terapijske metoda lečenja kardiovaskularnih oboljenja i srčane slabosti. Posle uspeha CardioS-a 2013, odlučeno je da se klinička orijentacija sastanka zadrži, a da se naučni sadržaj Kongresa, zasnovan na Evropskim preporukama pojača. Kongres će se odvijati u 14 sesija razdvojenih u dve sale, u kojima će učestvovati 57 domaćih predavača i 17 predavača po pozivu iz 12 Evropskih zemalja.

CardioS 2014 je ne samo dinamičan i interaktivan edukacioni događaj, već predstavlja presek dijagnostičkih i terapijskih standarda kliničke kardiologije u Evropi i svetu. Format Kongresa obuhvata prikaze slučajeva, kliničke edukacije, kliničke simpozijume, sesije za sestre, fokus sesije, radionice, interdisciplinarne sesije, sesije pitajte eksperte, sesije prikaza slučajeva i simpozijume industrije.

CardioS 2014 predstavlja izvanredni obrazovno-naučni događaj. Struktura Kongresa u prvi plan stavlja najaktuelnije teme u kliničkoj kardiologiji, kao što su novine u lečenju terminalne i akutne srčane insuficijencije, pet najvažnijih dijagnostičkih metoda u kardiologiji, urgentna stanja u kardiovaskularnoj medicini kroz prikaz integrisanog kliničkog slučaja, kao i sesiju biseri kliničke kardiologije u srčanoj insuficijenciji.

Internacionalni aspekt CardioS 2014 će i ove godine biti u prvom planu, izražen kroz veliki broj stranih predavača i plenarno predavanje M. Komajde, bivšeg predsednika Evropskog udruženja kardiologa. Potrudimo se da diskusije i komentari budu na srpskom i engleskom jeziku u skladu sa posebnim konceptima sesija. Zdravstveni savet Srbije je akreditovao Kongres sa 15 bodova za predavače i 9 za učesnike.

Upotreba Audience Response System-a, će ove godine biti znatno poboljšana, što će dati priliku da se razmene misljenja i iskustva među ekspertima, lekarima i ostalim učesnicima. Sesija prikaza slučajeva će imati dobru audio-vizuelu podršku.

Sigurni smo da će CardioS 2014 biti stručni i naučni sastanak na najvišem nivou i da će u potpunosti ispuniti očekivanja naše i Evropske kardiološke javnosti.

Prof. dr Petar M. Seferović,
dopisni član SANU
Predsednik Organizacionog Odbora kongresa



Akademik prof. dr Nebojša M. Lalić
Predsednik Naučnog Odbora Kongresa

Welcome address

It is our particular pleasure to welcome you at the XII International Congress of Clinical Cardiology and Heart Failure, CardioS 2014 in Belgrade, Serbia, on April 25-26, 2014. The co-organizers of the meeting this year are Heart Failure Society of Serbia, Belgrade University School of Medicine, Serbian Academy of Sciences and Arts and Heart Failure Association of the European Society of Cardiology.

CardioS 2014 will feature the best and most up-to-date facts in the diagnosis and treatment of cardiovascular disease and heart failure. Being comprehensive, clinically oriented and translational, this Congress will cover the most important aspects of patient treatment, based on the latest European guidelines. This year, CardioS 2014 will take place in Hyatt Regency Hotel, Belgrade and will have 14 scientific sessions, in two rooms, gathering 57 local and 17 invited speakers from 12 European countries.

The Congress is not only dynamic and interactive educational event, but also presents cross-section of diagnostic and therapeutic standards in clinical cardiology in Europe and world-wide. The format of Congress covers clinical educations, clinical symposia, nursing session, focus session, workshop, interdisciplinary sessions, meet the experts session, heart failure case reports and industry sponsored Symposia.

CardioS 2014 presents an excellent teaching and learning event. The structure of the Congress highlights the hot topics in clinical cardiology, such as new treatments of end-stage and acute heart failure, cardiovascular emergencies and pearls in clinical cardiology session.

The large number of invited speakers and plenary lecture given by M. Komajda, past president of European Society of Cardiology, will provide high international level of the Congress. The Serbian Medical Chamber accredited the Congress with 15 CME points for lecturers and 9 CME points for participants.

This year, we improved the use of Audience Response System, which will allow the exchange of the knowledge and experience among experts and audience. Case-based and case presentation sessions will have strong audio-visual support.

We are sure that CardioS 2014 will be top level scientific and educational meeting, fulfilling the high expectations of Serbian and European cardiology community.

Prof. dr Petar M. Seferović,
Corresponding member of SASA
Congress Director



Academician prof. dr Nebojša M. Lalić
Chairman of Scientific Committee



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Raphael Rosenhek (Vienna, AT)
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Dragan V. Simić (Belgrade, RS)
Goran Stanković (Belgrade, RS)
Branislav Stefanović (Belgrade, RS)
Ivan Stojanović (Belgrade, RS)
Dušan Šćepanović (Belgrade, RS)
Nebojša Tasić (Belgrade, RS)
Bosiljka Vujisić-Tešić (Belgrade, RS)
Dejan Vukajlović (Regensburg, DE)
Vladan Vukčević (Belgrade, RS)
Biljana Vukobrat (Belgrade, RS)
Ivana Živković (Belgrade, RS)

Predavači po pozivu / Invited lecturers

Rade Babić (Belgrade, RS)

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Dragana Jovanović (Belgrade, RS)

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Velisava Perović (Belgrade, RS)

Jovan Peruničić (Belgrade, RS)

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Mira Ranković (Belgrade, RS)

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Dragan V. Simić (Belgrade, RS)

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Slavoljub Živanović (Belgrade, RS)

Naučni sekretariat Kogresa / Congress Scientific secretary

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Milorad Tešić (Belgrade, RS)

Olga Petrović (Belgrade, RS)

Jelena Stojković (Belgrade, RS)





Kongresni centar

Hyatt Regency Beograd je luksuzni hotel (pet zvezdica), koji se nalazi u centru Novog Beograda.

Lociran je nedaleko od centra grada u blizini kompleksa Beogradska Arena i Centra Sava – najvećih kongresnih, kulturnih i poslovnih centara u našoj zemlji. Udaljen je samo 15 minuta vožnje od Aerodroma.

U svojoj ponudi ima 302 komforne i moderno opremljene sobe. Pored smeštaja, obezbeđuje i usluge banket i katering servisa. U okviru hotela nalaze se restorani Metropolitan Grill i Focaccia, kao i mesta za poslovne sastanke Tea House i The Bar.

Ekskluzivni Klub Olympus fitnes centar & spa, opremljen je najsavremenijom fitnes opremom, sadrži potpuno renoviran bazen i đakuzi, saunu, parno kupatilo, mlazne tuševe i nudi veliki izbor masaža i tretmana za lice i telo.



Adresa hotela je Ulica Milentija Popovića 5, 11 070 Beograd, Srbija, tel +381 11 301 1234, fax +381 11 311 2234, e-mail belgrade.regency@hyatt.com, link www.hyattregencybeograd.rs



Congress Venue

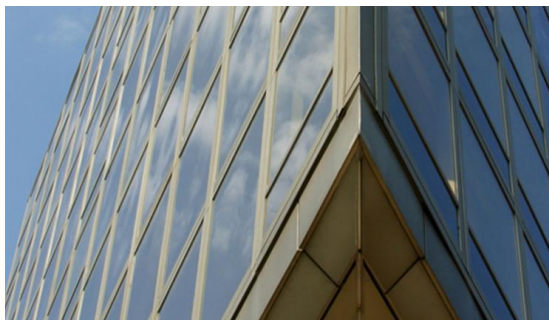
Hyatt Regency Belgrade is the finest ***** 5 star hotel in Belgrade, located in New Belgrade, close to the exclusive shopping Centre Ušće, and the mouth of Sava and Danube, with riverbank overlooking the city center, Kalemegdan fortress and natural resort War Island.

The hotel is only five minutes by car from the downtown Belgrade, the old city of Zemun and within walking distance from Conferce and Congress Center Sava, as well as KOMBANK Arena - the largest event and sports hall in the city. Hyatt Regency Belgrade hotel is also just 15 minutes from the Belgrade Airport.

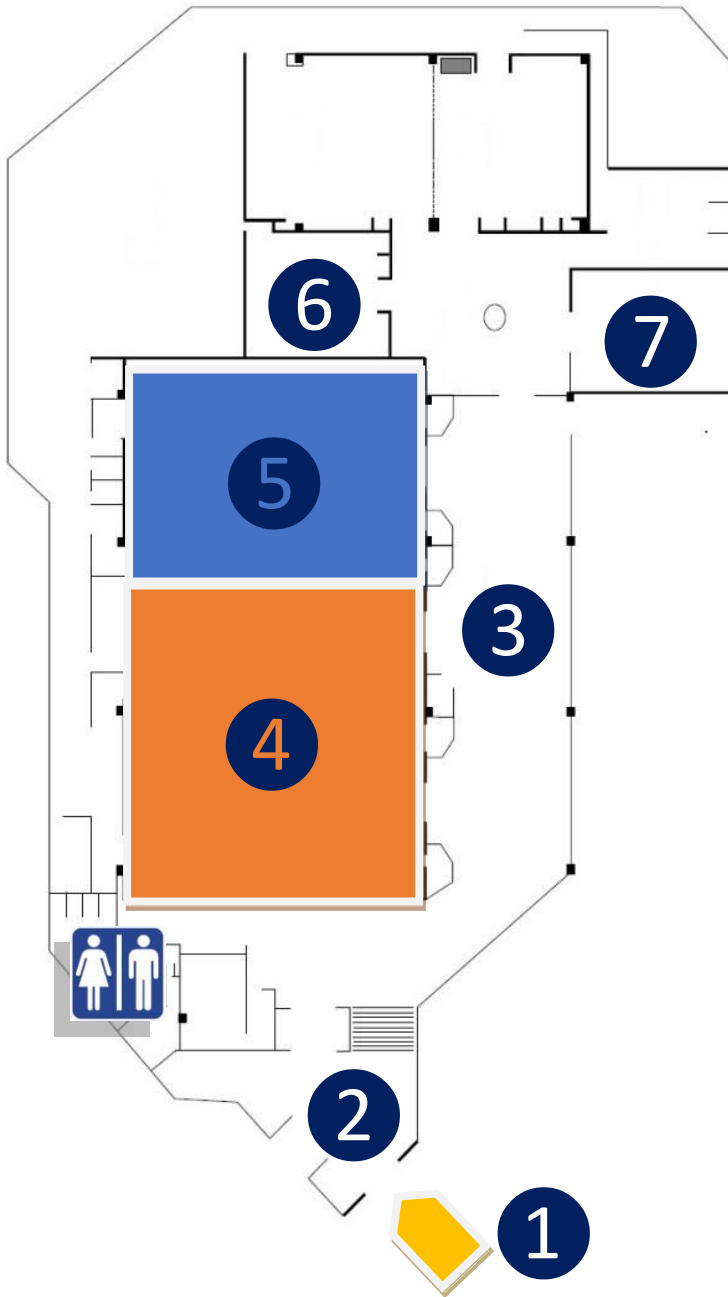
All hotel rooms come with lavish amenities and luxury guest services. Sample delicious cuisine at one of our restaurants including Metropolitan Grill Restaurant with Serbian and international delicacies and Tea House lounge, which specializes in sandwiches, light snacks and homemade teas and cakes. The Bar provides the large selection of wines by the glass, malt whiskies, vodkas, classic cocktails and hand-rolled cigars.

Club Olympus Fitness Centre & Spa is a wellness and fitness club pleasuring both body and mind, featuring the latest in fitness and training equipment, as well as a luxurious Belgrade spa. Recreation facilities include an indoor swimming pool, whirlpool, sauna, steam bath and a variety of exclusive massage and cosmetic treatments.

Hotel address in Milentija Popovića 5 Street, 11 070 Belgrade, Serbia, phone +381 11 301 1234, fax +381 11 311 2234, e-mail belgrade.regency@hyatt.com, web link www.hyattregencybeograd.rs

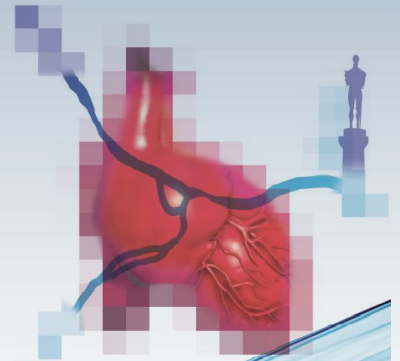


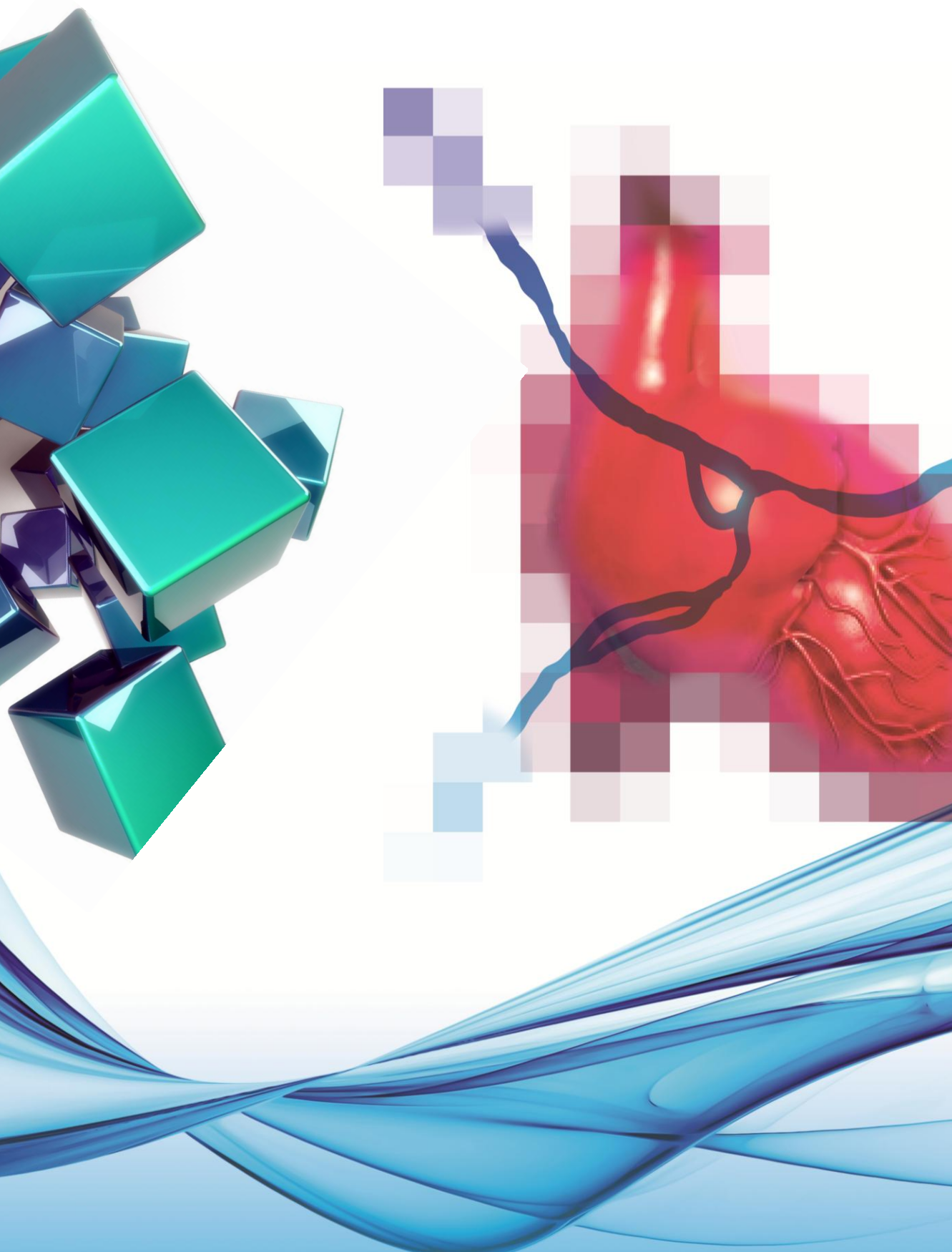
Plan kongresnog centra / Congress Venue Floor Plan



- ① Ulaz / Entrance
- ② Registracija / Registration
- ③ Izložbeni prostor / Exhibition area
- ④ Sala Heart / Room Heart
- ⑤ Sala Aorta / Room Aorta
- ⑥ Servis za predavače / Speakers service
- ⑦ VIP prostorija / VIP area

CardioS 2014







Opšte informacije o Kongresu

**Congress guidelines
and general
informations**

Uputstva za predavače, registracija i sertifikati

SERVIS ZA PREDAVAČE I VIP PROSTORIJA

Sesije se sastoje od četiri predavanja eksperata, trajanja do 20 minuta (osim u slučajevima kada to nije posebno naglašeno). **Audience Response System (ARS)** za interaktivno učešće je dostupan za 100 učesnika u Sali 1. PC video projektor je instaliran u salama za sve prezentacije. Neće biti moguće duple projekcije. Prezentacije na CD-u ili USB-u treba dostaviti tehničkom osoblju bar sat vremena pre sesije ili na e-mail adresu seferovic@med.bg.ac.rs. Nema limita u veličini prezentacije, ali se ne preporučuje da bude veća od 50 MB. Prezentacija sa ličnog notebook-a je takođe moguća, ali se ne preporučuje zbog vremenskog ograničenja sesija. **Servisa za predavače i VIP Prostorije** za predavače su prikazane na Planu Kongresnog centra.

ZVANIČAN JEZIK

Prezentacije evropskih eksperata će biti na engleskom jeziku. Predavanja srpskih eksperata, gostiju iz regiona i simpozijumi industrije će biti na lokalnom jeziku sa slajdovima na engleskom jeziku.

REGISTRACIJA

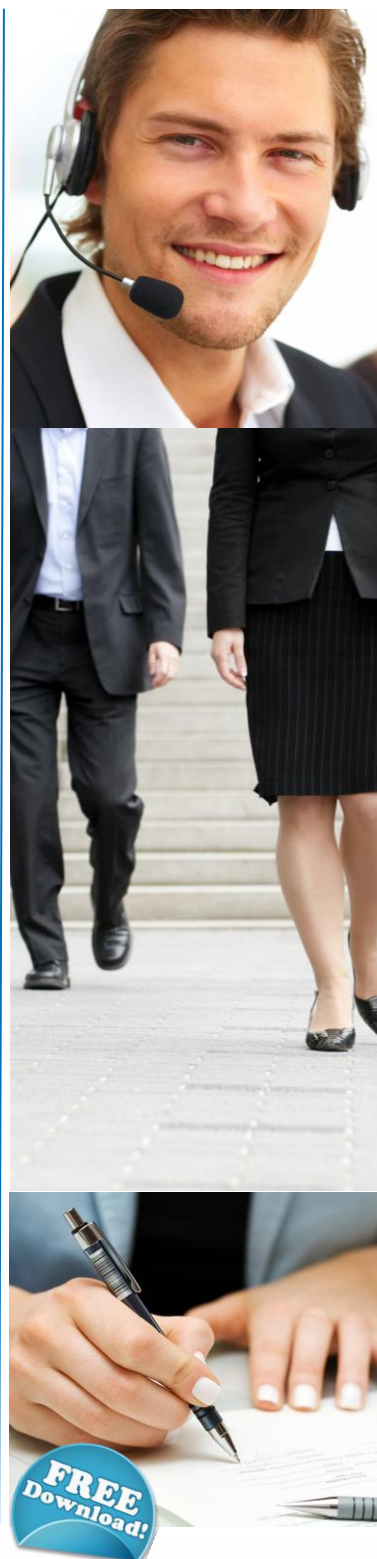
Registracioni pult je otvoren od petka, 25.aprila 2014, od 09:00h. Registracija za lekare je 150 €, a za medicinske sestre 75 €. Za sve predavače registracija je besplatna. Preregistrovani učesnici mogu da preuzmu svoje bedževe i kongresni material na Registracionom pultu od petka, 25.aprila 2014, 09:00h.

SEFTIFIKATI

Program Kongresa je akreditovan od strane Zdravstvenog saveta Republike Srbije sa 9 bodova za učesnike i 15 bodova za predavače (broj odluke **153-02-04294/2013-01**, od januara 2014., evidencioni br. **A-1-163/14**). Sertifikate možete preuzeti na Registracionom pultu u subotu, 26.aprila, 2014. od 10.00 h.

ELEKTRONSKU VERZIJU PROGRAMA MOŽETE PREUZETI SA

SAJTA: <http://tca.co.rs/>





Guidelines for Speakers, Registration and Certificates

SPEAKER SERVICE CENTER AND VIP ROOM

Sessions consist of four 20-minutes lectures delivered by distinguished experts (if otherwise not specified). **Audience Response System (ARS)** is available for 100 participants in Room 1. PC video projector will be available for all presentations. No double projection or slide projection will be possible. Presentation on a CD-ROM or USB stick should be delivered to the technician at least one hour before the session or sent in advance to seferovic@med.bg.ac.rs. There is no limit in the size of presentation, but it is suggested to keep it less than 50 MB. Presentation from a personal notebook is possible but not recommended due to the time limitation. **Speaker Service Center and VIP Room** for the invited lectures exact location can be found on the Floor plan.



LANGUAGE

All presentations of European experts will be in English. Serbian experts and industry-sponsored symposia will be in Serbian language with slides in English.

REGISTRATION

Registration desk will be opened on Friday April 26th 2013, from 09:00h. Registration fee is 150 € for doctors and 75 € for nurses . All faculty – free of charge. Preregistered participants can pick up their badges and congress material at the Registration desk from Friday April 26th 2014, 09:00 AM.

CERTIFICATES OF ATTENDANCE

The Congress program is accredited by the Medical Council of Serbia with 9 CME credit hours for participants and 15 for lecturers (No. **153-02-04294/2013-01**, Ev.No.**A-1-163/14**). Certificates of attendance will be available at the Registration Desk, on Saturday, April 26, 2014 from 10.00 AM.

DOWNLOAD PROGRAM FROM SITE: <http://tca.co.rs/>



FREE
Download!

Generalne informacije

VALUTA

Zvanična valuta u Srbiji je Dinar (skraćeno RSD). Trenutni zvanični srednji kurs je oko 115.5 RSD za 1 Euro. Kreditne kartice (VISA, Euro card, MasterCard i Diners Club) su sredstvo plaćanja koje prihvata većina prodavnica. Menjačnice i bankomati postoje u Hotelu. Za informacije se obratiti recepciji Hotela ili sekretarijatu Kongresa.

JAVNI PREVOZ

Autobuske linije 68, 95, tramvajske linije 7, 7L, 9, 11 i 13 i minibusovi E1, E5, E6 staju ispred Hotela Hyatt. Karte za jednu vožnju mogu da se kupe u samim vozilima (cena 150 RSD), a karte za više vožnji na kioscima ispred Hotela. Taxi stanica se, takođe nalazi ispred Hotela.

KAFE PAUZE

Kafe pauze će biti organizovane u Izložbenom prostoru u petak, 25.aprila od 11. 10-11. 30 i uz Koktel dobrodošlice od 15. 40-16. 10, kao i u subotu 26.aprila od 10. 10 - 10. 30 i od 15. 30 - 15. 50 uz radni ručak od 10. 30- 11. 30 u okviru Simpozijuma industrije.

WiFi

Za sve učesnike Kongresa je obezbeđen besplatan WiFi. Potrebno je izabrati opciju Hyatt internet, nakon toga opciju Conference, zatim uneti kod: meet/cardios2014 i pritisnuti Login.

VREMENSKA PROGNOZA

Tokom dva dana Kongresa, očekuje se oblačno vreme sa povremenim pluskovima prvog dana Kongresa i dnevnim temperaturama 13-25°C (izvor: accuweather.com).

SEKRETARIAT KONGRESA

Ivan Milinković, Dejan Simeunović, Gorica Radovanović, Jelena Seferović, Ivana Živković, Milorad Tešić, Olga Petrović and Jelena Stojković. Klinika za kardiologiju, Klinički centar Srbije, Koste Todorovica 8, 11000 Beograd, Srbija, Telefon/Fax: +381-11-361-4738, E-mail: seferovic@med.bg.ac.rs, Mobilni telefoni: +381-64-9901-273 (Milinković), +381-64-1111-219 (Simeunović), +381-64-206-58-19 (Radovanović), +381-63-77-666-38 (Seferović), +381-63-861-29-23 (Živković), +381-63-83-80-559 (Tešić) i +381-63-329-492 (Petrović).

TURISTIČKA AGENCIJA

Za potrebe rezervacije hotela i organizacije puta, kontaktirati **Turističku agenciju TCA (Gosp. Radmila Kovačević ili Gosp. Katarina Kovačević, telefoni +381-11-3238-514 ili +381-11-3238-705, ili mobilni telefon +381-300-719, E-mail: tca@beotel.net)**. Smeštaj za inostrane goste je organizovan u Hotelu Hyatt Regency. Prevoz od aerodroma i od hotela je, takođe, organizovan za sve međunarodne predavače.



General Information

CURRENCY

The Serbian currency is Serbian Dinar (abbreviated as RSD). Current exchange rate is 115.5 RSD for 1 Euro. Credit cards (VISA, Euro card, MasterCard and Diners Club) are accepted in most shops. Automated Teller Machines (ATMs) and Exchange offices are also available in the Hotel. For detailed information contact Hotel reception or Congress Secretariat.

PUBLIC TRANSPORTATION

Bus lines 68, 95, as well as tram lines 7, 7L, 9, 11 and 13 connect to the Hotel with various stops within the city. The one way tickets are available in the buses and trams (cost 150 RSD, app. 1.3 Euro), and also the multiple use tickets can be acquired at kiosks in the front of the Center. Taxis are available throughout the City of Belgrade, and also in front of the Hotel.

COFFEE BREAKS

Coffee breaks will be located in the Exhibition area on Friday April 25th, from 11. 10-11. 30 with Welcome Reception Cocktail from 15. 40-16. 10, and on Saturday, April 26th from 10. 10 - 10. 30 and from 15. 30 - 15. 50, with Working lunch Symposium from 10. 30-11. 30.

WiFi

Free WiFi is provided for all Congress participants. Choose option Hyatt internet, than option Conference, input code: meet/cardios2014 and press Login.

WEATHER FORECAST

During the two days of the Congress it is expected mostly cloudy weather, with mild showers on the first day of the Congress and daily temperatures ranging from 13-25 °C (source: accuweather.com).

SCIENTIFIC SECRETARIAT

Ivan Milinković, Dejan Simeunović, Gorica Radovanović, Jelena Seferović, Ivana Živković, Dejan Milašinović, Milorad Tešić, Olga Petrović and Jelena Stojković. Department of Cardiology, Clinical Centre of Serbia, Koste Todorovica 8, 11000 Belgrade, Serbia, Phone/Fax: +381-11-361-4738, E-mails: seferovic@med.bg.ac.rs, Mobile phones: +381-64-9901-273 (Milinković), +381-64-1111-219 (Simeunović), +381-64-206-58-19 (Radovanović), +381-63-77-6666-38 (Seferović), +381-63-861-29-23 (Živković), +381-63-83-80-559 (Tešić) and +381-63-329-492 (Petrović).

TRAVEL AGENCY

For hotel reservations and travel arrangements please contact **TCA travel agency (Ms. Radmila Kovačević or Ms. Katarina Kovačević, office phone +381-11-3238-514 or +381-11-3238-705, or mobile phone +381-063-300-719, E-mail: tca@beotel.net).** Accommodation of the faculty members and international participants is organized at the Hyatt Regency Hotel. Transportation from the airport and from the hotels will be organized for all invited speakers and international participants.



Udruženje za srčanu slabost Srbije i Evropsko Udruženje za srčanu insuficijenciju: zajedno smo jači !

ŠTAND UDRUŽENJA ZA SRČANU SLABOST SRBIJE

Udruženje za srčanu slabost Srbije (USSS) je osnovano 2011. godine. Aktivnosti Udruženja od 2012. godine su: organizacija Evropskih dana srčane slabosti u Srbiji, Samita Nacionalnih udruženja za srčanu slabost, Nacionalnog registra za srčanu slabost, Nacionalnog registra za peripartalnu kardiomiopatiju, Nacionalnog registra za plućnu hipertenziju i Mladih kardiologa koji se bave srčanom slabošću. Pozivamo Vas da postanete član Udruženja i da zajedno pomognemo bolesnicima sa srčanom slabošću. Članarina je besplatna u sledeće dve godine. Za sve dodatne informacije oko aplikacije za članstvo posetite stand Udruženja koji se nalazi blizu Registracionog pulta. Sastanak Skupštine Udruženja, na koji su svi pozvani, će se održati u subotu, 26. aprila od 07.30 h u Sali Aorta u Hotelu Hyatt Regency

EVROPSKO UDRUŽENJE ZA SRČNU INSUFICIJENCIJU

Evropsko Udruženje za srčanu insuficijenciju (HFA ESC) je osnovana 2004. godine kao jedna od Asocijacija ESC. Misija HFA je unapređenje dužine i kvaliteta života kroz bolju prevenciju, dijagnozu i lečenje srčane slabosti, uključujući i uspostavljanje mreže posvećene lečenju, edukaciji i istraživanju. HFA organizuje godišnje kongrese, istraživačke sastanke, edukacione, trening programe i radionice, proizvodi konsenzus dokumente i ESC vodiče kliničke prakse, kao i organizuje registre iz polja srčane slabosti. HFA promoviše istraživanje, uspostavlja evropske mreže za istraživanje i lečenje srčane slabosti preko aktivnosti više svojih Komiteta i studijskih grupa, čime unapređuje svest o postojanju srčane slabosti u Evropi i pomaže implementaciju ESC vodiča kliničke prakse za dijagnostiku i lečenje srčane slabosti. HFA, takođe, objavljuje naučni časopis, The European Journal of Heart Failure sa impakt faktorom 4.89. Za dodatne informacije, posetite www.escardio.org/communities/HFA

GODIŠNJI KONGRESI EVROPSKE ASOCIJACIJE ZA SRČANU SLABOST

Kongres "Heart Failure" koji organizuje HFA ESC, je jedinstven forum gde kardiolozi, specijalisti interventne medicine, kardiohirurzi, internisti, lekari opšte prakse, bazični naučnici, epidemiolozi, medicinske sestre, predstavnici industrije i drugi imaju mogućnost da se upoznaju, razmene iskustva, ideje i informacije. HFA Kongres je međunarodni događaj otvoren za sve koje interesuje bilo koji aspekt srčane slabosti, od dijagnoze (nove metoda imidžinga i biomarkeri), monitoringa, prognoze (stratifikacije rizika) i lečenja. Zahvaljujući međunarodnim predavačima, u prvi plan se stavlja edukacija i saradnja. U maju 2012.godine, Beograd je bio domaćin HFA kongresa, "HEART FAILURE 2012", koji je po opštoj oceni, bio jedan od najuspešnijih sastanaka Evropskog Udruženja za srčanu insuficijenciju. Ove godine, HFA ESC kongres, "HEART FAILURE 2014", će se održati u Atini, Grčka, 17-20. maja 2014. godine. U isto vreme održaće se i Prvi Svetski kongres o akutnoj srčanoj insuficijenciji. Saznajte više na <http://www.escardio.org/congresses/heart-failure-2014>.

CENEĆI VELIKU AKTIVNOST SRPSKIH KARDIOLOGA NA PODRUČJU SRČANE SLABOSTI, EVROPSKO UDRUŽENJE ZA SRČANU SLABOST JE ODOBRILO DA KARDIOLOZI IZ SRBIJE PLAĆAJU KOTIZACIJU ZA KONGRES HEART FAILURE 2014 PO CENI OD 200 € (CENA LOKALNIH UČESNIKA)! Potrebno je sa se uz registraciju priloži fotokopija pasoša.



EUROPEAN
SOCIETY OF
CARDIOLOGISTS



HEART FAILURE
ASSOCIATION
OF THE EUROPEAN SOCIETY OF CARDIOLOGISTS



Heart Failure Society of Serbia and Heart failure Association of the ESC: together we are stronger !

HEART FAILURE SOCIETY OF SERBIA CORNER

Heart failure Society of Serbia was founded in 2011. The activities of the Society from 2012 included: European Heart Failure Awareness Day in Serbia, Heart failure National Societies Summits, Serbian long-term Registry on heart failure, Serbian Peripartum cardiomyopathy Registry, National Registry on pulmonary hypertension and Young heart failure cardiologist. We invite you to become the member of the Society, and let's help together our heart failure patients. The membership in the Society is free for the next two years. All information regarding membership application are available at the Heart Failure Society of Serbia Corner near Registration Desk. The General Assembly of the Society will take place on Saturday, April 26th, 2013, from 07.30AM in Room Aorta of the Hyatt Hotel.

HEART FAILURE ASSOCIATION OF THE EUROPEAN SOCIETY OF CARDIOLOGY

Heart Failure Association of the European Society of Cardiology (HFA of the ESC) has been established in 2004 as a branch of the ESC. The mission of HFA is to improve quality of life and longevity, through better prevention, diagnosis and treatment of heart failure, including the creation of network for its management, education and research. HFA organizes HFA Annual Congresses, research meetings, education and training programmes and workshops, produces Consensus documents, ESC guidelines, surveys and registries in the field of heart failure. It promotes research, establishes European heart failure research and management networks through several Committees and Study Groups, improving awareness of heart failure in Europe and helping in implementation of the ESC Guidelines on Heart Failure. HFA also publishes scientific journal, the European Journal of Heart Failure with the impact factor 4.89. For additional information, visit www.escardio.org/communities/HFA

HEART FAILURE ASSOCIATION ANNUAL CONGRESS

Organized by the HFA of the ESC, the Heart Failure Congress is a unique forum where cardiologists, interventional heart failure specialists, cardiac surgeons, internists, practicing general physicians, basic scientists, epidemiologists, cardiac nurses, industry affiliates and others have the opportunity to meet, exchange ideas and information. The HFA congress is an international event open to anyone interested in any aspect of heart failure from epidemiology, through basic and translational science to prevention, diagnosis (including novel imaging modalities and biomarkers), monitoring, prognostication (risk stratification as well as use of biomarkers), medical and nursing management (including drugs, devices, tele-care and surgery). It favors education, networking and knowledge thanks to an international faculty. This year HFA of the ESC Annual Congress, HEART FAILURE 2014, will take place in Athens, Greece, 17-20th May, 2014. Find out more on <http://www.escardio.org/congresses/heart-failure-2014>.

EVROPSKI DAN SRČANE SLABOSTI U SRBIJI

Evropski dan srčane slabosti se obeležava u celoj Evropi od maja 2011. godine. Ovaj dan, iniciran od strane HFA ESC bi trebao da ukaže na važnost prepoznavanja srčane insuficijencije, uspostavljanja tačne dijagnoze i adekvatnog lečenja. Ova kampanja se sastoji od interakcije lekara sa bolesnicima na javnim mestima, organizovanih predavanja na klinikama i medijske promocije kampanje (na televiziji i u novinama). Odlično organizovane kampanje povodom ovog dana u predhodnih godina, a od 2012 od strane Udruženja za srčanu slabost Srbije (Beograd, Novi Sad, Kragujevac i Niš), je su omogućile da Srbija četiri godine uzastopno bila jedan od pobednika za najbolju organizaciju među 28 evropske zemlje. Sledeći originalne ideje našeg vrhunskog novinara Petra Popovića, ove godine će centralni događaj obeležavanja Evropskog dana srčane slabosti biti organizovan vožnjom turističkim autobusima do "Avalskog tornja", 9. maja 2014. Moto ovogodišnje akcije je "Pregled na najvišem nivou". Vaša ustanova je dobrodošla da učestvuje u obeležavanju ovog dana, a sav neophodan promotivni material je dostupan za preuzimanje na: www.escardio.org/communities/HFA/heart-failure-awareness-day-2013/Pages/european-heart-failure-awareness-day-2013.aspx.

SAMIT NACIONALNIH UDRUŽENJA ZA SRČANU SLABOST

Samit Evropske Asocijacije za srčanu slabost se organizuje sa ciljem da poboljša saradnju ove Asocijacije i Nacionalnih udruženja za srčanu slabost. Uz to, cilj Samita je i da pojača regionalnu saradnju između Nacionalnih udruženja, promoviše upotrebu aparat i poboljša strategije prevencije srčane slabosti. Samit je osmišljen kao skup predsednika ili predstavnika Nacionalnih udruženja i Evropske Asocijacije. zatim članova Borda HFA i članova Komiteta HFA nacionalnih udruženja. Tokom 2011. i 2012. godine, Samit Nacionalnih udruženja je veoma uspešno organizovan u Beogradu, 2012 od strane Udruženja za srčanu slabost Srbije, okupivši oko 50 predsednika ili predstavnika HF NS, članova Borda HFA i članova Komiteta HFA nacionalnih udruženja.

EUROOBSERVATIONAL ISTRAŽIVAČKI PROGRAM

Upitnici i registari su osnovni načini procene kardiovaskularne epidemiologije kao i dijagnostike i lečenja. Zbog toga je Evropsko udruženja kardiologa 2009. započelo istraživački program - *EURObservational Research program*. Glavne karakteristike *EURObservational* programa su: upotreba adekvatne metodologije, mreža volonterskih centara koje su odredila za to zadužena ESC tela, upotreba on-line sistema za elektronsko beleženje podataka (electronic Case Report Forms -CRF), čime je omogućeno osim lakog unošenja podataka i puno učešće Nacionalnih udruženja ESC i odgovarajućih organizacija unutar ESC. Saznajte više na: www.escardio.org/guidelines-surveys/eorpc/welcome.aspx.





EUROPEAN HEART FAILURE AWARENESS DAY IN SERBIA

European Heart Failure Awareness Day is held throughout the Europe, since 2011. It is a public campaign initiated by the HFA of the ESC and designed to raise awareness about the importance of early recognizing heart failure, getting an accurate diagnosis and receiving optimal treatment. The campaign consists of interaction with patients in public locations, lectures in open clinics, and media campaign (television and newspapers). Well organized Heart Failure Awareness Day campaigns during the last 4 years, and in 2012 and 2013 by Heart failure Society of Serbia, (Belgrade, Novi Sad, Kragujevac and Nis), enabled Serbia to be the one of the winners for the best organization among 28 participating European countries. Following the ideas of our top journalist, Mr Petar Popović, this year, central Heart Failure Awareness Day campaign will be held at "Avala tower" on May 9th 2014. Your Institution is welcome to take part. All necessary promotional material can be downloaded from www.escardio.org/communities/HFA/heart-failure-awareness-day-2013/Pages/european-heart-failure-awareness-day-2013.aspx.

HEART FAILURE NATIONAL SOCIETIES SUMMIT

Heart failure Association (HFA) Summit is organized to improve the avenues of cooperation and friendship between the HFA and the National Heart Failure Societies (HF NS) / working groups. Furthermore, the Summit's aim is to enhance regional collaboration among the HF NS and provide an additional forum for transfer of knowledge and experience in heart failure in Europe, increase public awareness about heart failure, promote appropriate use of devices, and improve heart failure prevention strategies. The Summit was designed to gather together Presidents/Representatives of the HF NS, HFA Board members, and Members of the HFA National Societies Committee. During 2011 and 2012 HF NS Summits were organized in Belgrade, in 2012 by Heart Failure Society of Serbia, gathering around 50 HF NS presidents/ representatives, HFA Board and NF NS Committee members.

EUROBSERVATIONAL RESEARCH PROGRAM

Surveys and Registries are essential to assess CV epidemiology, diagnostic/therapeutic processes and adherence to Guidelines. In 2009 the **EURObservational Research Programme (EORP)** was launched. The aim of this new programme, of Surveys & Registries, is to provide a better understanding of medical practice based on observational data collected with more robust methodological procedures. The main features of the *EURObservational* Research Programme are: use of appropriate methodological procedures, network of volunteer centres appointed by ESC constituent bodies, use on-line electronic Case Report Forms (CRF) allowing user friendly web based data entry and full involvement of the ESC National Societies and relevant ESC Constituent Bodies. Find out more on www.escardio.org/guidelines-surveys/eorp/Pages/welcome.aspx.

DUGOROČNI REGISTAR BOLESNIKA SA SRČANOM SLABOŠĆU SRBIJE

Dugoročni registar bolesnika sa srčanom slabošću Srbije je baza podataka o dijagnozi i lečenju srčane insuficijencije. Cilj ovog registra je bolje razumevanje prirode obolenja, prevalence i terapijskih strategija. Ovaj registar je deo EURObservational istraživačkog programa i u ovaj prospektivan projekat je uključena mreža centara i udruženja koji se bave srčanom insuficijencijom. Eksperti i institucije iz Srbije koji žele da se pridruže ovom projektu su dobrodošli i mogu dobiti sve informacije na e-mail srcanaslabost@yahoo.com.

REGISTAR BOLESNIKA SA PERIPARTALNOM KARDIOMIOPATIJOM SRBIJE

Nacionalni registar bolesnika sa peripartalnom kardiomiopatijom (PPCM), je deo svetskog registra bolesnika sa PPCM EURObservational istraživačkog programa, čiji je glavni cilj utvrđivanje kliničke epidemiologije, dijagnostičkih i terapijskih pristupa, kao i prikupljanje informacija o stanju dece. Prikupljaju se podaci o mogućim faktorima rizika, dijagnozi, porođaju i standardnoj terapiji. Eksperti i institucije iz Srbije koji žele da se pridruže ovom projektu su dobrodošli i mogu dobiti sve informacije na e-mail srcanaslabost@yahoo.com. Saznajte više informacija na www.escardio.org/guidelines-surveys/eorp/surveys/ppcm/Pages/peripartum-cardiomyopathy.aspx.

NACIONALNI REGISTAR ZA PLUĆNU HIPERTENZIJU

U Srbiji se u protele tri godine vidi nacionalni registar za bolesnike sa plućnom hipertenzijom koji uključuje, kako bolesnike sa primarnim oblicima plućne hipertenzije, tako i bolesnike sa sekundarnom formom ovog oboljenja. Registar čine 15 ustanova iz Univerzitetskih centara u Srbiji. Sem adultnih i pedijatrijskih kardiologa, u ovom registru aktivno učestvuju i pulmolozi, reumatolozi, klinički imunolozi i kardiohirurzi. Registar ima bazu podataka kojoj se može pristupiti preko interneta, što olakšava prijavu i praćenje bolesnika u različitim centrima.

MLADI KARDIOLOZI KOJI SE BAVE SRČANOM INSUFICIJENCIJOM

Glavni zadatak Nacionalnih Udruženja za srčanu insuficijenciju je da identifikuju mlade kardiologe (mlađe od 40 godina), koji se interesuju za srčanu slabost. Kod ovih lekara treba stimulisati saznanje iz oblasti srčane slabosti na nacionalnom i internacionalnom nivou. Bilo bi poželjno obezbediti njihovo aktivno učešće na godišnjim Kogresima HFA ESC. Korisno je da se mladi kardiolozi, koji žele da se bave srčanom insuficijencijom međusobno poznaju, a u skladu sa stepenom edukacije, treba planirati dalje usavršavanje. Oni treba da učestvuju u izvođenju kliničkih studija iz oblasti srčane slabosti u svojoj ustanovama ili na nacionalnom nivou kako bi što pre postali kompetentni u ovoj oblasti.



SERBIAN LONG-TERM REGISTRY ON HEART FAILURE

Serbian long term HF registry is the organized database about the diagnosis and treatment of HF. The purpose of the registry is to help better understanding the nature of the disease, its prevalence and treatment strategies. The registry is a part of EURObservational Research Programm registry and a network of HF centers and societies are involved in this prospective project. Serbian experts and institutions who would like to join Serbian long term HF registry are welcome. Experts and Institutions which would like to join the project are welcome and can get additional information on e-mail srcanaslabost@yahoo.com.

SERBIAN NATIONAL PERIPARTUM CARDIOMYOPATHY REGISTRY

Serbian National peripartum cardiomyopathy registry (PPCM), is a part of worldwide registry on PPCM of EURObservational Research Programm, which main goal is to establish the clinical epidemiology and the diagnostic/therapeutic processes of women suffering from this condition, as well as the collection of information on their offspring. Data is collected on possible risk factors, diagnosis, mode of delivery, standard management and therapeutic interventions currently performed in each centre for patients presenting with signs and symptoms of PPCM pre- or postpartum. Experts and Institutions which would like to join the project are welcome and can get additional information on e-mail srcanaslabost@yahoo.com. You can find more information on www.escardio.org/guidelines-surveys/eorp/surveys/ppcm/Pages/peripartum-cardiomyopathy.aspx

NATIONAL REGISTRY ON PULMONARY HYPERTENSION

National registry on pulmonary hypertension was founded in Serbia three years ago and includes patients with arterial pulmonary hypertension, but also patients with systemic autoimmune disease, post-thromboembolic and any other forms requiring PAH-specific treatment. Registry includes 15 institutions, covering all university medical centers in Serbia. Apart from adult and pediatric cardiologists, our multidisciplinary team also includes pulmonologists, rheumatologists, clinical immunologists, and cardiac surgeons. Registry is web-based and enables password-protected access from any of the participating centers, which facilitates follow-up and transfer of patients.

YOUNG HEART FAILURE CARDIOLOGIST

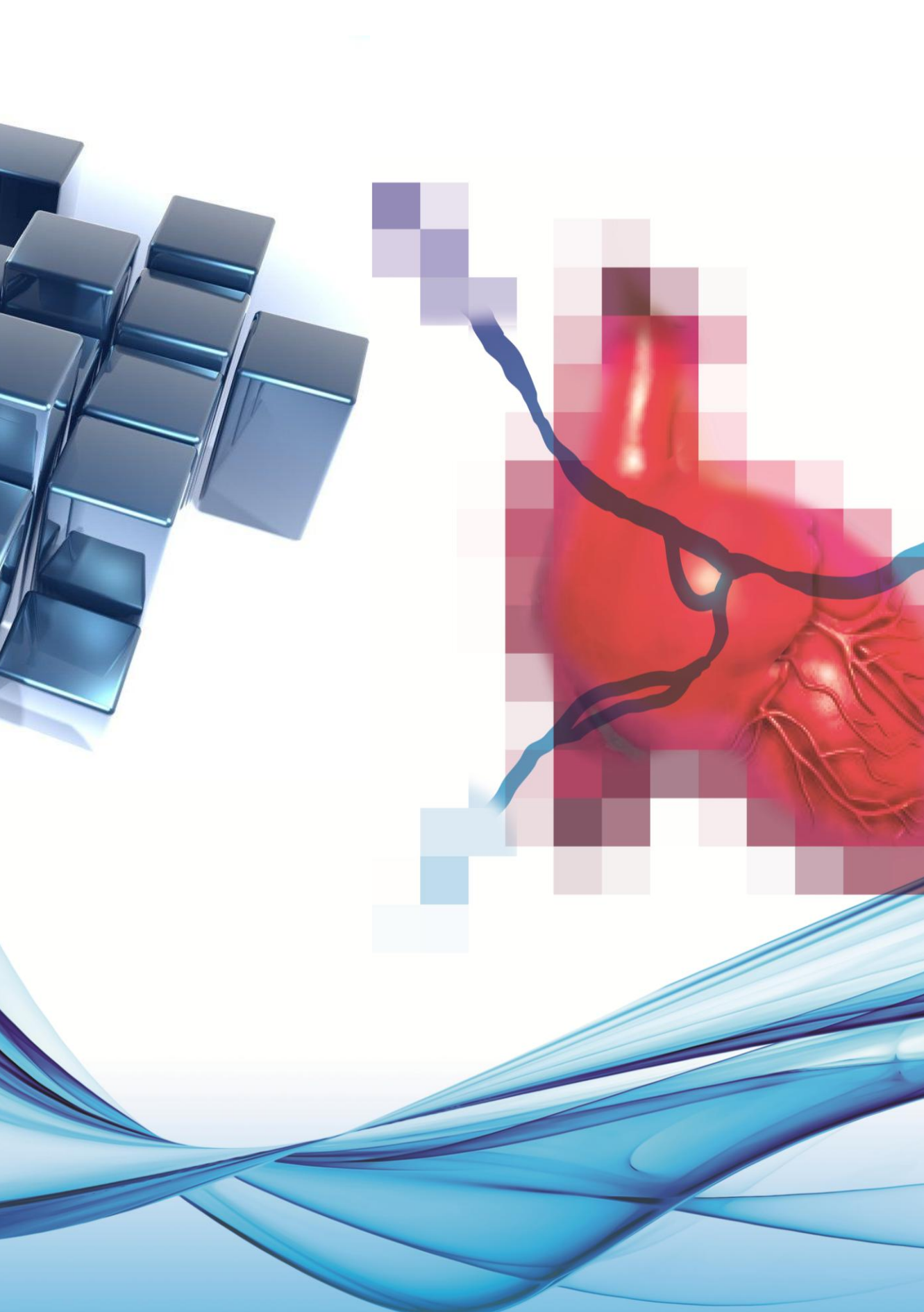
The major task of Heart Failure National Societies is to identify the young cardiologist (less than 40 years old), with the interest in heart failure. These individuals should have specific heart failure education, nation- and Europe-wide. They should be provided regular attendance of the Heart Failure Association of the ESC Annual Congresses if possible, with active participation. Each Heart failure National Society, including Serbian, should have the list of young cardiologists of the various ages and design their education accordingly. In addition, young cardiologists should be the important part of the heart failure clinical studies in their institution or nation-wide in order to obtain the education and competence in this important part of the clinical work.

Izložbeni prostor / Exhibition Plan

Radno vreme / Opening hours 9.00- 20.00h









Naučni Program

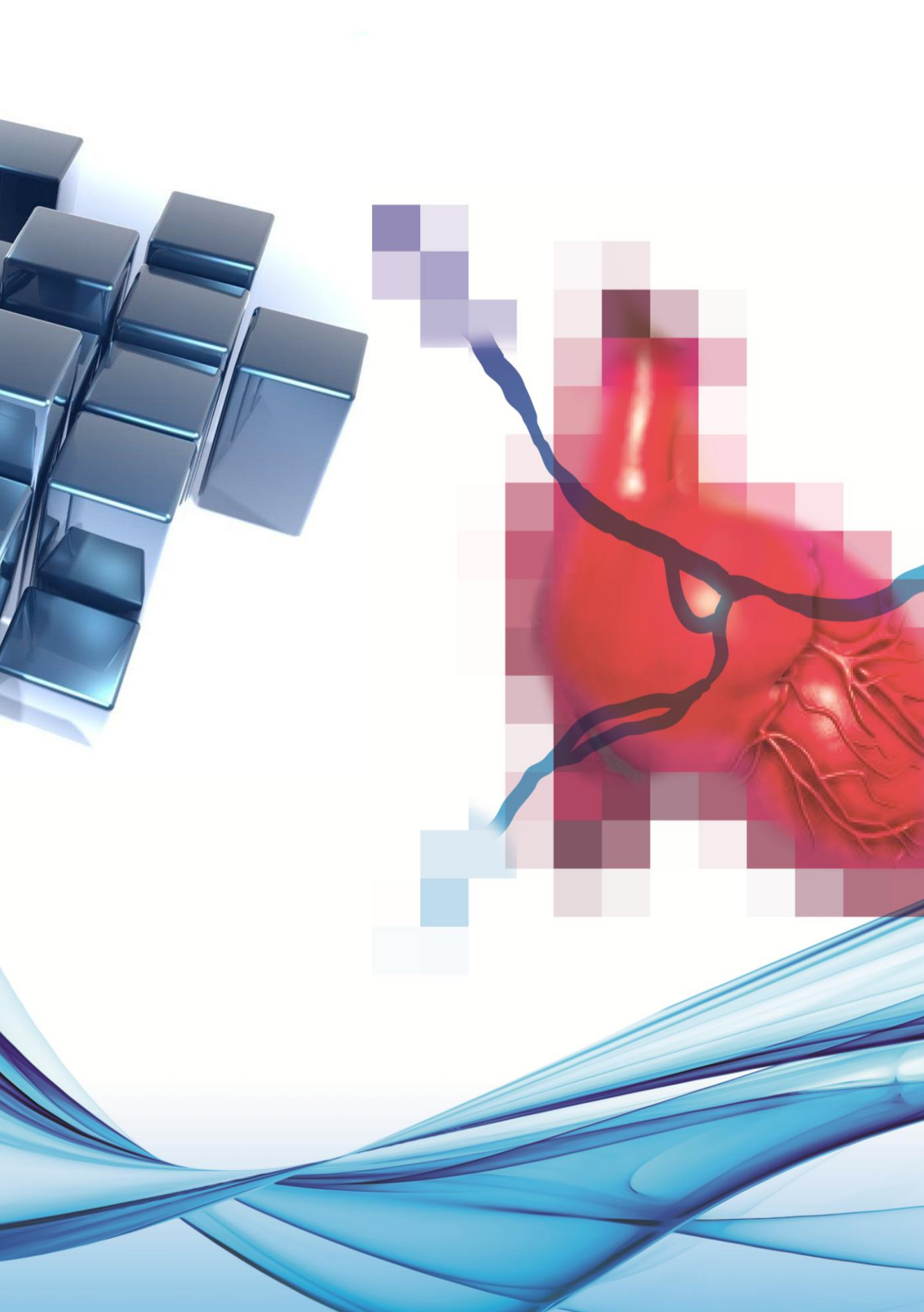
Scientific Program

Petak, 25. april 2014. / Friday, April 25th 2014.

Vreme / Time	Sala Srce / Room Heart	Sala Aorta / Room Aorta
08. 30-10. 00	Sesija 1 / Session 1 Lečenje terminalne srčane insuficijencije: Mehanička potpora leve komore, transplantacija srca i transplantacija matičnih ćelija / New treatment perspective for end-stage heart failure: mechanical circulatory support, heart transplantation, and stem-cell transplantation	Sesija 2 / Session 2 Pet najvažnijih dijagnostičkih metoda u kardiologiji: EKG, biomarkeri, ehokardiografija, CT, MRI. Dovoljni ili manjkavi? / Five major diagnostic methods in cardiology: ECG, biomarkers, echocardiography, CT, MRI. Too much or too little?
10. 10-11. 10	Richter Gedeon Simpozijum / Richter Gedeon Symposium	
11. 10-11. 30	Pauza / Coffee break	
11. 30-13. 00	Sesija 3 / Session 3 Debata: lečenje stabilne angine pektoris - kome lekovi, kome revaskularizacija? / Debate: management of stable angina pectoris – drugs or revascularization?	Sesija 4 / Session 4 Značaj medicinskih sestara / tehničara u lečenju bolesnika sa srčanom slabošću / The central role of nurse in the treatment of patients with heart failure
13. 10-14. 10	Krka Simpozijum / Krka Symposium	
14. 20-15. 40	Svečano otvaranje i plenarno predavanje M. Komajda / Opening ceremony and keynote lecture M. Komajda	
15. 40-16. 10	Koktel dobrošlice / Welcome reception	
16. 10-17. 10	Teva Serbia Simpozijum / Teva Serbia Symposium	
17. 20-18. 20	Sanofi Aventis Simpozijum / Sanofi Aventis Symposium	
18. 30-20. 00	Sesija 5 / Session 5 Urgentna stanja u kardiovaskularnoj medicini / Emergencies in cardiovascular medicine	Sesija 6 / Session 6 Interakcija lekara opšte prakse i kardiologa: dvosmerna ulica posuta zrcima kliničke mudrosti / Interaction between primary care physicians and cardiologists: a two-way street paved with pearls of clinical wisdom

Subota, 26. april 2014. / Saturday, April 26th 2014.

Vreme / Time	Sala Srce / Room Heart	Sala Aorta / Room Aorta
07. 30-08. 15	Sastanak Skupštine Udruženja za srčanu slabost Srbije / General Assembly of Heart failure Society of Serbia	
08. 30-10. 00	Sesija 7 / Session 7 Radionica Evropskog udruženja za srčanu slabost i GREAT Network-a: tajne poruke iz konsenzus dokumenta o akutnoj srčanoj slabosti / Heart Failure Association and GREAT Network Workshop: secret messages from acute heart failure consensus statement	Sesija 8 / Session 8 Biseri kliničke kardiologije u srčanoj insuficijenciji: edukacija kroz prikaze bolesnika / Clinical pearls in heart failure: case-based learning
10. 10-10. 30	Pauza / Coffee break	
10. 30-11. 30	Berlin-Chemie Menarini Simpozijum / Berlin-Chemie Menarini Symposium Working lunch session	
11. 40-12. 40	Merck Simpozijum / Merck Symposium	
12. 50-13. 50	Pfizer Simpozijum / Pfizer Symposium	
14. 00-15. 30	Sesija 9 / Session 9 Simposium: dijabetes i kardiovaskularne bolesti / Symposium: diabetes and cardiovascular disease	Sesija 10 / Session 10 Maligne ventrikularne aritmije: zlokožne ali se mogu sprečiti / Malignant ventricular arrhythmias: ominous but preventable
15. 30-15. 50	Pauza / Coffee break	
15. 50-17. 20	Sesija 11 / Session 11 Takmičenje mladih kardiologa vodećih kardiovaskularnih ustanova u Srbiji: Najbolji prikazi bolesnika / Case-based learning: competition of the rising stars in Serbian cardiology	Sesija 12 / Session 12 FOKUS SESIJA: Kardiologija i gastroenterologija: drugi pogled na isti problem / FOCUS SESSION: when cardiology meets gastroenterology
17. 30-19. 00	Sesija 13 / Session 13 Debata: Kontroverze u lečenju bolesti srčanih zalistaka / Debate: new horizons and controversies in valvular heart disease	Sesija 14 / Session 14 Novi lekovi u srčanoj insuficijenciji: više optimizma nego uspeha / New drugs in heart failure management: more myth than truth?
19. 10-19. 30	Dodela nagrada i završetak programa / Awards and Closing remarks	





Naučni Program

25. April 2014.

Scientific Program

April 25th, 2014.

Sesija 1 / Session 1**Sala Srce / Room Heart****Lečenje terminalne srčane insuficijencije: Mehanička potpora leve komore, transplantacija srca i transplantacija matičnih ćelija****New treatment perspective for end-stage heart failure: mechanical circulatory support, heart transplantation, and stem-cell transplantation**

Predsedavajući / Chairpersons: D. Miličić (Zagreb, HR)
M. Ristić (Belgrade, RS)

- 08. 30 Transplantacija srca i uređaji za mehaničku cirkulatornu potporu: kome i kada?**
Heart transplantation and LVAD implantation: to whom and when?
- M. Ristić (Belgrade, RS)
- 08. 50 Uređaji za mehaničku cirkulatornu potporu kao trajna terapija: zamena za transplantaciju?**
Destination therapy: ready to replace transplantation?
- D. Miličić (Zagreb, HR)
- 09. 10 Farmakološka terapija i praćenje bolesnika nakon transplantacije srca i implantacije uređaja za mehaničku cirkulatornu potporu**
Medical management and follow up after heart transplantation and LVAD implantation
- E. Nestorović (Belgrade, RS)
- 09. 30 Terapija matičnim ćelijama završnih stadijuma ishemijske srčane insuficijencije**
State-of-the-art in stem cell transplantation as a treatment of ischemic end-stage heart failure
- D. Dolatabadi (Brussels, BE)

Sesija 2 / Session 2**Sala Aorta / Room Aorta****Pet najvažnijih dijagnostičkih metoda u kardiologiji: EKG, biomarkeri, ehokardiografija, CT, MRI. Dovoljni ili manjkavi?****Five major diagnostic methods in cardiology: ECG, biomarkers, echocardiography, CT, MRI. Too much or too little?**

Predsedavajući / Chairpersons: D. Kalimanovska Oštrić (Belgrade, RS)
B. Ivanović (Belgrade, RS)



- 08. 30 Pet zagonetnih EKG-a: da li ćete pogoditi dijagnozu?**
Five puzzling ECGs: will you make the diagnosis?
- V. Vukčević (Belgrade, RS)
- 08. 50 Pet najvažnijih biomarkera u kardiologiji**
Five most important biomarkers in cardiology
- M. Deljanin-Ilić (Niška banja, RS)
- 09. 10 Pet zlatnih dijagnostičkih standarda i pet najčešćih zamki u ehokardiografiji**
Five diagnostic gold standards and five most frequent pitfalls in echocardiography
- Lj. Jovović (Belgrade, RS)
- 09. 30 Pet pravih indikacija za CT i/ili MRI pregled u kardiologiji**
Five best indications for CT and/or MRI in cardiology
- R. Maksimović (Belgrade, RS)

Simpozijum Industrije / Industry Symposium

Sala Srce / Room Heart

Richter Gedeon Simpozijum. Bolesnik sa visokim kardiovaskularnim rizikom u fokusu: regulisanje arterijske hipertenzije je najvažnije**Richter Gedeon Symposium. High risk cardiovascular patient in focus: treatment of arterial hypertension is essential****Moderators / Moderator:**

P.M. Seferović (Belgrade, RS)

B. Ivanović (Belgrade, RS)



- 10. 10** **Lečenje arterijske hipertenzije po preporukama: iskustvo, dokazi i kliničke mudrosti**
The Guidelines for the treatment of arterial hypertension: experience, evidence based approach and clinical wisdom

- P.M. Seferović (Belgrade, RS)

- 10. 35** **Fiksna kombinacija ACE inhibitora i antagonista kalcijumskih kanala: više od redukcije krvnog pritiska**

Fixed combination of ACE inhibitors and CCB: reduction of blood pressure and beyond

- B. Ivanović (Belgrade, RS)

11. 10 - 11. 30 Pauza / Coffee break

Sesija 3 / Session 3

Sala Srce / Room Heart

Debata: lečenje stabilne angine pektoris - kome lekovi, kome revaskularizacija?**Debate: management of stable angina pectoris – drugs or revascularization?****Predsedavajući / Chairpersons:**

G. Stanković (Belgrade, RS)

D. Dinčić (Belgrade, RS)



- 11. 30** **Kada su samo lekovi dovoljni?**

Medical treatment is the best option?

- M. Petrović (Belgrade, RS)

- 11. 50** **Kome je neophodna perkutana revaskularizacija?**

Percutaneous coronary intervention is a treatment of choice?

- G. Stanković (Belgrade, RS)

- 12. 10** **Hirurška revaskularizacija je superiorna?**

Coronary artery bypass grafting is a gold standard?

- S. Kačar (Belgrade, RS)

- 12. 30** **Panel diskusija**

Panel discussion

- R. Babić (Belgrade, RS), S. Ilić (Niška Banja, RS), D. Dinčić (Belgrade, RS),

S. Kačar (Belgrade, RS), S. Dimković (Belgrade, RS), A.N. Nešković (Belgrade, RS)

Sesija 4 / Session 4**Sala Aorta / Room Aorta****Značaj medicinskih sestara/tehničara u lečenju bolesnika sa srčanom slabošću****The central role of nurse in the treatment of patients with heart failure**

Predsedavajući / Chairpersons: J. Riley (London, UK), E. Lambrinou (Cyprus, CY),
S. Dodić (Belgrade, RS), P. Otašević (Belgrade, RS), D.V. Simić (Belgrade, RS)

- 11. 30 Bolesnik u fokusu: prikaz slučaja**
Patient centered approach: baseline clinical case
- E. Lambrinou (Cyprus, CY); Invited discussant: V. Perović (Belgrade, RS)
- 11. 50 Bolesnik koji ima jako gušenje: akutna srčana insuficijencija**
She is very breathless: the acute care perspective
- J. Riley (London, UK); Invited discussant: B. Vukobrat (Belgrade, RS)
- 12. 10 Bolesnik koga malo guši: šta kardiolog treba da uradi**
She is breathless: the view of cardiologist
- D.V. Simić (Belgrade, RS); Invited discussant: M. Ranković (Belgrade, RS)
- 12. 30. Guši me: bolesnicima je najteže**
I am breathless: the patient experience
- D. Šćepanović (Belgrade, RS); Invited discussant: G. Isaković (Belgrade, RS)

**Simpozijum Industrije / Industry Symposium****Sala Srce / Room Heart****Krka Simpozijum. Kontrola hipertenzije i više od toga****Krka Symposium. How to achieve the target blood pressure and beyond**

Moderators / Moderatori: B. Ivanović (Belgrade, RS)
N. Tasić (Belgrade, RS)

- 13. 10 Losartan: poslušajte glas svog srca**
Losartan: whispering to your heart
- B. Ivanović (Belgrade, RS)
- 13. 30 Valsartan: savršena kontrola, vrhunsko izvođenje**
Valsartan: perfect control, top performance
- N. Tasić (Belgrade, RS)
- 13. 50 Krka: već 60 godina zajedno**
Krka: 60 years with us
- S. Popović (Belgrade, RS)



Svečano otvaranje / Opening ceremony**14. 20–15. 40 Sala Srce / Room Heart****Predsedavajući / Chairpersons:**

Petar M. Seferović, Michel Komajda, Vladimir Kanjuh, Davor Miličić, Nebojša Lalić

Veliko srce Beograda, video animacija / Open heart of Belgrade, video animation**Dobro došli na CARDIOS 2014/ Welcome to CARDIOS 2014**

Petar M. Seferović, Predsednik Organizacionog Odbora Kongresa / Congress Director

Nove misli o srcu / New heart Quotes: video animation**Dobro došli u ime Medicinskog fakulteta, Univerziteta u Beogradu****Welcome on behalf of Belgrade University School of Medicine**Nebojša M. Lalić, dekan i predsednik Naučnog odbora Kongresa /
Dean and Scientific Director of the Congress**Muzički intremeco / Musical intermezzo:****Quartet SensArtica: Umetnički splet stilizovanih narodnih igara**

Classical medley:

Jovan Bandur: "Narodna igra"

Milenko Živković : "Srpska igra"

Dušan Radić : "Igra"

Dobro došli u ime Evropskog Udruženja kardiologa**Welcome on behalf of the European Society of Cardiology**Davor Miličić, Član Borda Evropskog Udruženja kardiologa /
Councillor of European Society of Cardiology**Moderni Etno Balet / Modern Ethno Ballet:****Una Saga Serbica**

Slobodan Marković : "Igre i zvuci Balkana" - finale

Dobro došli u ime Srpske akademije nauka i umetnosti**Welcome on behalf of Serbian Academy of Sciences and Arts**Vladimir Kanjuh, Predsednik Odbora za kardiovaskularnu patologiju SANU /
President of SASA Board on cardiovascular pathology**Muzički intremeco / Musical intermezzo:****Iva Cojić, glas i klavir:**

"The Greatest Love if All"

Otvaranje kongresa i plenarno predavanje / Opening of the congress and keynote lecture
"Heart rate modulation in cardio vascular disperses.Recent developmnents"**M. Komajda, Past president of the ESC**Aranžman uvodne animacije i muzičkog programa, Gosp. Petar Popović i Orange Studio
Introductory video and musical program arranged by Mr. Petar Popović and Orange Studio

15. 40 - 16. 10 Koktel dobrodošlice / Welcome reception with cocktail

Simpozijum Industrije / Industry Symposium

Sala Srce / Room Heart

TEVA Srbija Simpozijum. Individualizovana terapija srčane insuficijencije: rešenje za XXI vek
TEVA Srbija Symposium. Personalized treatment of heart failure: best solution in new millenium

Moderatori / Moderators: P.M. Seferović (Belgrade, RS)
 R. Babić (Belgrade, RS)



- 16. 10 Precizno doziranje najefikasnijeg diuretika: osnova lečenja srčane insuficijencije**
Precise dosage of the most effective diuretic: the backbone of successful heart failure treatment
 - P.M. Seferović (Belgrade, RS)
- 16. 35 Inhibitori konvertujućeg enzima u srčanoj insuficijenciji: da li različita efikasnost može omogućiti optimalne efekte?**
ACE inhibitors in heart failure: differences in efficacy leading to the optimal effect
 - R. Babić (Belgrade, RS)

Simpozijum Industrije / Industry Symposium

Sala Srce / Room Heart

Sanofi Aventis Simpozijum. ESC/ESH preporuke za lečenje arterijske hipertenzije 2013: mesto fiksnih kombinacija
Sanofi Aventis Symposium. ESC/ESH guidelines for the treatment of arterial hypertension 2013: the indication for fixed combination

Moderatori / Moderators: P.M. Seferović (Belgrade, RS)
 D.V. Simić (Belgrade, RS)



- 17. 20 Nova formulacija dva pouzdana antihipertenzivna leka: fiksna kombinacija ramiprila i felodipina**
The new life of two accurate antihypertensive agents: fixed combination of ramipril and felodipine
 - P.M. Seferović (Belgrade, RS)
- 17. 45 Visoka efikasnost fiksne kombinacije felodipina i ramiprila: patofiziološki efekat blokade RAAS i periferne vazokonstrikcije**
Fixed combination of felodipine and ramipril: the consequence of pathophysiological blockade of RAAS and peripheral vasoconstriction
 - D.V. Simić (Belgrade, RS)

Sesija 5 / Session 5

Sala Srce / Room Heart

Urgentna stanja u kardiovaskularnoj medicini**Emergencies in cardiovascular medicine**

Jedna klinička slika, razne bolesti: muškarac, 48 godina, bol u grudima praćen malasalošću i gušenjem

One clinical presentation, many diseases: male, 48 years, chest pain, fatigue and shortness of breath

Predsedavajući / Chairpersons: I. Mrdović (Belgrade, RS)
B. Stefanović (Belgrade, RS)



- 18. 30 Akutni infarkt miokarda: najčešći ali i terapijski najzahvalniji**
Acute myocardial infarction: most frequent but therapeutically most rewarding
- A.N. Nešković (Belgrade, RS)
- 18. 48 Disekantna aneurizma aorte: podmukla i opasna**
Aortic dissection: insidious and dangerous
- J. Peruničić (Belgrade, RS)
- 19. 06 Embolija plućne arterije: skrivena i smrtonosna**
Pulmonary embolism: hidden and lethal
- B. Stefanović (Belgrade, RS)
- 19. 24 Perimiokarditis: bolest sa deset lica...**
Perimyocarditis: tip of an iceberg...
- D.S. Simeunović (Belgrade, RS)
- 19. 40 Ekstrakardijalni uzroci (pluća, pleura, ezofagus, želudac, kosti...)**
Extracardial causes (lungs, pleura, oesophagus, stomach, bones...)
- D. Jovanović (Belgrade, RS)



Sesija 6 / Session 6**Sala Aorta / Room Aorta**

Interakcija lekara opšte prakse i kardiologa: dvosmerna ulica posuta zrcima kliničke mudrosti
Interaction between primary care physicians and cardiologists: a two-way street pawed with pearls of clinical wisdom

Sudija-moderator / Judge-moderator: S. Dimković (Belgrade, RS)



Porota predsestavajućih / Jury of chairpersons:

N. Čemerlić-Adić (Sremska kamenica, RS), P. Otašević (Belgrade, RS), G. Davidović (Kragujevac, RS)

18. 30 Debata 1. Kardiolog i lekar opšte prakse: uspešan dvojac u lečenju srčane slabosti
Debate 1. The alliance of GP and cardiologist in the treatment of heart failure: the best option for success

- M. Glavinić (Belgrade, RS) (lekar opšte prakse / primary care aspects)
- T. McDonagh (London, UK) (kardiolog / cardiologists perspective)

A presuda porote je... / Did the jury reach the verdict...

- P. Otašević (Belgrade, RS) (for the Jury)

18. 58 Debata 2. Poruke za primarnu zdravstvenu zaštitu iz novih evropskih preporuka za lečenje atrijske fibrilacije

Debate 2. Key messages for primary care from ESC Guidelines for atrial fibrillation

- S. Živanović (Belgrade, RS) (lekar opšte prakse / primary care aspects)
- N. Mujović (Belgrade, RS) (kardiolog / cardiologists perspective)

A presuda porote je... / Did the jury reach the verdict...

- N. Čemerlić-Adić (Sremska Kamenica, RS) (for the Jury)

19. 26 Debata 3. Angina pectoris: uspešno lečenje zahteva zajednički pristup lekara opšte prakse i kardiologa

Debate 3. Angina pectoris: for successful treatment, the alliance of GP and cardiologist is necessary

- V. Sretenović (Belgrade, RS) (lekar opšte prakse / primary care aspects)
- S. Dodić (S.Kamenica, RS) (kardiolog / cardiologists perspective)

A presuda porote je... / Did the jury reach the verdict...

- G. Davidović (Kragujevac, RS) (for the Jury)

19. 55 Zaključak sesije – odluka sudije / Take home message – decision of the honorable Judge

- N. Čemerlić-Adić (Sremska kamenica, RS)



Naučni Program

26. April 2014.

Scientific Program

April 26th, 2014.

Skupština USSS / General Assembly of HFSS

Sala Aorta / Room Aorta

07. 30 - 08. 15

Sastanak Skupštine Udruženja za srčanu slabost Srbije
General Assembly of Heart Failure Society of Serbia



Sesija 7 / Session 7

Sala Srce / Room Heart

Radionica Evropskog udruženja za srčanu slabost i GREAT Network-a: tajne poruke iz konsenzus dokumenta o akutnoj srčanoj slabosti

Heart Failure Association and GREAT Network Workshop: secret messages from acute heart failure consensus statement

Predsedavajući / Chairpersons: Z. Papp (Debrecen, HU)
S. Di Somma (Rome, IT)



08. 30 Patofiziološki mehanizmi kao klinički ciljevi lečenja akutne srčane insuficijencije
Pathophysiologic targets as clinical goals in treating AHF

- S. Di Somma (Rome, IT)

08. 50 Poboljšavanje rezultata lečenja srčane slabosti različitih etiologija: dva prikaza slučaja
Improving outcomes in pump failure of various etiologies: two challenging case studies in AHF

- A.D. Ristić (Belgrade, RS)

09. 10 Inotropni lekovi: povratak u budućnost?
Treatment focused on inotropy: back to the future?

- Z. Papp (Debrecen, HU)

09. 30 Savremene terapijske mogućnosti u akutnoj srčanoj slabosti: korak napred ili slepa ulica?
New therapeutic options in acute heart failure: step ahead or dead end?

- P.M. Seferović (Belgrade, RS)

Sesija 8 / Session 8**Sala Aorta / Room Aorta****Biseri kliničke kardiologije u srčanoj insuficijenciji: edukacija kroz prikaze bolesnika****Clinical pearls in heart failure: case-based learning**

Predsedavajući / Chairpersons: T. Jaarsma (Linköping, SE)
M. Dekleva (Belgrade, RS)

- 08. 30 Farmakološka terapija srčane insuficijencije: kako postići veću efikasnost i bolju saradnju bolesnika**
Pharmacological management of heart failure: optimizing effectiveness and adherence
- T. Jaarsma (Linköping, SE)
- 08. 50 Bolesnik sa kongestivnom srčanom insuficijencijom rezistentnom na diuretike**
Patient with congestive heart failure resistant to diuretics
- M. Lainscak (Golnik, SI)
- 09. 10 Blagovremeno otkrivanje srčane insuficijencije: pravilna stratifikacija bolesnika**
Timely detection of heart failure: which patients should be targeted
- A. Hoes (Utrecht, NL)
- 09. 30 Bolesnik sa srčanom slabošću i normalnom ejekcionom frakcijom: diabetes, gojaznost i hipertenzija**
Heart failure with preserved ejection fraction: diabetes, obesity and hypertension
- N. Čemerlić-Adić (Sremska Kamenica, RS)

10. 10 - 10. 30 Pauza / Coffee break

Simpozijum Industrije / Industry Symposium**Sala Srce / Room Heart****Berlin Chemie Menarini Simpozijum. Stabilna angina pectoris: novi terapijski aspekti****Berlin Chemie Menarini Symposium. Stable angina: new medical approach**

Moderatori / Moderators: P.M. Seferović (Belgrade, RS)
M. Gričar (Ljubljana, SI)



- 10. 30 Preporuke ESC 2013 za lečenje stabilne angine pectoris: optimalni terapijski pristup**
ESC guidelines for stable coronary artery disease 2013: optimal therapeutic approach
- P.M. Seferović (Belgrade, RS)
- 10. 55 Ranolazin u lečenju stabilne angine pectoris: visoka efikasnost, mali sporedni efekti**
Ranolazine in the treatment of stable coronary artery disease: high efficacy, low side effects
- M. Gričar (Ljubljana, SI)

Simpozijum Industrije / Industry Symposium

Sala Srce / Room Heart

Merck Serono Simpozijum. Savremeno lečenje kardiovaskularnih bolesti**Merck Serono Symposium. Recent advances in the treatment of cardiovascular disease****Moderatori / Moderators:**

M. Pavlović (Niš, RS)
P. Otašević (Belgrade, RS)



11. 40 Bisoprolol u terapiji srčane insuficijencije
Bisoprolol in the treatment of heart failure

- P. Otašević (Belgrade, RS)

12. 05 Kada je fiksna kombinacija bisoprolola i amlodipina terapijski izbor u arterijskoj hipertenziji?

The fixed combination of bisoprolol and amlodipine as a treatment of choice in arterial hypertension

- M. Pavlović (Niš, RS)

Simpozijum Industrije / Industry Symposium

Sala Srce / Room Heart

Pfizer Simpozijum. Tromboprofilaksa u atrijalnoj fibrilaciji: razlika postoji!**Pfizer Symposium. Thromboprophylaxis in atrial fibrillation: there is a difference!****Moderatori / Moderators:**

M. Prostran (Belgrade, RS)
T. Potpara (Belgrade, RS)



12. 50 Četiri alternative tromboprofilakse: uporedna klinička farmakologija
Four alternatives of thromboprophylaxis: a comparative clinical pharmacology

- M. Prostran (Belgrade, RS)

13. 15 Individualizovano lečenje atrijalne fibrilacije: izaberite mudro
Individualized atrial fibrillation treatment: choose wisely

- T. Potpara (Belgrade, RS)

Sesija 9 / Session 9

Sala Srce / Room Heart

Simposium: dijabetes i kardiovaskularne bolesti**Symposium: diabetes and cardiovascular disease**

Predsedavajući / Chairpersons: N.M. Lalić (Belgrade, RS)
S. Dimković (Belgrade, RS)

- 14. 00** Dijabetes i smanjenje kardiovaskularnog rizika: nove terapijske paradigme
Type 2 diabetes and cardiovascular risk reduction 2014: new therapeutic paradigms
- N.M. Lalić (Belgrade, RS)
- 14. 20** Srčana insuficijencija u dijabetesu: molekularni i metabolički mehanizmi
Heart failure in diabetes: molecular and metabolic mechanisms
- Dj. Jakovljević (Newcastle, UK)
- 14. 40** Dijabetes i hipertenzija: ima li opravdanja za različite terapijske pristupe?
Diabetes and arterial hypertension: is there a justification for different therapeutic targets?
- S. Dimković (Belgrade, RS)
- 15. 00** Optimalno lečenje koronarne bolesti u dijabetesu: lekovi, perkutana koronarna intervencija ili aorto-koronarni baj-pas
Choose the best: medical therapy, PCI or CABG in patients with diabetes and coronary artery disease
- R. Babić (Belgrade, RS)

Sesija 10 / Session 10

Sala Aorta / Room Aorta

Maligne ventrikularne aritmije: zlokobne ali se mogu sprečiti**Malignant ventricular arrhythmias: ominous but preventable**

Predsedavajući / Chairpersons: S.U. Pavlović (Belgrade, RS)
D. Vukajlović (Regensburg, DE)

- 14. 00** Maligne asimptomatske aritmije: dijagnoza i prognostičke implikacije
Malignant asymptomatic arrhythmias: diagnostic and prognostic implications
- T. Potpara (Belgrade, RS)
- 14. 20** Komorske aritmije: stratifikacija rizika i klinički značaj
Ventricular arrhythmias: risk stratification and clinical significance
- S.U. Pavlović (Belgrade, RS)
- 14. 40** Lečenje komorskih aritmija: savremena farmakološka terapija, kateter ablacija ili ICD?
Treatment of ventricular arrhythmias: drugs, catheter ablation or ICD?
- D. Vukajlović (Regensburg, DE)
- 15. 00** Okrugli sto: preskače mi srce, šta da radim?
Round table discussion: I have palpitation, what should I do?
- D.V. Simić (Belgrade, RS), D. Dinčić (Belgrade, RS), M. Pavlović (Niš, RS),
N. Mujović (Belgrade, RS)

15. 30 - 15. 50 Pauza / Coffee break

Sesija 11 / Session 11

Sala Srce / Room Heart

Takmičenje mladih kardiologa vodećih kardiovaskularnih ustanova u Srbiji: najbolji prikazi bolesnika

Case-based learning: competition of the rising stars in Serbian cardiology

Moderator / Moderator: A.N. Nešković (Belgrade, RS)

Žiri / Jury: B. Ivanović (Belgrade, RS), D. Dinčić (Belgrade, RS),
G. Stanković (Belgrade, RS), Lj. Jovović (Belgrade, RS)
Đ. Jakovljević (Newcastle, UK), D. Vukajlović (Regensburg, DE)



15. 50 Prikaz slučaja 1 / Case report 1

- S. Kafedžić (Kliničko bolnički centar Zemun, Belgrade)

16. 05 Prikaz slučaja 2 / Case report 2

- M. Kovačević (Institut za kardiovaskularne bolesti Vojvodine, Sremska Kamenica)

16. 20 Prikaz slučaja 3 / Case report 3

- D. Topić (Institut za kardiovaskularne bolesti Dedinje, Belgrade)

16. 35 Prikaz slučaja 4 / Case report 4

- I. Živković (Klinika za kardiologiju, Kliničkog centra Srbije, Belgrade)

16. 50 Prikaz slučaja 5 / Case report 5

- Z. Mladenović (Vojnomedicinska Akademija, Belgrade)

Sesija 12 / Session 12

Sala Aorta / Room Aorta

FOKUS SESIJA: Kardiologija i gastroenterologija: drugi pogled na isti problem

FOCUS SESSION: when cardiology meets gastroenterology

Predsedavajući / Chairpersons: T. Milosavljević (Belgrade, RS)
M. Krstić (Belgrade, RS)



15. 50 Acetilsalicilna kiselina u maloj dozi: dobar, loš ili zao

Low dose acetylsalicylic acid: good, bad and ugly

- M. Krstić (Belgrade, RS)

16. 10 Izazovi gastroprotekcije u dualnoj antiagregacionoj i antikoagulantnoj terapiji

Gastroprotection in dual antiplatelet and anticoagulant treatment: challenge in internal medicine

- T. Milosavljević (Belgrade, RS)

16. 30 Mišljenje kardiologa: dobra antiagregaciona terapija, vitalna indikacija

The view of the cardiologist: antiplatelets are essential for coronary artery patency

- G. Davidović (Kragujevac, RS)

16. 50 Nestteroidni antiinflamatorni lekovi ili inhibitori ciklooksigenaze 2 kod bolesnika na antiagregacionoj terapiji: dodatak na skupoću

Non steroidal anti-inflammatory drugs and COX 2 inhibitors in patients on antiagregational therapy: adding oil on fire

- P. Ostojić (Belgrade, RS)

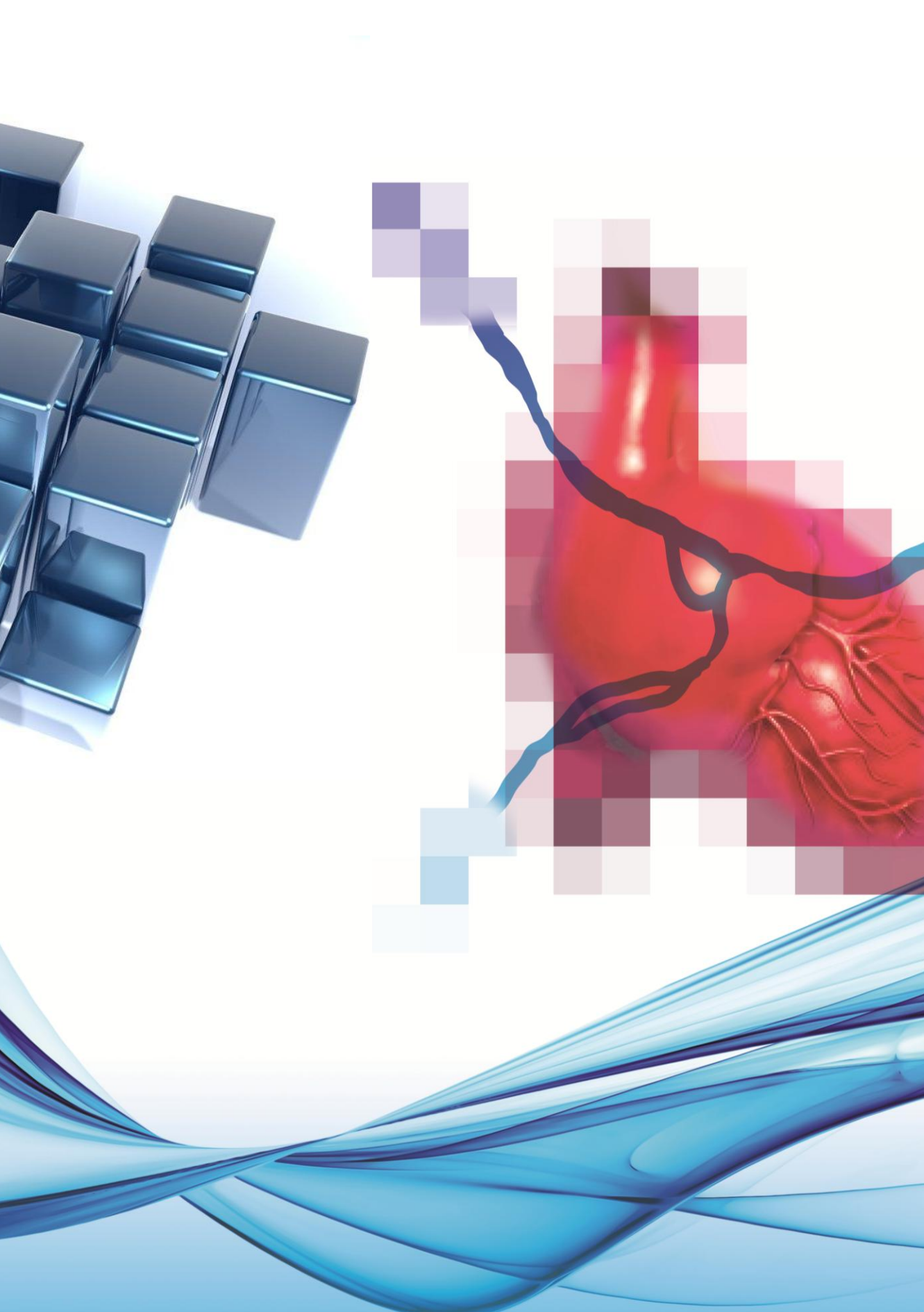
Sesija 13 / Session 13**Sala Srce / Room Heart****Debata: Kontroverze u lečenju bolesti srčanih zalistaka****Debate: new horizons and controversies in valvular heart disease****Predsedavajući / Chairpersons:** R. Rosenhek (Vienna, AT), I. Stojanović (Belgrade, RS)

- 17. 30 Procena stepena aortne stenoze: novi kriterijumi i njihova prediktivna vrednost**
Diagnostic approach to aortic stenosis: the new criteria and their predictive value
 - R. Rosenhek (Vienna, AT)
- 17. 50 Dijagnostički i terapijski aspekti mitralne stenoze**
Diagnostic and therapeutic aspects of mitral stenosis
 - B. Vujisić Tešić (Belgrade, RS)
- 18. 10 Savremene mogućnosti hirurške rekonstrukcije mitralne valvule**
Increasing repair feasibility of complex mitral valve disease: does every cloud has a silver lining?
 - I. Stojanović (Belgrade, RS)
- 18. 30 Ne zaboravite trikuspidalnu valvulu: greška koja se skupo plaća**
A fairytale on tricuspid valve disease: gone, but not forgotten
 - B. Ivanović (Belgrade, RS)

Sesija 14 / Session 14**Sala Aorta / Room Aorta****Novi lekovi u srčanoj insuficijenciji: više optimizma nego uspeha?****New drugs in heart failure management: more myth than truth?****Predsedavajući / Chairpersons:** B. Maisch (Marburg, DE), S. Dodić (Belgrade, RS)

- 17. 30 Novi oralni antikoagulantni lekovi: efikasnost, prednosti i sporedni efekti**
Novel anticoagulant medications: efficacy, advantages and side effects
 - T. Potpara (Belgrade, RS)
- 17. 50 Ivabradin u srčanoj insuficijenciji: nedoumice i perspective**
Ivabradin in heart failure: concerns and perspectives
 - B. Maisch (Marburg, DE)
- 18. 10 Novi lekovi za hroničnu srčanu insuficijenciju: ispunjeno obećanje ili razočarenje?**
New chronic heart failure medications: fulfilled or failed promise?
 - S. Dodić (Sremska Kamenica, RS)
- 18. 30 Uloga antagonista mineralokortikoidnih receptora u lečenju srčane insuficijencije posle evropskih preporuka 2012**
The role of MRA antagonists in chronic heart failure treatment after ESC Guidelines 2012
 - M. Pavlović (Niš, RS)

19. 10-19. 30 Dodela nagrada i završetak programa / Awards and Closing remarks





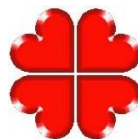
Biografije predavača

Curriculum vitae

Rade Babić

Belgrade, Serbia

E-mail: drbabic@gmail.com

**TITLE AND/OR DEGREEED**

Professor, MD, PhD, FESC

CURRENT POSITION

- Professor of medicine / cardiology, School of Medicine, Belgrade
- Head of Internal medicine cardiology / teaching unit at Dedinje Cardiovascular Institute
- Interventional cardiologist, consultant, head of Clinical Cardiology department, Dedinje Cardiovascular Institute

SPECIAL AREA OF INTEREST AND EXPERTISE

- Interventional cardiology, IVUS, OCT and cardiovascular imaging
- Myocardial infarction, heart failure, cardiovascular manifestations of diabetes mellitus
- Clinical pharmacology, endothelial function

PROFESSIONAL ACTIVITIES

- Fellow of The European Society of Cardiology, FESC
- Fellow of Society for Cardiovascular Interventions and Angiography (FSCAI)
- Member of the ESC Working Group of Interventional cardiology (EAPCI)
- Member of the ESC Working Group for Heart Failure

OTHER ACTIVITIES

- Erasmus University / Thoraxcenter, Rotterdam (Netherlands) (1989)
- University of Athens / Hippokration Hospital, Athens (Greece) (1994)
- JICA scholarship: Hospital Management Course, Japan (2002)
Postdoctoral interventional research fellowship: Centro cuore Columbus, Milan (Italy) and San Raffaele Hospital, Milan (Italy) (2005-2006)
- European Cardiologist Diploma, European Society of Cardiology (2003)

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 2 international scientific journals (listed in current contents), and in 4 domestic scientific journals
- 20 *in extenso* papers in leading international medical journals
- several chapters in international textbooks on cardiology
- several chapters in Serbian university textbooks on cardiology and internal medicine

Nada Čemerlić Ađić

Sremska Kamenica, Serbia

E-mail: ncemerlica@gmail.com



TITLE AND/OR DEGREE

Professor, MD, PhD, FESC

Group Analytic Psychotherapist

CURRENT POSITION

- Professor of Cardiology, School of Medicine, University of Novi Sad
- General Director, Institute of Cardiovascular Diseases, Vojvodina – Sremska Kamenica

SPECIAL AREA OF INTEREST AND EXPERTISE

- Hypertension, coronary artery disease, heart failure
- Health Management
- Psychocardiology

PROFESSIONAL ACTIVITIES

- Member of European Association for Cardiovascular Prevention and Rehabilitation
- Member of European Society of Cardiology
- Fellow of European Society of Cardiology
- Member of European Health Management Association (EHMA)
- One of the the founders of Transitional Countries Network of EHMA
- One of the the founders of **women network** for senior health managers and health policy makers of EHMA
- Member of Serbian Society of Cardiologists
- Member of Association of Physicians of Vojvodina of Serbian Medical Society
- Serbian Society of Psychoanalysts
- Fouders of Ballint group of Vojvodina

OTHER ACTIVITIES

- Principal Investigator in numerous clinical studies
- "Health Insurance Without Borders", Cross-border cooperation International Project, Principal Investigator, 2008
- "Bologna Declaration in Cardiology" Project, 2002

EDITORIAL BOARD AND PUBLICATIONS

- 7 papers with SCI (SSCI) and 26 quotations
- Over 200 papers in domestic journals

Goran Davidović**Kragujevac, Serbia****E-mail:** medicusbg@yahoo.com**TITLE AND/OR DEGREE**

Associate professor, MD, PhD

CURRENT POSITION

- Director, Department of Cardiology, Clinical Center Kragujevac
- Assistant Director for internal branches, Clinical Center Kragujevac
- Associate professor, School of Medicine, University of Kragujevac

PROFESSIONAL ACTIVITIES

- Member of Medical Society of Serbia
- Member of National Expert Group on acute coronary syndrome, heart failure and pulmonary hypertension
- Vice President of the National Assembly of the Heart Failure Society of Serbia
- Member of the Board of Coronary units of the Republic of Serbia
- Member of Serbian Society of Cardiology
- Member of European Society of Cardiology and European Society of Echocardiography

OTHER ACTIVITIES

- Investigator in "EURObservational Research Programme – Heart Failure Long-term Registry".
- Principal investigator in ODYSSEY clinical trial
- Investigator in Study assessIng the morbidity-mortality beNefits of the If inhibitor ivabradine in patients with coronarY artery disease (SIGNIFY) clinical trial

EDITORIAL BOARD AND PUBLICATIONS

- Published over 50 scientific papers in journals of international and national importance
- Author of monograph of national importance: "Pathophysiological bases of modern treatment of heart failure," published by School of Medicine, Kragujevac.

Milica Dekleva-Manojlovic

Belgrade, Serbia

E-mail: dekleva.milica@gmail.com

**TITLE AND/OR DEGREE**

Associate Professor, MD, PhD

CURRENT POSITION

- Associate Professor of internal medicine / cardiology, School of Medicine, University of Belgrade
- Head of Noninvasive Cardiology, Department of Cardiovascular Disease, University Clinical Hospital Center Zvezdara
- Assistant Director for Research University Clinical Hospital Center Zvezdara

SPECIAL AREA OF INTEREST AND EXPERTISE

- Ischemic heart disease, heart failure
- Echocardiography and other imaging modalities
- Non-invasive functional cardiopulmonary testing

OTHER ACTIVITIES

- European school of echocardiography at the Thorax Center Erasmus University, Rotterdam, Holland
- Investigator in two Research projects supported by Serbian Monastery of Science
- Course of Hyperbaric Medicine
- Trained in Clinical and Research Cardiology in UCSF San Francisco California

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of ESC Working Group of Echocardiography
- Member of the European Society of Cardiology
- Member of the Heart Failure Association
- Member of American Society of Echocardiography

EDITORIAL BOARD AND PUBLICATIONS

- Re-viewer in 2 international scientific journals (listed in current contents), and in 1 domestic scientific journal
- 11 *in extenso* papers in leading international medical journals
- More than 10 invitated lectures
- several chapters in Serbian university textbooks cardiology and internal medicine

Marina Deljanin Ilić

Niš, Niška Banja, Serbia

E-mail: marinadi@open.telekom.rs



TITLE AND/OR DEGREE

Professor, MD, PhD, FESC, FACC

CURRENT POSITION

- Professor of Internal Medicine and Cardiology, University of Nis School of Medicine
- Director, Institute for treatment and cardiovascular rehabilitation „Niška Banja“, Niška Banja

SPECIAL AREA OF INTEREST AND EXPERTISE

- Ischemic heart disease, heart failure, arterial hypertension, endothelial function, cardiovascular prevention and rehabilitation, echocardiography

PROFESSIONAL ACTIVITIES

- Fellow European Society of Cardiology (FESC), Member of the European Society of Hypertension, Member of the Heart Failure Association of the European Society of Cardiology, Member of the European Association of Cardiovascular Imaging, Member of the European Association for Cardiovascular Prevention and Rehabilitation
- Fellow American College of Cardiology (FACC), Member of American Heart Association
- Senior Fellow of the New Westminster College
- Member of the National Society of Cardiology, Member of the Union of Medical Society of Serbia, Member of the Serbian Society of Echocardiography

OTHER ACTIVITIES

- Trained in clinical cardiology and echocardiography at the Hammersmith Hospital, London, UK
- Research fellow in ten scientific projects
- Silver Diploma award from the Yugoslav Society of Cardiology (2001)
- President of Assembly Serbian Medical Chamber

EDITORIAL BOARD AND PUBLICATIONS

- Editor-in-Chief of Acta Facultatis Medicae Naissensis, Scientific Journal of the School of Medicine University of Niš.
- Over 450 studies, including abstracts, articles in national and international journals and book chapters, over 40 invited lectures and seminars at national and international meetings

Salvatore Di Somma

Rome, Italy



E-mail: salvatore.disomma@uniroma1.it

TITLE AND/OR DEGREE

Associate Professor, MD PhD

CURRENT POSITION

- Chairman Postgraduate School of Emergency Medicine, Faculty of Medicine and Psychology, Sapienza University of Rome, since 2002
- Director Emergency Medicine Sant'Andrea Hospital Rome, Faculty of Medicine and Psychology, Sapienza University of Rome, since 2003
- Chairman Emergency Medicine and Coordinator Emergency Medicine, Faculty of Medicine and Psychology, Sapienza University of Rome
- Associate Professor of Medicine, Faculty of Medicine and Psychology, Sapienza University of Rome, since 2002

PROFESSIONAL ACTIVITIES

- Member of the following Scientific Societies: American Heart Association, American Society for Cardiovascular Pathology, Heart Failure Society of America, Italian Society of Cardiology, Italian Society of Internal Medicine, Italian Society of Hypertension, European Heart Association of HF
- Founder and Vice President of GREAT Global Research on Acute Conditions Team, the Academic Research and Educational Organization gathering experts operating in the management of acute clinical conditions in the field of Emergency Medicine

OTHER ACTIVITIES

- Department of Clinical and Experimental Medicine 'University "Federico II" of Naples from 1978 to 2001
- Assistant Professor – Emergency Medicine and Cardioangiology – University Federico II of Naples, from 1978 al 2001
- Research Fellow in Cardiology University of Pavia, 1989-1992
- Assistant Professor Department of Medicine New York Medical College New York U.S.A. 1994-1996 Cardiovascular Research Institute.
- Director Internal Medicine Rieti Hospital in 1999

EDITORIAL BOARD AND PUBLICATIONS

- More than 300 Papers in the field of Cardiology and Emergency Medicine.
- Reviewer for International Medical Journals
- More than 300 presentations, lectures and chairs to the major international Congress in Internal Medicine, Hypertension, Cardiology and Emergency Medicine

Siniša Dimković**Belgrade, Serbia****E-mail:** dimkovic.sinisa@bkosa.edu.rs**TITLE AND/OR DEGREE**

Professor, MD, MSci, PhD.

CURRENT POSITION

- Professor of Internal Medicine and Cardiology, School of Medicine, University of Belgrade
- Chairman of Postgraduate Studies in Cardiology, School of Medicine, University of Belgrade
- Director of Clinic for internal Medicine, University Medical Center Bežanijska kosa, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Ischemic heart diseases, heart failure
- Arterial hypertension, cardiovascular prevention
- Arrhythmias, pacemakers
- Cardio-nephrology

OTHER ACTIVITIES

- Research fellow in fifteen scientific projects
- Editor and chairman for the first Serbian Guidelines on Hypertension
- Co-editor for the first Guidelines on Ischaemic Heart Disease, Treatment and Prevention

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the Union of Medical Society of Serbia
- Member of National Board of Serbia for Heart Failure
- Member of the European Society of Cardiology
- Member of the European Association for Cardiovascular Prevention and Rehabilitation

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 3 domestic scientific journals
- 30 *in extenso* papers in leading international medical journals
- several chapters in Serbian university textbooks on cardiology and internal medicine
- Over 300 publications, including abstracts, articles in national and international journals and book chapters
- Over 50 invited lectures and seminars at national and international meetings

Dragan Dinčić

Belgrade, Serbia

E-mail: d1dincic@gmail.com



TITLE AND/OR DEGREE

Professor, MD, PhD,

CURRENT POSITION

- Professor of medicine / cardiology, Medical Faculty MMA, Defence University, Belgrade
- Deputy Head of the Military Medical Academy, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Urgent Internal Medicine
- Ischemic Heart Disease, ACS,
- Cardiovascular Prevention
- Lipidology

OTHER ACTIVITIES

- Member of a Senate Medical Faculty MMA
- Research fellow in scientific projects

PROFESSIONAL ACTIVITIES

- Member of the Serbian Society of Cardiology
- Member of The European Society of Cardiology
- Member of the Serbian Society of ACS

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 2 domestic scientific journals (1 listed in SCI)
- 30 *in extenso* papers in SCI medical journals
- several chapters in domestic textbooks on cardiology
- Author of Monography "Lipoprotein (a) in Occurrence and Development of ischaemic heart disease"

Slobodan Dodić**Sremska Kamenica, Serbia****E-mail:** s.dodic@eunet.rs**TITLE AND/OR DEGREE**

Professor, MD, PhD, FESC

CURRENT POSITION

- Professor of Internal Medicine/Cardiology, School of Medicine, University of Novi Sad
- Head of General Cardiology Dept. Institute of Cardiovascular Diseases Vojvodina
- Head of Cardiology-Cardiosurgery Consilium, General Manager's Representative for Integrative System Management Implementation

SPECIAL AREA OF INTEREST AND EXPERTISE

- Echocardiography, Invasive Cardiology, Imagings

PROFESSIONAL ACTIVITIES

- Fellow of european society of cardiology (fesc);
- Honorary member of italian society of echocardiography (siec);
- Member of european working group on coronary microcirculation;
- Member of european working group in cardiac rehabilitation and prevention;
- Responsible person for twining between two hospitals – lecco (italy) and institute of cardiovascular disease vojvodina (serbia).
- Moderator, speaker, chairman and grader in many of scientific domestic and international meetings
- Principal investigator in more than 10 international multicentre randomized trials

EDITORIAL BOARD AND PUBLICATIONS

- First author and co-author in more than 150 published scientific papers
- Published book in myocardial viability

Dariouch Dolatabadi**Chaleroi, Belgium****E-mail:** dariouch.dolatabadi@chu-charleroi.be**TITLE AND/OR DEGREEED**

Specialist in cardiology, MD

CURRENT POSITION

- Cardiologist - Cardiac catheterization – Chu de Chaleroi
- Cardiologist - Cardiac catheterization – Hopital St Pierre Brussel

PROFESSIONAL ACTIVITIES

- Principal investigator in clinical trials: C-CURE and CHART1
- Investigator in clinical trials: TIMI38, STRADIVARIUS, PEGASUS, IMPROVE R, MULTI BENE, TIBET II, SATURN, PRESILION, ASSENT4, DELIVER, MEDCOR, ABLYNX, BIOFLOW, Global Leaders, AQUARIUS, BASE ACS, CINERGY, DELUX, EPICOR, PIONIR, RESOLUTE, TE PROVE, APTOR II, E-SELECT, ELUTAX, SPIRIT WOMEN, CENTURY II, ABSORB, ASSRE

Arno W. Hoes

Utrecht, Netherlands

E-mail: A.W.Hoes@umcutrecht.nl



TITLE AND/OR DEGREE

Professor, MD, PhD, EPCCS

CURRENT POSITION

- Professor of Clinical Epidemiology and General Practice, Julius Center for Health Sciences and Primary Care of the University Medical Center, Utrecht

SPECIAL AREA OF INTEREST AND EXPERTISE

- Diagnosis, prognosis and therapeutic interventions in cardiovascular disease (mainly heart failure and coronary heart disease)
- Preventive cardiology

PROFESSIONAL ACTIVITIES

- Board Member of the European primary care Cardiovascular Society
- Member of the Dutch Medicines Evaluation Board since 1998
- Member of several editorial boards, including the European Journal of Heart Failure and scientific committees in the Netherlands and abroad

OTHER ACTIVITIES

- Studied medicine at the Catholic University Nijmegen and graduated in 1986.
- From 1987 worked at the Department of Epidemiology & Biostatistics at the Erasmus Medical Center in Rotterdam, where he was trained in clinical epidemiology.
- PhD degree in 1992.
- Assistant professor of clinical epidemiology and general practice at both the Department of Epidemiology & Biostatistics and the Department of General Practice at the Erasmus Medical Center in 1991.
- Headed the research line "Cardiovascular disease in primary care".
- Moved to the Julius Center for Health Sciences and Primary Care of the University Medical Center in Utrecht in 1996,
- Professor of Clinical Epidemiology and General Practice in 1998

EDITORIAL BOARD AND PUBLICATIONS

- Author and co-author of around 300 papers in peer-reviewed journals

Marija Glavinić

Belgrade, Serbia

E-mail: mglavinic@eunet.rs

**TITLE AND/OR DEGREE**

MD, Specialist of Family Medicine

CURRENT POSITION

- Family Medicine Specialist in Primary Health Care Center Zemun

SPECIAL AREA OF INTEREST AND EXPERTISE

- Primary prevention of cardiovascular diseases
- Prevention and treatment of diabetes mellitus

OTHER ACTIVITIES

- Prevention of drug addiction and rehabilitation of drug addicts

PROFESSIONAL ACTIVITIES

- Member of EURACT (European Academy of Teachers in General Practice/ Family Medicine)

EDITORIAL BOARD AND PUBLICATIONS

- Published papers in domestic medical journal

Stevan Ilić

Niš, Niška Banja, Serbia

E-mail: stevanil@open.telekom.rs



TITLE AND/OR DEGREE

Professor, MD, PhD, FESC

CURRENT POSITION

- Dean of the Faculty of Medicine University of Nis
- Professor of Internal Medicine and Cardiology, University of Nis, Faculty of Medicine
- Head of the Cardiology Clinic, Institute for treatment and cardiovascular rehabilitation „Niška Banja“, Niška Banja

SPECIAL AREA OF INTEREST AND EXPERTISE

- Ischemic heart diseases, heart failure
- Arterial hypertension, cardiovascular prevention and rehabilitation
- Arrhythmias, valvular heart disease

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the Union of Medical Society of Serbia
- Member of the European Society of Cardiology
- Member of the European Association for Cardiovascular Prevention and Rehabilitation
- Member of the Heart Failure Association of the European Society of Cardiology
- Fellow European Society of Cardiology (FESC)

OTHER ACTIVITIES

- Trained in clinical cardiology and echocardiography at the Hammersmith Hospital and National Heart Hospital, London, UK
- Research fellow in fifteen scientific projects
- Received the Gold Diploma award from the Yugoslav Society of Cardiology (2001)
- Member of a Senate University of Nis

EDITORIAL BOARD AND PUBLICATIONS

- Co Editor of Acta Medica Medianae, Scientific Journal of the University of Nis Faculty of Medicine and the Department of the Serbian Medical Society in Nis
- Author of seven monographs, editor of two books
- Over 500 studies, including abstracts, articles in national and international journals and book chapters
- Over 50 invited lectures and seminars at national and international meetings

Branislava Ivanović**Belgrade, Serbia****E-mail:** drbivanovic@yahoo.com**TITLE AND/OR DEGREEED**

Professor, MD, PhD

CURRENT POSITION

- Professor of Internal Medicine and Cardiology, Belgrade University School of Medicine
- Head of Department for Hospital Treatment of Arterial Hypertension and its Complications

SPECIAL AREA OF INTEREST AND EXPERTISE

- Arterial hypertension and cardiovascular prevention
- Valvular and ischemic heart disease
- Infective endocarditis

OTHER ACTIVITIES

- Researcher in many national and international scientific projects and studies
- Over 30 invited lectures and seminars at national and international seminars

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the European Society of Cardiology
- Member of the Heart Failure Association of the European Society of Cardiology
- Member of the European Society of Cardiovascular Imaging

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 5 international scientific journals
- 60 *in extenso* papers in leading international medical journals
- Several chapters in Serbian university textbooks on cardiology and internal medicine

Tiny Jaarsma

Linköping, Sweden

E-mail: tiny.jaarsma@liu.se



TITLE AND/OR DEGREE

- Professor in Caring Sciences, RN, PhD, NFESC, FAHA, FAAN

CURRENT POSITION

- Professor in caring sciences at the Faculty of Health Sciences of the University of Linköping, Sweden

SPECIAL AREA OF INTEREST AND EXPERTISE

- Heart Failure, Disease Management, Patient education and self-care, Compliance

PROFESSIONAL ACTIVITIES

- Until 2010, associate professor, University Medical Centre Groningen, the Netherlands. Co- principle investigator COACH-trial
- Editor-in Chief of the European Journal of Cardiovascular Nursing
- WP leader of EU project: Homecare Heart Failure
- Former board member of the Heart Failure Association of the ESC
- Member of editorial boards of: European Journal of Heart Failure, Journal on Cardiovascular Nursing, Netherlands Heart Journal
- Reviewer for: European Journal of Heart Failure, Cardiac Failure, Critical Care, Pharmacoeconomics, Heart & Lung, Psychosomatic research, Netherlands Heart Journal, International Journal of Cardiology, Journal of Cardiovascular Nursing.
- Development of European curriculum on heart failure nursing
- Review committee ESC Guidelines diagnosis and treatment of heart failure
- Committee on Dutch guidelines Heart Failure
- Advisory board for development of the internet site heartfailurematters.org
- Grant review board of the Netherlands Heart Foundation
- Task force ESC on Update of guidelines in Heart Failure
- Founder and member of UNITE (Undertaking Nursing Interventions Throughout Europe)
- Chair of 'Working group on Nursing Research' of the Netherlands Cardiovascular Nursing Association ; Chair of the Working Group on Cardiovascular Nursing of ESC; Chair of the Science Committee of the ESC Council of Cardiovascular Nursing and Allied Professionals
- International committee American Heart Association, Nursing Council of the AHA

EDITORIAL BOARD AND PUBLICATIONS

- Over 190 papers in peer-reviewed journals, H- index 17

Dordje Jakovljević,

Newcastle, United Kingdom



E-mail: Djordje.Jakovljevic@newcastle.ac.ukb

**TITLE AND/OR DEGREEED**

PhD MSc ACSM-CES BSc

Senior research associate (Clinical applied physiology)

CURRENT POSITION

- Senior Research Fellow and Principled Investigator at the Institute of Cellular Medicine Faculty of Medical Sciences at Newcastle University in England, United Kingdom.

PROFESSIONAL ACTIVITIES

- Master's degree and PhD in the filed of heart failure and mechanical circulatory support of the left ventricle
- Projects and implement research in the filed of primary and secondary prevention with emphasis on the implications of risk factors and lifestyle, such as diet and physical activity on the functional capacity of the cardiovascular system.
- Experimental study on molecular and cellular mechanisms that cause changes in cardiovascular function, especially the role of mitochondrial function and inflammatory signaling mechanisms as key factors in the changes of the cardiovascular system.
- Coordinator of a multidisciplinary team of 18 associates
- Held 14 invited lectures

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer of Int J Cardiol, BMJ Heart, Eur J Heart Failure, Am J Cardiol, Future Cardiol, Eur J ApplPhysiol, J Cardiac Failure, J ClinMonit Comput, Circulation Heart Failure
- Publ ished 35 papers in international medical journals

Dragana Jovanovic

Belgrade, Serbia

E-mail: draganajv@yahoo.com



TITLE AND/OR DEGREEED

Professor, MD, PhD

CURRENT POSITION

- Professor of medicine / pulmonology, oncology and palliative medicine, School of Medicine, Belgrade
- Head of University Hospital of Pulmonology, Clinical Center of Serbia
- Head of Palliative medicine specialty, School of Medicine, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Thoracic oncology
- Palliative medicine
- **Interstitial lung diseases**

OTHER ACTIVITIES

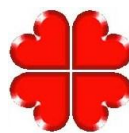
- Trained in pulmonology at the Laenec Hospital in Paris (1984)
- Trained in Thoracic oncology/monoclonal antibodies scintigraphy at the St Bartholomew Hospital, London (1989)
- Fellowship on Adjuvant treatment and interventional pulmonology at Hopital Foch and Hopital Tenon in Paris (2004)
- Research scinetific coordinator in several scientific projects

PROFESSIONAL ACTIVITIES

- Member of the European Initiative Quality Management Lung cancer Care Task force
- Member of the Thoracic Oncology Assembly of the ERS
- Member of several International Lung Cancer Boards
- Member of the ERS (European Respiratory Society)
- Member of IASLC
- Member of Serbian Medical Society

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 4 international scientific journals, and in 4 domestic scientific journals
- 14 *in extenso* papers in recognized international medical journals
- several chapters in international textbooks on pulmonology
- Editor of 3 university books and the author of more than 30 chapters in several Serbian university textbooks on pulmonology and internal medicine

Ljiljana Jovović**Belgrade, Serbia****E-mail:** jovovic_01@yahoo.com**TITLE AND/OR DEGREE**

MD, PhD, FESC

CURRENT POSITION

- Head of Noninvasive cardiac diagnostics at Dedinje Cardiovascular Institute, Belgrade, Serbia
- Head of Dedinje Echocardiography School
- Coordinator of GUCH Center at Dedinje Cardiovascular Institute

SPECIAL AREA OF INTEREST AND EXPERTISE

- Noninvasive cardiac diagnostics
- Echocardiography conventional, TEE as well as newer techniques
- **GUCH and valvular diseases**
- **Imaging before, during and after PCI in structural heart disease**

OTHER ACTIVITIES

- Collaboration in GUCH program with San Donato Milanese, 2010
- Organization and coordination of Dedinje Echocardiography School (from 2007)
- Collaboration with Prof Sylvain Chauvaud from Paris, France, in surgical repair of Ebstein anomaly (from 2006)
- Consultant cardiologist in Institute for CV diseases, Sr Kamenica, Serbia
- Consultant cardiologist in Clinic of Cardiology, Clinical Center of Montenegro, Podgorica, Montenegro (from 2005)
- European Cardiologist Diploma, European Society of Cardiology (2004)

PROFESSIONAL ACTIVITIES

- President of Section Cardiology of Serbian Medical Association (2009-2010)
- Secretary of Section Cardiology of Serbian Medical Association (1991-1995)
- Fellow of The European Society of Cardiology, FESC

EDITORIAL BOARD AND PUBLICATIONS

- Several *in extenso* publications in leading international medical journals
- several chapters in Serbian university textbooks on cardiology

Saša Kačar**Belgrade, Serbia****E-mail:** sakacar@gmail.com**TITLE AND/OR DEGREE**

MD, MSc, FETCS

CURRENT POSITION

- Cardiac surgeon, Clinic for Cardiac surgery, Military Medical Academy
- MSc, Belgrade University, School of Medicine

SPECIAL AREA OF INTEREST AND EXPERTISE

- 200 - 250 cardiac procedures a year (the most delicate and the most risky cardiac procedures)
- Cardiac surgery of patients with highest risk, including mechanical complications of acute myocardial infarction, and revascularization in patients on dual antiplatelet therapy in acute coronary syndromes.
- Coronary surgery, use of grafts, total arterial revascularization, off-pump total myocardial revascularization (aortic no-touch), resection and reconstruction of the left ventricle.
- Valve surgery
- Emergency cardiac surgery - aortic dissection surgery, emergency coronary surgery in acute myocardial infarction, surgery of complications of myocardial infarction (free wall rupture with and without the use of extracorporeal circulation, rupture of the interventricular septum, papillary muscle rupture, cardiogenic shock and arrest after myocardial infarction) and complications after percutaneous coronary intervention.
- All types of combined surgery, surgery of ascending aorta and aortic arch
- In Italy performed operations of congenital heart diseases and heart transplantation.

OTHER ACTIVITIES

- OPCAB training, Catholic University of Leuven, Belgium (2005)
- Trained in Cardiac surgery hospital, Bergamo, Italy (1995-1996)
- Master in cardiac surgery, anesthesiology and cardiology (subspecialisation in pediatric cardiac surgery), St. Anna University, Pavia (1996)

PROFESSIONAL ACTIVITIES

- Fellow of the European society for Thoracic et Cardiovascular surgery (FETCS)
- Member of Serbian Society for Cardiovascular Surgery
- Member of Serbian Society for Cardiothoracic Surgery
- Member of European society of cardiovascular surgery

Dimitra Kalimanovska-Oštrić**Belgrade, Serbia****E-mail:** kalimdim@gmail.com**TITLE AND/OR DEGREES**

Professor, MD, PhD,

CURRENT POSITION

- Professor of Internal medicine and Cardiology, University of Belgrade, School of Medicine
- Head of the Department for investigation and treatment of acquired and congenital heart disease in adults, Cardiology Clinic, Clinical centre of Serbia, Belgrade
- Head of the Department of General practice, University of Belgrade School of Medicine

SPECIAL AREA OF INTEREST AND EXPERTISE

- Adult congenital heart disease, valvular heart disease, echocardiography, pulmonary artery hypertension, arterial hypertension, renovascular hypertension

OTHER ACTIVITIES

- Introduced Doppler echocardiography in Serbia (1984)
- Scholarship for Texas Heart Institute, Houston, USA (1985)
- Erasmus University / Thoraxcenter, Rotterdam (Netherlands) (1987)

PROFESSIONAL ACTIVITIES

- Member of the European Society of Cardiology and European Society of Echocardiography
- Member of the ESC Working Group for Grown-up Congenital Heart Disease
- Member of the Serbian Society of Cardiology, Serbian Society of Echocardiography and Serbian Society of Heart Failure

EDITORIAL BOARD AND PUBLICATIONS

- 16 *in extenso* papers in leading peer-reviewed journals, over 300 articles and abstracts in different international and national journals or Proceedings.
- First author of the first monography on Doppler echocardiography in Yugoslavia (1989).
- Chapters in several Textbooks of Internal medicine, Cardiology and Echocardiography published in the last 25 years in Serbia.
- Reviewer in 2 international scientific journals and in 2 domestic scientific journals.

Vladimir I. Kanjuh

Belgrade, Serbia

E-mail: kanjuh@eunet.rs



TITLE AND/OR DEGREES

Academician, Professor, MD, PhD

CURRENT POSITION

- Academician, Serbian Academy of Sciences and Arts
- President of the Board on Cardiovascular Pathology Serbian Academy of Sciences and Arts
- President of the Board on Development of Medical Sciences, Serbian Academy of Sciences and Arts
- Professor Emeritus, Belgrade University School of Medicine, Department of Pathology

SPECIAL AREA OF INTEREST AND EXPERTISE

- Cardiovascular pathology, especially congenital heart diseases (CHD) and its pulmonary circulation, oncologic pathology, teratology, history of medicine

OTHER ACTIVITIES

- Former vice - dean and chief of the Chair of Pathology. Academician – ordinary member of the Serbian Academy of Sciences and Arts
- Founder of the cardiovascular pathology in Yugoslavia, and creator of the Registry and Museum of CHD with 1500 pathological specimens
- Former president of the Society of Yugoslav Pathologist (1994 –1998)
- Member of the editorial board of Am J Cardiovasc Pathology
- Scientific awards: October of Belgrade 1974, “July 7th” of Serbia 1989, Hungarian Semmelweis Medal 1990, Commendation from HH the Patriarch of Serbia Pavle for Merit 2000, “Academician B.S. Djordjevic” 2000, Association of University Professors of Serbia 2002, and “Brothers Karic” 2003

PROFESSIONAL ACTIVITIES

- Member and visiting professor of the “JE Edwards Registry for Cardiovascular Pathology”, London (clinical cardiology), Amsterdam (pulmonary circulation)
- President of the Atherosclerosis Society of Serbia
- Co-president of the Union of Serbian and Greek physicians
- Vice-president of the Serbian-Greek Friendship Society
- Member of the Councils of the Europ. Soc. Pathol., Europ. and Intern. Atheroscl. Soc

EDITORIAL BOARD AND PUBLICATIONS

- Published as (co)author 1019 scientific papers: 481 in extenso (79 abroad) and 538 abstracts (262 abroad) including 12 books, and 59 chapters in other books

Michel Komajda

Paris, France



E-mail: michel.komajda@psl.aphp.fr

**TITLE AND/OR DEGREES**

Professor, MD, PhD

CURRENT POSITION

- Professor of Cardiology – University Pierre et Marie Curie, Paris
- Head of the Cardiovascular Medical and Surgical Department

SPECIAL AREA OF INTEREST AND EXPERTISE

- Pharmacology of heart failure, neuro-hormones in heart failure, genetics of dilated and hypertrophic cardiomyopathy

OTHER ACTIVITIES

- Member of several Steering Committees / Executive Committees of international trials on heart failure./CV diseases: CARMEN, COMET, HEAAL, I PRESERVE, RECORD, SHIFT, ASCEND HF, CORONA

PROFESSIONAL ACTIVITIES

European Society of Cardiology

- 1989: Fellow of the European Society of Cardiology
- 1999-2000: Co-chairperson of Euro Heart Failure Survey I
- 2000-2002: Chairperson Working Group Heart Failure
- 2001 & 2005: Member of the Writing Committee Guidelines for the management of CHF
- 2005 & 2006: Chairperson of the Congress Programme Committee (Stockholm 2005 and Barcelona WCC 2006)
- 2007: Vice-President for Associations Working Groups and Councils
- 2008 - 2010: President Elect

French Society of Cardiology

- 1988 : Member of the Board
- 1992-1996: Treasurer
- 1997-2000: General Secretary
- 2001: Vice President
- 2002-2004: President

EDITORIAL BOARD AND PUBLICATIONS

- Editorial board of Heart, International Journal of Cardiology, European Heart Journal, European Journal of Heart failure.

Miodrag N. Krstić**Belgrade, Serbia****E-mail: miodrag61@gmail.com****TITLE AND/OR DEGREEED**

Professor, MD, PhD

CURRENT POSITION

- Deputy Director, Department of Gastroenterology and Hepatology, Clinical Center of Serbia, Belgrade
- Head of the Unit for Endoscopic Ultrasonography Department of Gastroenterology, Clinical Center of Serbia

PROFESSIONAL ACTIVITIES

- Member of the Serbian Medical Society
- Member of Section for Gastroenterology, Serbian Medical Society (1989)
- Member of Section for Hepatology of the Serbian Medical Society (1989)
- Member of Yugoslav Endoscopic Association (YUGEA) (1991)
- Member of the International GASTRO- SURGICAL Club (1991)
- Secretary of Section for Hepatology, Serbian Medical Society (1992-1996)
- The Secretary-General of the Yugoslav Association of Gastroenterologists (2001-2005)
- Member of the educational committee of the World Association of Gastroenterology (2004-2008)
- International member of the American Gastroenterology Association (2007)
- Member of the Yugoslav Association for the Study of Inflammatory Bowel Disease (IBD Yugoslav Study Group) (2006)
- Member of the Yugoslav Association of Coloproctology (2004)
- Section for gastroenterology of the Serbian Medical Society, president (2009)
- President of Non-surgical department, Serbian section IASGO (International Association of Surgeons , Gastroenterologists and Oncologists) (2009)
- President of the Scientific Board, Congress of Gastroenterology Serbia (2011)

EDITORIAL BOARD AND PUBLICATIONS

- 300 publications in peer-reviewed journals - 18 SCI, MEDLINE 75
- 12 book chapters, co-authored one book

Nebojša M. Lalić**Belgrade, Serbia****E-mail:** nmlalic@eunet.rs**TITLE AND/OR DEGREES**

Academician, Professor, MD, PhD

CURRENT POSITION

- Academician, Serbian Academy of Sciences and Arts
- Dean, School of Medicine, University of Belgrade
- Professor of Internal Medicine/Endocrinology, School of Medicine, University of Belgrade
- Head of the Center for Metabolic Disorders, Intensive Treatment and Cell Therapy in Diabetes, Institute for Endocrinology, Diabetes and Metabolic Diseases, Clinical Center of Serbia, Belgrade
- Deputy Director, Institute for Endocrinology, Diabetes and Metabolic Diseases, Clinical Center of Serbia, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Insulin resistance, coronary heart disease and stroke, neurodegenerative disease, immunology of type 1 diabetes, insulin pump treatment, diabetic nephropathy

PROFESSIONAL ACTIVITIES

- Member, Serbian Medical Society, Serbian Endocrine Society
- Member, Mediterranean Group for the Study of Diabetes
- Member, European Association for the Study of Diabetes
- Member, International Pancreas and Islet Transplant Association
- Member, European Group on Insulin Resistance
- Member, American Diabetes Association
- Member, Immunology of Diabetes Society
- Member, European Atherosclerosis Society, European Society of Endocrinology. Member, Diabetes and Cardiovascular Diseases EASD Study Group

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer at international meetings or journals, 1995, 3rd International Congress Cell Transplant Society, Miami, USA, 1999, 10th Balkan Congress on Endocrinology, Belgrade, Yugoslavia, 2000, 36th Annual Meeting of the European Association for the Study of Diabetes, Jerusalem, Israel, 2004, Member of the Board of Review Editors of the International Diabetes Monitor (IDM)
- Has published more than 60 papers in peer review journals, is author of chapter in books

Bernhard Maisch

Marburg, Germany



E-mail: maisch@mail.uni-marburg.de

TITLE AND/OR DEGREES

Professor, MD, PhD, FESC, FACC

CURRENT POSITION

- Professor of Internal Medicine/Cardiology
- Chair of Internal Medicine-Cardiology , Philipps University, Marburg

SPECIAL AREA OF INTEREST AND EXPERTISE

- Myocardial and pericardial diseases
- Cardioimmunology, cardiovirology
- Arrhythmias and pacing in infectios endocarditis

PROFESSIONAL ACTIVITIES

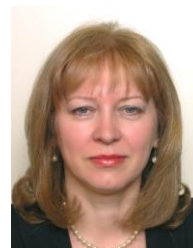
- Member, German Society of Cardiology
- Member, European Society of Cardiology
- Member, American College of Cardiology

OTHER ACTIVITIES

- Chairman, Task Force on Pericardial Diseases, Scientific Council on Cardiomyopathies, World Heart Federation
- Chairman, European Society of Cardiology Task Force on the Scientific Statement "Management of Pericardial Diseases"
- Visiting Professor of the Belgrade University

EDITORIAL BOARD AND PUBLICATIONS

- Editor, member of the editorial board or reviewer: Herz (editor), American Journal of Cardiology, Basic Research in Cardiology, Circulation, Clinical and Experimental Immunology, Endocrinology, European Journal of Clinical Investigations, European Heart Journal, Herzmedizin, Herz und Gefäße, Zeitschrift für Kardiologie
- Author of 250 papers in extenso in peer-reviewed journals, five books, 64 book chapters

Ružica Maksimović**Belgrade, Serbia****E-mail:** rmaksmovic@yahoo.com**TITLE AND/OR DEGREES**

Professor, MD, PhD, FESR

CURRENT POSITION

- Professor of Radiology, School of Medicine, University of Belgrade
- Staff Radiologist, Center for Magnetic Resonance Imaging, Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Magnetic resonance imaging
- Computerized tomography imaging
- Invasive and interventional radiology
- Myocardial and pericardial disease

PROFESSIONAL ACTIVITIES

- Vice president of the Radiology Society of Serbia
- General Secretary of the Radiology Society of Serbia
- European Society of Radiology
- Serbian Medical Association
- Yugoslav Association of Radiology
- Secretary of the Postgraduate studies in Radiology School of Medicine, University of Belgrade

OTHER ACTIVITIES

- 42 invited lectures at various national and international meetings including ESC, ESR and world congresses
- Organized 12 highly ranked international meetings
- Awarded by RSNA Certificate of Merit Award 2003
- Was deputy grant coordinator of EU Project Tempus: Restructuring of Postgraduate studies and Training in Medicine in Serbia 2004, and two more EU Tempus projects

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer of European Radiology and European Journal of Radiology
- Has published total of 306 papers, 55 in peer review national and international journals, associate editor of an international monograph, and 25 book chapters

Davor Miličić**Zagreb, Croatia****E-mail:** d.milicic@mail.inet.hr**TITLE AND/OR DEGREES**

Professor, MD, PhD, FESC, FACC

CURRENT POSITION

- Dean, University of Zagreb, School of Medicine
- Full Professor of Internal Medicine and Cardiology, University of Zagreb, School of Medicine
- Head, Department of Cardiovascular Diseases, University Hospital Centre Zagreb
- President, Croatian Cardiac Society
- Founder & Director, Croatian Heart Foundation

PROFESSIONAL ACTIVITIES

European Society of Cardiology Activities

- Member, Credential Committee 2004-06, 2006-08
- Member, Congress Programme Committee, 2008-10; 2010-12
- Member, Committee on Education in Cardiology, 2010-12
- Consultant, Committee on Education, EACPR, 2010-12
- National Coordinator for CVD Prevention, 2004-
- Director, Dubrovnik Cardiology Highlights – an ESC Update Programme in Cardiology (2009, 2012, -)
- Grader, EAE, 2006-
- Member, Device for Life Initiative (EHRA)

Fellowships and Honors

- FESC
- FACC
- Award, International League of Humanists, 2009
- Award, Croatian Academy of Arts and Sciences, 2010
- Award for scientific excellence, University of Zagreb, 2011
- President, National Bioethical Committee for Medicine, 2008

EDITORIAL BOARD AND PUBLICATIONS

- Editorial board of Journal of Cardiovascular Medicine, Cor et Vasa, Acta Medica Croatica, Liječnički vjesnik – Journal of the Croatian Medical Association, Kardiolog – Journal of the Croatian Cardiac Society

Tomica Milosavljević

Belgrade, Serbia

E-mail: tommilos@hotmail.com



TITLE AND/OR DEGREES

Professor, MD, PhD

CURRENT POSITION

- Professor of Internal Medicine and Gastroenterohepatology, School of Medicine, University of Belgrade
- Gastroenterology and Hepatology Clinic- Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- *Helicobacter pylori* infection and related diseases, chronic inflammation and carcinogenesis, inflammatory bowel diseases, pancreatic diseases, diagnostic and therapeutic endoscopy.

PROFESSIONAL ACTIVITIES

- President of Serbian Association of Gastroenterologists (2009-2013)
- President of Yugoslavian Coloproctology Society (2003-2007)
- President of Yugoslavian Association for Digestive Endoscopy (1996-2000).
- Minister of health of Serbia (2002-2003, 2004-2006, and 2007-2011).
- Member of Executive Board of World Health Organization (WHO) 2009-2012
- Member of Standing Committee of WHO for Europe (2005-2008), he was a president of 57th Session of RC WHO Euro, in 2007.
- Member of the Council of European Association for Gastroenterology, Endoscopy and Nutrition (EAGEN) since 2008.
- Member of UEG General Assembly (2012-15), representing EAGEN.

EDITORIAL BOARD AND PUBLICATIONS

- Editor of Archives of Gastroenterohepatology
- International editorial board member of Hepatogastroenterology

Zorica Mladenović**Belgrade, Serbia****E-mail:** zoz3377@gmail.com**TITLE AND/OR DEGREE**

Ass, MD, PhD

CURRENT POSITION

- assistant of Internal Medicine and Cardiology, Faculty of Medicine, University of Defense, Belgrade,
- Clinic for Cardiology, Military Medical Academy

SPECIAL AREA OF INTEREST AND EXPERTISE

- Non invasive cardiology, transthoracic and transesophageal echocardiography, stress echo, coronary flow reserve
- Heart failure, coronary artery disease
- Congenital heart disease

OTHER ACTIVITIES

- Received award for young investigators from the European Society of echocardiography (2006)

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the Union of Medical Society of Serbia
- Member of the European Society of Cardiology
- Member of the European Association of Cardiovascular Imaging
- Member of the Heart Failure Association of the European Society of Cardiology

EDITORIAL BOARD AND PUBLICATIONS

- Author and co author of over 30 studies, including abstracts, articles in national and international journals and book chapters

Igor B. Mrdović

Belgrade, Serbia

E-mail: igormrd@gmail.com

**TITLE AND/OR DEGREEED**

Professor, MD, PhD

CURRENT POSITION

- Professor of internal medicine / cardiology, School of Medicine, University of Belgrade
- Head of Coronary Care Unit "A", Emergency Center, Clinical center of Serbia.

SPECIAL AREA OF INTEREST AND EXPERTISE

- Clinical cardiology, echocardiography, invasive cardiology
- Acute coronary syndrome, prognostic models after myocardial infarction
- Testing of platelet function in acute myocardial infarction
- Takotsubo cardiomyopathy

OTHER ACTIVITIES

- International Award for the best young researcher at the Mediterranean Congress of Cardiologists and cardiac surgeons in 1989, Antalya
- The Foreign Medical Graduates Validation of Medical Doctor Diploma for USA (1986)

PROFESSIONAL ACTIVITIES

- Head of Internal medicine admission department, Emergency Center,, Clinical center of Serbia (1992-2000)
- Principal investigator in clinical trials: RISK-PCI, ART-PCI, FUSSION II
- Collaborator in several projects financed by Fund Science of the Republic of Serbia

EDITORIAL BOARD AND PUBLICATIONS

- 37 articles in journals from JCR list (first author in 16 articles)
- 10 chapters in internal medicine and emergency medicine books
- Reviewer in Lancet, International Journal of Cardiology

Nebojša Mujović**Belgrade, Serbia****E-mail:** nmujovic@gmail.com**TITLE AND/OR DEGREEED**

- Assistant Professor, MSc

CURRENT POSITION

- Assistant professor of Internal Medicine-Cardiology, Medical Faculty University of Belgrade
- Specialist in internal medicine, cardiologist, Clinical Center of Serbia, Clinic for Cardiology

SPECIAL AREA OF INTEREST AND EXPERTISE

- Cardiology, arrhythmology, catheter ablation of cardiac arrhythmias, cardiac electrophysiology

PROFESSIONAL ACTIVITIES

- Radiofrequency catheter ablation of supraventricular and ventricular tachycardias since 2003 (over 2500 ablation procedures)
- Invasive cardiac electrophysiology
- Electroanatomical mapping ablation procedures (atrial fibrillation), EnsiteNavX
- Cardiac catheterization and coronary arteriography since 2000 (over 1500 procedures)
- Sixteen year experience in clinical cardiology and practice in coronary care unit

OTHER ACTIVITIES

- Trained in interventionalelectrophysiology in Germany, Kerckhoff Klinik, Bad Nauheim (Prof H.F.Pitschnner)
- Course of catheterablation of atrial fibrillation, dr Geller Laszlo, Budapest, Hungary

EDITORIAL BOARD AND PUBLICATIONS

- 12 articles published in extenso in journal indexed in CC and SCI

Aleksandar N. Nešković

Belgrade, Serbia

E-mail: neskovic@hotmail.com



TITLE AND/OR DEGREE

Associate Professor, MD, PhD, FESC, FACC

CURRENT POSITIONS

- Associate Professor of Medicine and Cardiology, Faculty of Medicine, University of Belgrade
- Chairman, Clinic of Internal Medicine, and Chief, Interventional Cardiology, Clinical Hospital Center Zemun, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Interventional cardiology
- Emergency echocardiography
- LV function, heart failure, acute coronary syndrome

OTHER ACTIVITIES

- Fellowship in interventional cardiology, Careggi Hospital, Florence (2001)
- Training in echocardiography:
Massachusetts General Hospital, Boston (1990)
Cleveland Clinic Foundation, Cleveland (1993, 1995)
- European Cardiologist Diploma

PROFESSIONAL ACTIVITIES

- Fellow of the European Society of Cardiology, FESC
- Fellow of the American College of Cardiology, FACC
- Board member of the European Association of Echocardiography, 2008-2010, 2010-2012
- Member of the Serbian Scientific Society

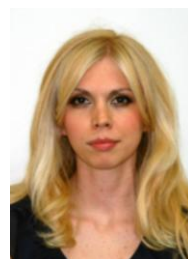
EDITORIAL BOARD AND PUBLICATIONS

- Editorial board member of the European Heart Journal of Cardiovascular Imaging, and Cardiovascular Ultrasound
- 88 articles *in extenso* in peer-reviewed international journals (CC/Medline); > 1300 citations
- 10 international book chapters
- Co-Editor of 2 international books: "Emergency echocardiography", Taylor & Francis, London 2005; "Stress Echocardiography: essential guide and DVD", Informa Healthcare, New York, 2010

Emilija M. Nestorovic

Clinical Center of Serbia
Belgrade, Serbia

E-mail: emanestor@gmail.com



TITLE AND/OR DEGREE

MD, MSci, Internal medicine specialist

CURRENT POSITION

- Head, Division of heart transplant, LVAD and ECMO,
- Clinical for Cardiac Surgery, Clinical Centre of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Heart failure, mechanical circulatory support, cardiac transplant, postoperative care, cardiac surgery, sport medicine

OTHER ACTIVITIES

- Echocardiography, School of Medicine, Belgrade (2008)
- Basic life support and Automatic External Defibrillation, Immediate Life Support and Advance Life Support, European Resuscitation Council (2010,2011)
- UEFA Football Doctor Education Programme, Workshop I, Vienna (2012)
- UEFA Football Doctor Education Programme, Workshop II, Amsterdam (2013)
- HeartMate II Training, Medical Highschool, Hanover, Germany (2013)
- Cardiac transplant and ventricular assist device (VAD) Training, Mayo Clinic College of Medicine, Division of cardiac transplant and VAD program, Rochester, USA (2013)

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the Echocardiography Society of Serbia
- Member of the Serbian Society for Cardiothoracic Surgery

EDITORIAL BOARD AND PUBLICATIONS

- 5 chapters in Serbian university textbooks on cardiology, internal and sport medicine
- Over 50 abstracts in total on Serbian and English language, includes articles in national and international journals

Predrag Ostojić**Belgrade, Serbia****E-mail:** ostojic@vektor.net**TITLE AND/OR DEGREE**

Assistant Professor, MD, PhD, MHSM

CURRENT POSITION

- Assistant professor of Internal Medicine, School of Medicine, University of Belgrade
- Head of V Hospital Department, Institute of Rheumatology, Belgrade

PROFESSIONAL ACTIVITIES

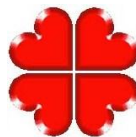
- Secretary of Rheumatology Association of Serbia
- Member of [The European League Against Rheumatism](#) (EULAR)
- Member of EULAR working group for systemic sclerosis

OTHER ACTIVITIES

- Master manager in the health care system, Faculty of Medicine and Faculty of Organizational Sciences, University of Belgrade

EDITORIAL BOARD AND PUBLICATIONS

- 15 articles published in its entirety in international journals cited in Current Contents and Medline (including the first author of 10 articles)
- More than 70 papers published in national and international professional meetings

Petar Otašević**Belgrade, Serbia****E-mail:** potasevic@yahoo.com**TITLE AND/OR DEGREE**

Associate Professor, MD, PhD

CURRENT POSITION

- Associate Professor of Internal Medicine-Cardiology, Belgrade University School of Medicine
- Cardiologist at Dedinje Cardiovascular Institute

PROFESSIONAL ACTIVITIES

- Trained at Heart Failure Unit, Cleveland Clinic Foundation, Cleveland, USA (2003)
- Trained at Heart Failure Unit, Kerckoff Clinic, Bad Neuheim, Germany (2009)
- Collaborator on scientific projects: Carotis artery disease in Serbia, Cardiomyopathy - applied research

EDITORIAL BOARD AND PUBLICATIONS

- Member of editorial board of *Medicinski pregled* and Heart and blood vessels
- Total 46 papers in peer-review journals cited by SCI

Zoltán Papp**Debrecen, Hungary****E-mail:** pappz@med.unideb.hu**TITLE AND/OR DEGREE**

Professor, MD, PhD, DSc, FESC

CURRENT POSITION

- Professor of Clinical Physiology, University of Debrecen, Hungary
- Head of division, Division of Clinical Physiology, Institute of Cardiology, Faculty of Medicine, University of Debrecen
- Vice-Dean for Educational Affairs at the Medical Faculty of the University of Debrecen, Hungary

SPECIAL AREA OF INTEREST AND EXPERTISE

- Myocardial contractility
- Cellular physiology
- Heart failure
- Ischemia/reperfusion injury
- Excitation-contraction coupling

PROFESSIONAL ACTIVITIES

- Member of the Board: Heart failure Association of the European Society of Cardiology
- Chairman of the Basic Research Section of Heart failure Association of the European Society of Cardiology
- Member of the European Society of Muscle Research
- Member of the European Working Group of Cardiac Cellular Electrophysiology
- Member of the International Society of Heart Research

EDITORIAL BOARD AND PUBLICATIONS

- Member of the Editorial Board: Cardiovascular Therapeutics, Experimental and Clinical Cardiology, Cardiovascular Research
- Over 80 papers in peer-reviewed journals
- Over 2300 citations in international literature
- Over 50 invited lectures and seminars at International meetings

Milan Pavlović

Niš, Serbia

E-mail: milanpa@open.telekom.rs



TITLE AND/OR DEGREE

Associate Professor, MD, PhD

CURRENT POSITION

- Associate Professor of Internal Medicine, School of Medicine, University of Niš
- Chief of the Coronary Unit and the Department of Acute Coronary Syndrome, Clinic for Cardiovascular Diseases, Clinical Center Nis.

SPECIAL AREA OF INTEREST AND EXPERTISE

- Interventional cardiology and non-invasive cardiology

PROFESSIONAL ACTIVITIES

- Member of Serbian Society of Cardiology
- Member of Cardiology Section, Serbian Medical Society
- Member of Academy of Medical Sciences of the Serbian Medical Society
- Member of European Association of Interventional Cardiology
- Member of European Association of Echocardiography

OTHER ACTIVITIES

- Former director of Clinic for Cardiovascular Diseases, Clinical Center Nis.
- Former president of the Expert Committee of the Clinical Center of Nis

Siniša U. Pavlović**Belgrade, Serbia****E-mail:** pavlosini@yahoo.com**TITLE AND/OR DEGREE**

Professor, MD, PhD, FESC

CURRENT POSITION

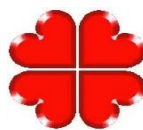
- Deputy Director of Pacemaker Center, Clinical Centre of Serbia
- Professor of medicine / cardiology, School of Medicine, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Cardiac rhythm disorders

PROFESSIONAL ACTIVITIES

- Member of the Serbian Medical Society since 1988.
- Member of Association of Cardiologists of Yugoslavia since 1992.
- The president of the Ethics Committee of the Faculty of Medicine since 2009.
- Elected member of NASPE (now the Heart Rhythm Society) since 1997.
- Member of the European Society of Cardiology
- Fellow European Society of Cardiology (FESC) since 2000
- Member of the European Heart Rhythm Association (EHRA) since 2005
- Member Heart Failure Association of the European Society of Cardiology since 2009

Velisava Perović**Belgrade, Serbia****E-mail:** perovicv@gmail.com**TITLE AND/OR DEGREE**

Medical nurse specialist

CURRENT POSITION

- Head nurse of interventional cardiology and radiology, Dedinje Cardiovascular Institute, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Interventional cardiology, IVUS, interventional radiology
- Myocardial infarction, heart failure, cardiovascular manifestations of diabetes mellitus
- **Clinical pharmacology**

OTHER ACTIVITIES

- Le programme nouveau de sterilisation, partiquement, vitesse de preparation des complets et la securite des instruments. Amcor Flexibles, laboratoires, France, (2008)
- Workshop Raucodrape OR Drape Sytems and L&R OR Accessories, Lohmann & Rauscher Training Center in Vienna, Austria (2011)
- Delegation of the Nurses Association of Serbia Visitation in Marburg, Germany

PROFESSIONAL ACTIVITIES

- Fellow of The Society of Cardiology Serbia
- Chairperson of the Cardiovascular Nursing Society of Serbia, CVNSS
- Member of the ESC, European Society of Cardiology
- Member of the ESC Working Group for Heart Failure
- Member of the CCNAP, ESC Council on Cardiovascular Nursing and Allied Professions

EDITORIAL BOARD AND PUBLICATIONS

- **Citation:** European Heart Journal (2013) 34 (Abstract Supplement), 951
- **Citation:** European Journal of Cardiovascular Nursing (2014) 13 (Supplement 1), S4

Jovan Peruničić**Belgrade, Serbia****E-mail:** perun.j@ptt.rs**TITLE AND/OR DEGREE**

Professor, MD, PhD, FESC

CURRENT POSITION

- Professor of internal medicine / cardiology, School of Medicine, Belgrade
- Head of Clinic for urgent internal medicine, Emergency Center, Clinical center of Serbia
- Head of Coronary "B" Unit, Emergency Center, Clinical center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Acute coronary syndrome, heart failure
- Aortic dissection
- **Pulmonary embolism**

OTHER ACTIVITIES

- President of the Serbian society of cardiology Working group of heart failure

PROFESSIONAL ACTIVITIES

- Member of the ESC
- Member of the EHRA

EDITORIAL BOARD AND PUBLICATIONS

- 27 *in extenso* papers in leading international medical journals
- several chapters in Serbian university textbooks on cardiology and internal medicine

Milan Petrović**Belgrade, Serbia****E-mail:** mpetrovic026@gmail.com**TITLE AND/OR DEGREE**

Professor, MD, PhD

CURRENT POSITION

- Professor of internal medicine / cardiology, School of Medicine, Belgrade
- Cardiologist, Department for Echocardiography, Clinic of Cardiology, Clinical Center of Serbia

OTHER ACTIVITIES

- The educational program of the European Society of Cardiology "Intracardiac echocardiography", Amsterdam, 2002;
- The educational program of the European Society of Cardiology on Pericarditis.
- Educational Course of the European Society of Cardiology, "Echocardiographic Techniques and Clinical Applications," Belgrade, 2007

PROFESSIONAL ACTIVITIES

- Collaborator on project "Mitral regurgitation: New perspectives on an old problem"

EDITORIAL BOARD AND PUBLICATIONS

- 16 published articles in journals cyted by SCI

Tatjana Potpara**Belgrade, Serbia****E-mail:** tanjapotpara@gmail.com**TITLE AND/OR DEGREE**

Assistant Professor, MD PhD

CURRENT POSITION

- Assistant Professor of internal medicine / cardiology, School of Medicine, University of Belgrade
- Chief of the intensive care unit for arrhythmology and clinical cardiology, Department of Cardiology III, Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Cardiac arrhythmias, atrial fibrillation

PROFESSIONAL ACTIVITIES

- Invited lecturer on international conferences: Venice Arrhythmias, Europace, Cardiostim, European Society of Cardiology Congress, World Cardiology Congress 2014
- Member of European Heart Rhythm Association (EHRA) Scientific Initiatives Committee
- President of the Working Group on cardiac arrhythmias, Serbian Society of Cardiology
- President of the Serbian Association of atrial fibrillation

EDITORIAL BOARDS AND PUBLICATIONS

- Member of the Editorial Board of Nature Scientific Reports
- Guest editor of Current Pharmaceutical Design
- Reviewer of many international journals such as Circulation, Thrombosis Haemostasis, American Journal of Cardiology, British Medical Journal, Europace, Advances in Therapy, etc.
- Published 40 papers in journals cited by Current Content and PubMed database and over 50 papers cited by other databases
- Author of numerous chapters in books and monographs

Milica Prostran

Belgrade, Serbia

E-mail: mprostran@doctor.com



TITLE AND/OR DEGREE

Professor, MD PhD

CURRENT POSITION

- Professor of Pharmacology, Clinical Pharmacology and Toxicology, Faculty of Medicine, University of Belgrade
- Head of the Postgraduate Studies in Pharmacology and Clinical Pharmacology, Faculty of Medicine, University of Belgrade
- Head of the Master Studies in Pharmaceutical Medicine, Faculty of Medicine, University of Belgrade
- Head of the Clinical Pharmacology Department, Clinical Center of Serbia, Belgrade
- Chairperson of the Governmental Committee for Psychoactive Controlled Substances

SPECIAL AREA OF INTEREST AND EXPERTISE

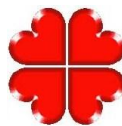
- Specialist in Clinical Pharmacology
- Subspecialist in Clinical Pharmacology - Pharmacotherapy
- Autonomic pharmacology, cardiovascular pharmacology: endothelial function, hypertension, heart failure, atrial fibrillation, pharmacology of pain, clinical pharmacology, bioethics

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology, Member of the European Society of Cardiology, Member of the Serbian Pharmacological Society, Member of the Serbian Physiological Society, Member of the EUPHAR, Member of IUPHAR, Member of the IUPHAR Subcommittee for Clinical Pharmacology in Developing Countries, Member of the European Society for Clinical Investigation, Member of the American Chemical Society, Member of SAFA Advisory Board, President of the Pharmacotherapy - Pharmaceutical Medicine Section of the Serbian Medical Association, Member of the Medical Academy of the Serbian Medical Association

EDITORIAL BOARDS AND PUBLICATIONS

- Editorial board of the Current Medicinal Chemistry (IF ~ 5)
- More than 170 *in extenso* papers published in CC/SCI indexed journals
- Around 60 *in extenso* papers published in PubMed journals
- Editor-in-chief of more than 15 national and international books
- More than 60 chapters in national and international books
- Over 30 invited lectures and seminars at national and international meeting

Mira Ranković**Belgrade, Serbia****E-mail:** mirka-68@Yahoo.com**TITLE AND/OR DEGREE**

High vocational nurse

CURRENT POSITION

- Nurse in the ICU at Dedinje Cardiovascular Institute

PROFESSIONAL ACTIVITIES

- Associations of Health professionals Serbia
- Associations of Cardiovascular nursing Serbia

Arsen D. Ristić**Belgrade, Serbia****E-mail:** arsen.ristic@med.bg.ac.rs**TITLE AND/OR DEGREE**

Associate Professor, MD, PhD, FESC

CURRENT POSITION

- Director, Department of Cardiology, Clinical Center of Serbia
- Associate Professor of Internal Medicine-Cardiology, Belgrade University School of Medicine

PROFESSIONAL ACTIVITIES

- Member, Task Force for the European Society of Cardiology Guidelines on pericardial diseases 2015
- Member of the Acute & Advanced Heart Failure Committee, Heart Failure Association of the ESC (2012 -)
- Coordinator, National registry for pulmonary hypertension (2011 –)
- Vice-Chairman, National WG for Heart Failure Guidelines in Serbia, 2011/12
- Member of the nucleus, European Society of Cardiology WG on Myocardial & Pericardial Dis. (2007-12)
- Coordinator, Study group on Pericardial Diseases, ESC WG on Myocardial & Pericardial Diseases (2009-12)
- Member, Republic of Serbia Expert Committee for Clinical Practice Guidelines,
- Secretary, Serbian Heart Association (2001-2003), Fellow, European Society of Cardiology (2001-)

OTHER ACTIVITIES

- EDUCATION - SCHOOL OF MEDICINE OF THE PHILIPPS UNIVERSITY, MARBURG, GERMANY. Research fellowship of the European Society of Cardiology, Twin-centres fellowship, World Heart Federation and Cardiac promotion society scholarship, Marburg (1999-2000). Doctoral thesis: Pericardiocentesis and intrapericardial treatment: Advances of the technique, diagnostic, and therapeutic value. (Mentor Prof. B. Maisch, final exam in 2002)

EDITORIAL BOARD AND PUBLICATIONS

- 1515 citations from 1996-2014 in SCOPUS database, h index 18
- Two international monographs "Maisch B, Ristić AD, Seferović PM, Tsang TSM. Interventional Pericardiology: Pericardiocentesis, Pericardioscopy, Pericardial Biopsy, Balloon Pericardiotomy, and Intrapericardial Therapy, incl. DVD, Springer Verlag, Heidelberg 2011" and "Pericardiology, contemporary answers to continuing challenges" (editors P.M. Seferovic, D.H. Spodick, B. Maisch). Science, Belgrade, 2000
- 65 papers in peer-review journals listed in Medline (55 in CC/SCI), 30 book chapters (18 international eds)

Miljko Ristić

Belgrade, Serbia

E-mail: risticmiljko@gmail.com

**TITLE AND/OR DEGREE**

Professor of surgery, MD, PhD

CURRENT POSITION

- Head, Clinical Center of Serbia
- Head, Clinic for Cardiac Surgery, Clinical Center of Serbia
- Professor of medicine / cardiac surgery, School of Medicine, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Mitral valve, By-pass surgery, Mechanical Circulatory Support, Heart transplantation, Sport Medicine

OTHER ACTIVITIES

- Clinique Saint Luc, Bruxelles, Department de Chirurgie Cardiovasculaire
- L'Hopital Broussais Paris, Chirurgie Cardiaque
- L'Hopital Pitie-Salpetriere Paris, Chirurgie Cardiovasculaire
- St Luck, Houston, Cardiac Surgery
- Medical University Hospital, Zurich
- HeartMate II Training, Medical Highschool, Hanover, Germany

PROFESSIONAL ACTIVITIES

- President, Society for Cardiothoracic surgery of Serbia
- President, Resuscitation Council of Belgrade
- President, Medical Committee of Football Association of Serbia
- Member, of Medical Committee of Olympic Association of Serbia
- Member, European Society for Cardiothoracic Surgery
- Member, State Committee for Medicines
- President, State Committee for standards in cardiac surgery
- President, State Committee for practice control
- President, Working group for Cardiosurgery of Serbian Ministry of Health

EDITORIAL BOARD AND PUBLICATIONS

- Editor of several books and chapters in Serbian university textbooks on cardiac surgery, cardiology and sport medicine
- Over 20 in extenso publications in leading international journals and over 500 abstracts in total on Serbian and English language, includes articles in national and international journals

Raphael Rosenhek

Vienna, Austria



E-mail: raphael.rosenhek@meduniwien.ac.at

TITLE AND/OR DEGREE

Associate Professor, MD, FESC

CURRENT POSITION

- Director Heart Valve Clinic, Medical University Vienna
- Associate Professor, Department of Cardiology, Medical University Vienna

SPECIAL AREA OF INTEREST AND EXPERTISE

- Structural heart disease, valvular heart disease, echocardiography with a particular focus on optimal timing and choice of intervention for these conditions.

PROFESSIONAL ACTIVITIES

- Fellow European Society of Cardiology (FESC)
- Chairman elect of the Nucleus of the Working Group on Valvular Heart Disease of the European Society of Cardiology
- Programme committee member for the *European Society of Cardiology meeting* and the *Euroecho* meeting.

EDITORIAL BOARD AND PUBLICATIONS

- Author of several scientific articles and book chapters
- Editorial boards of *Cardiology*, the *European Heart Journal Cardiovascular Imaging*, *Archives of Cardiovascular Diseases*
- Associate Editor of *Heart*

Dušan Šćepanović**Belgrade, Serbia****E-mail:** scepovicdu@sbb.rs**UCH Est 1924****TITLE AND/OR DEGREE**

Professor, MD, PhD, BAPS, ESPU

CURRENT POSITION

- Professor of medicine/pediatric surgery and urology, Health management, School of medicine, Belgrade
- President of Managing Board, University Children's Hospital, Belgrade
- President of NGO Serbian Transplant Network, Belgrade
- Alive patient 8 years after Heart Transplantation

SPECIAL AREA OF INTEREST AND EXPERTISE

- Pediatric surgery, urology and oncology
- Organ Transplantation – Bioethics, organisation, legislation and promotion
- Health management and organisation in tertiary level Health care and Hospitals

OTHER ACTIVITIES

- Pediatric urology and kidney transplantation, Guy's & GOS Hosp, London, UK
- Member of first transplant team for kidney transplantation in children (1985)
- Head of University Children's Hospital, Belgrade (1990 – 2001)
- Research fellow in three scientific projects
- Belgrade city Diploma award for the best scientific article (1978), Gold Diploma award, School of medicine Belgrade for students education (1998)
- President of Scientific Team for Organ Transplantation in Serbia (2013)

PROFESSIONAL ACTIVITIES

- Member of the National Society for Pediatric surgery
- Member of the Union of Medical Society of Serbia
- Member of the Serbian Society of Bioethics
- Member of the European Association for Pediatric Surgery
- Member of the British Association for Pediatric Surgery (BAPS)
- Member of European Society of Pediatric Urology (ESPU)

EDITORIAL BOARD AND PUBLICATIONS

- Member of Editorial Board of ACTA CHIRURGICA, Scientific Journal of the University of Belgrade School of medicine
- Author and co – author of six monographs and two books
- Editor in- chief of Annals of University Children's Hospital, Scientific Journal
- Over 200 studies, abstract and articles in national and international journals
- Over 30 invited lectures and seminars at national and international meetings

Petar M. Seferovic

Belgrade, Serbia

E-mail: seferovic@med.bg.ac.rs



TITLE AND/OR DEGREE

Professor, MD, PhD, FACC, FESC

CURRENT POSITION

- Corresponding member of Serbian Academy of Sciences and Arts
- Chair of internal medicine, Belgrade University School of Medicine
- Chairman, Serbian National Committee for Cardiovascular Diseases
- President, Heart Failure Society of Serbia
- Chairman, Committee on Heart failure National Societies (Heart failure Association of ESC)
- Member of the Board, Heart Failure Association of the European Society of Cardiology

OTHER ACTIVITIES

- Director, Department of cardiology, University medical center Belgrade (2011-2013)
- President Elect, Society of Cardiology of Serbia and Montenegro (2004-2006)
- President, Serbian Heart Association (2001-2002)
- Member, European Society of Cardiology (ESC) Task Force in charge of Guidelines "Management of Pericardial Diseases" (2001-2004)
- Member of the Nucleus, ESC WG for on Myocardial and Pericardial Diseases (2001-07)

PROFESSIONAL ACTIVITIES

- Had more than 130 lectures by invitation at international conferences
- Organized more than 25 huge international meetings including Annual meeting of the Heart Failure Association 2012 in Belgrade with 3700 participants (Scientific Chairperson)
- Member, Task Force Diabetes and Cardiovascular disease Guidelines 2013
- Scientific Chairperson, Heart Failure Association Annual Meeting 2012
- Member, Task Force Heart Failure Guidelines 2012
- Member, Task Force on Pericardial Disease and Interventional pericardiology (2010-2012)
- Member, Task Force Peripartum Cardiomyopathy 2010
- Member of the Task Force on Pericardial Diseases, Scientific Council on Cardiomyopathies, International Society and Federation of Cardiology

EDITORIAL BOARD AND PUBLICATIONS

- Author of the 64 manuscripts in leading peer review international journals and three books (science citation index 1176)

Dejan Simeunović**Belgrade, Serbia****E-mail:** dejan.simeunovic@mfub.bg.ac.rs**TITLE AND/OR DEGREE**

Assistant Professor, MD, PhD, FESC

CURRENT POSITION

- Assistant Professor of medicine / Cardiology, School of Medicine, Belgrade
- Clinical and Interventional Cardiologist, Department of Cardiology, Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Heart muscle disease, heart failure
- Pericardial disease
- Pulmonary hypertension
- **Physiology of myocardial membrane transport mechanisms**

OTHER ACTIVITIES

- Greece heart Foundation, Cardiology Fellowship, Interventional cardiology in Athens-Hipocraton centre, Greece (2000)
- Training fellowship of the European Society of Cardiology, Dept. of Internal Medicine-Cardiology, Philipps University, Marburg, Germany (2004)

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the European Society of Cardiology
- Member of the Heart Failure Association of the European Society of Cardiology

EDITORIAL BOARD AND PUBLICATIONS

- 15 *in extenso* papers in international medical journals
- two chapters in international textbook on cardiology
- several chapters in Serbian university textbooks on cardiology and internal medicine
- Over 15 invited lectures and seminars at national and international meetings

Dragan V. Simić**Belgrade, Serbia****E-mail:** dr.dvsimic@gmail.com**TITLE AND/OR DEGREES**

Professor, MD, PhD, FESC

CURRENT POSITION

- Professor of Medicine / Cardiology, Faculty of Medicine, University of Belgrade
- Head, Department of Cardiology III, Division of Cardiology, Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Interventional cardiology, Ischemic heart disease
- Hypertension, Arrhythmias
- Heart failure
- Cardiovascular Therapy, Endothelial function

OTHER ACTIVITIES

- Training in Invasive cardiology, Division of Cardiology, Heinrich-Heine University, Düsseldorf, Germany /2002/
- Training in Hypertension, "Hypertension Summer School" Ystad, Sweden, (2003)
- Training in HF, Valencia, Spain /2013/
- Courses and training in several centers of in Europe and USA
- European Cardiologist Diploma, European Society of Cardiology /2005/

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member, European Society of Hypertension (ESH) /2002/
- Member, Heart Failure Association (HFA) /2006/
- Member, European Society of Heart Rhythm (EHRA) /2011/
- Fellow, European Society of Cardiology (FESC) /2006/

EDITORIAL BOARD AND PUBLICATIONS

- 29 full article papers in leading international medical journals
- reviewer in national scientific journals
- several chapters in Serbian Cardiology and/or Internal medicine University level textbooks
-

Vlada Sretenović

Belgrade, Serbia

E-mail: v_sretenovic@yahoo.com

**TITLE AND/OR DEGREE**

MD, MPH

CURRENT POSITION

- General practitioner, Health care center “Novi Beograd”, Belgrade

SPECIAL AREA OF INTEREST AND EXPERTISE

- Arterial hypertension, ischemic heart disease, heart failure
- Cardiovascular disease prevention
- Primary care and public health integration

OTHER ACTIVITIES

- Trained in family medicine at the Salzburg Duke Seminars, Salzburg, Austria
- Leonardo EURACT Course for Trainers in Family Medicine
- Research fellowship: Health literacy among primary health care patients in Belgrade

PROFESSIONAL ACTIVITIES

- Member of the Serbian Medical Society
- Member of WONCA
- Member of EURACT

PUBLICATIONS

- Articles and abstracts in domestic scientific journals

Goran Stanković**Belgrade, Serbia****E-mail:** gorastan@gmail.com**TITLE AND/OR DEGREE**

Professor, MD, PhD, FESC, FACC

CURRENT POSITION

- Professor of Medicine, Belgrade University Medical School
- Chief of invasive diagnostics and interventional cardiology, Department of cardiology, Clinical Center of Serbia

PROFESSIONAL ACTIVITIES

- Fellow of the European Society of Cardiology (FESC)
- Fellow of the European Association for Percutaneous Coronary Interventions
- Founding member and President of the European Bifurcation Club
- Fellow of the American College of Cardiology (FACC)
- Working Group for Invasive diagnostics and Interventional cardiology of Cardiology Society of Serbia.

OTHER ACTIVITIES

- Award of the City of Belgrade 1988.
- Elite Reviewer for the Journal of the American College of Cardiology (2005-2011)
- Simon Dack Award for Outstanding Scholarship - JACC Journals, from the American College of Cardiology Foundation (2009)
- Director of clinical research and Fellow coordinator, EMO Centro Cuore Columbus and San Raffaele Hospital, Milan, Italy (2001-2003)
- Serbian Ministry of Science and Technology Development, Research grant. Non-invasive and invasive diagnostics and percutaneous treatment of bifurcation lesions (2011- 2015)
- Asian and Japanese Bifurcation Club (2009)
- Consultant in the field of interventional cardiology at the Clinical Centre Ljubljana and Maribor in Slovenia, Clinical Center Rebro Zagreb in Croatia and in Clinical Centre Banja Luka in Bosnia and Herzegovina.

EDITORIAL BOARD AND PUBLICATIONS

- Co-Editor in Chief of the journal "Cardiology International"
- Editorial Boards: Journal of the American College of Cardiology, European Journal of Cardiovascular Medicine (EJCM), JAMA Edition for Serbia and Montenegro, Heart and Blood Vessels – Journal of Cardiology Society of Serbia
- 104 papers published in peer review international journals
- 14 books and papers published in international books and monographs

Branislav S. Stefanović

Belgrade, Serbia

E-mail: bstefan@eunet.rs

**TITLE AND/OR DEGREE**

Professor, MD, PhD, FESC

CURRENT POSITION

- Professor of internal medicine / cardiology, School of Medicine, University of Belgrade
- Head of Coronary Care Unit "C", Cardiology Clinic, Emergency Center, Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Original contribution to the treatment of pulmonary embolism with thrombolytic therapy in highest-risk patients after childbirth or surgical interventions. His work cited in the world's most prestigious journal The New England Journal of Medicine
- Urgent conditions in cardiology, particularly acute coronary syndrome, pulmonary embolism, mechanical complications of acute myocardial infarction, aortic dissection, malignant arrhythmias

OTHER ACTIVITIES

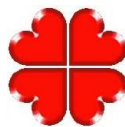
- Secretary of the Department of General Medicine, School of Medicine, Belgrade since 2005.
- Former Secretary of the Cardiology Section, Serbian Medical Society
- Executive Committee member of the Presidency of the Serbian Medical Society in one term
- Several times a member of the organizational and scientific boards of national congress of cardiology
- Invited lecturer at "The First European Spring School Venous Thromboembolism, Sithonia, 2013. organized by the European Society of Cardiology" and International symposium „Contemporary approach in management of STEMI patients”, Ljubljana, 2006.

PROFESSIONAL ACTIVITIES

- Fellow of The European Society of Cardiology, FESC
- National Coordinator for the largest international study in pulmonary embolism (PEITHO). The results of this prestigious study has been published recently in The New England Journal of Medicine, he is one of the authors
- Member of the international EPENET, European project of pulmonary embolism

EDITORIAL BOARD AND PUBLICATIONS

- Meyer G.,..., Stefanovic BS et al. N Engl J Med 2014; 370:1402-1411
- Stefanovic B, et al. Am J Emerg Med 2006;24:502-504

Ivan Stojanović**Belgrade, Serbia****E-mail:** ivan0stojanovic@gmail.com**TITLE AND/OR DEGREE**

Associate Professor, MD, PhD

CURRENT POSITION

- Associate Professor of medicine / surgery, School of Medicine, Belgrade
- Secretary of Cardiac surgery cathedra at School of Medicine, Belgrade
- Cardiac surgeon, consultant, cardiac surgery department, "Dedinje" Cardiovascular Institute

SPECIAL AREA OF INTEREST AND EXPERTISE

- Adult Cardiac surgery
- Mitral valve repair surgery, reconstructive surgery
- Minimally invasive surgery

OTHER ACTIVITIES

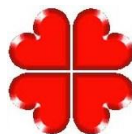
- UCL Mont Godinne, Belgium (1994-1996)
Fellowship in cardiovascular surgery mechanical heart support and heart transplantation at Texas Heart Institute, Houston, Texas, USA (1999-2000)
- HEGP, Paris, France (2001)
- ECFMG certificate (2008)

PROFESSIONAL ACTIVITIES

- Member of the Society of Thoracic Surgeons
- Member of the EACTS

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 1 international scientific journal (listed in current contents), and in 1 domestic scientific journal
- 9 *in extenso* papers in leading international medical journals
- several chapters in Serbian university textbooks on surgery

Nebojša Tasić**Belgrade, Serbia****E-mail:** nebtasa@yahoo.com**TITLE AND/OR DEGREE**

Assoc. Professor, MD, PhD

CURRENT POSITION

- Assoc. Professor of medicine / cardiology, School of Medicine, Belgrade
- Head of Center for Hypertension / teaching unit at Dedinje Cardiovascular Institute
- Interventional cardiologist, consultant, Dedinje Cardiovascular Institute

SPECIAL AREA OF INTEREST AND EXPERTISE

- Hypertension
- Heart failure. Organ transplantation
- Interventional cardiology, IVUS, OCT and cardiovascular imaging
- Myocardial infarction, heart failure, cardiovascular manifestations of diabetes mellitus
- **Clinical pharmacology, endothelial function**

PROFESSIONAL ACTIVITIES

- Fellow of The European Society of Cardiology, FESC
- Fellow of Society for Organ transplantation
- Fellow of the Society for Cardiovascular Prevention

OTHER ACTIVITIES

- Deutsche Herz Zentrum, Berlin (Germany) (2003)
- Medizinische Hochschule Hannover (Germany) (1997)

EDITORIAL BOARD AND PUBLICATIONS

- Reviewer in 3 domestic scientific journals
- 10 *in extenso* papers in leading international medical journals
- several chapters in Serbian university textbooks on cardiology and internal medicine

Bosiljka Vujisić Tešić**Belgrade, Serbia****E-mail:** bosavt@gmail.com**TITLE AND/OR DEGREE**

Professor, MD, PhD, FESC

CURRENT POSITION

- Professor of Cardiology, School of Medicine University of Belgrade
- Head of postgraduate study of ultrasound in clinical medicine
- Head of diagnostic and outpatient department, Clinic of Cardiology, Clinical Center of Serbia
- Chief of Noninvasive cardiology, Clinical Center of Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Clinical cardiology, echocardiography valvular heart disease, heart failure, hemodynamic research, diabetology, arterial hypertension, arrhythmias.

PROFESSIONAL ACTIVITIES

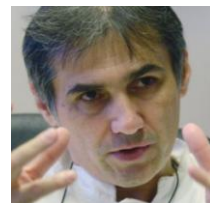
- Member of the National Society of Cardiology
- Fellow European Society of Cardiology (FESC). Member of the Heart Failure Association of the European Society of Cardiology

OTHER ACTIVITIES

- Serbian Medical Society: Secretary of Serbian Cardiology Section (1995 - 1999). President of Serbian Cardiology Section (2005-2007). President of Serbian Ultrasound Section (1998 - 2004). Member of Presidency since 2013.
- President of Working Group for Valvular Heart Disease of the Society of Cardiology of Serbia and Montenegro (1998-2006). President of Working Group of cardiovascular imaging, Cardiology society of Serbia (2008-2012)
- International study Euro Heart Survey on Valvular Heart Disease since 2001
- Research head/ fellow in five scientific projects Ministry of Science and Technology, Republic of Serbia. Award for Scientific Research of the Ministry of Science and Technology of the Republic of Serbia for the 2002/03 year.
- Diploma, thanks and Charter Medical Society, the Association of Cardiologists of Yugoslavia and the European Society of Cardiology

EDITORIAL BOARD AND PUBLICATIONS

- Member of the editorial board of the national journals: "Cardiology," Medical youth" and "Heart and blood vessels"
- Over 570 publications, including 135 articles in national and international journals, and 35 book chapters in Serbian university textbooks on cardiology and internal medicine

Vladan Vukčević**Belgrade, Serbia****E-mail:** vladan.vukcevic@gmail.com**TITLE AND/OR DEGREE**

Assistant Professor, MD, PhD,

CURRENT POSITION

- Assistant Professor of Internal Medicine and Cardiology, University of Nis, Faculty of Medicine
- Assistant Director, Cardiology Clinic, Clinical Center of Serbia, Belgrade, Serbia

SPECIAL AREA OF INTEREST AND EXPERTISE

- Interventional cardiology
- Electrocardiography
- Ischemic heart diseases, heart failure

OTHER ACTIVITIES

- Trained in interventional cardiology at Hypocraton Hospital, Athens, Greece,

PROFESSIONAL ACTIVITIES

- Member of the National Society of Cardiology
- Member of the Union of Medical Society of Serbia
- Member of the European Society of Cardiology
-

EDITORIAL BOARD AND PUBLICATIONS

- Author of three monographs, editor of two books
- Reviewer in 1 international scientific journals (listed in current contents)
- 34 *in extenso* papers in leading international medical journals
- several chapters in international textbooks on cardiology
- several chapters in Serbian university textbooks on cardiology and internal medicine

Biljana Vukobrat**Belgrade, Serbia****E-mail:** biljanavukobrat@yahoo.com**TITLE AND/OR DEGREE**

Medical nurse, Higher education school of professional health studies in Belgrade .

CURRENT POSITION

- Head nurse. Department for noninvasive diagnostics. Cardiology Clinic, CCS,
- Head nurse. Laboratory for echocardiography, Cardiology Clinic, CCS

SPECIAL AREA OF INTEREST AND EXPERTISE

- Heart failure
- Ischemic heart diseases,
- Arrhythmias, valvular heart disease

OTHER ACTIVITIES

- Trained in clinical echocardiography
- Trained in transoesophageal echocardiography

PROFESSIONAL ACTIVITIES

- Member of the Serbian Association of Nurses

Slavoljub Živanović

Belgrade, Serbia



E-mail: slavoljubz3@open.telekom.rs



TITLE AND/OR DEGREE

General medicine specialist, gerontologist

CURRENT POSITION

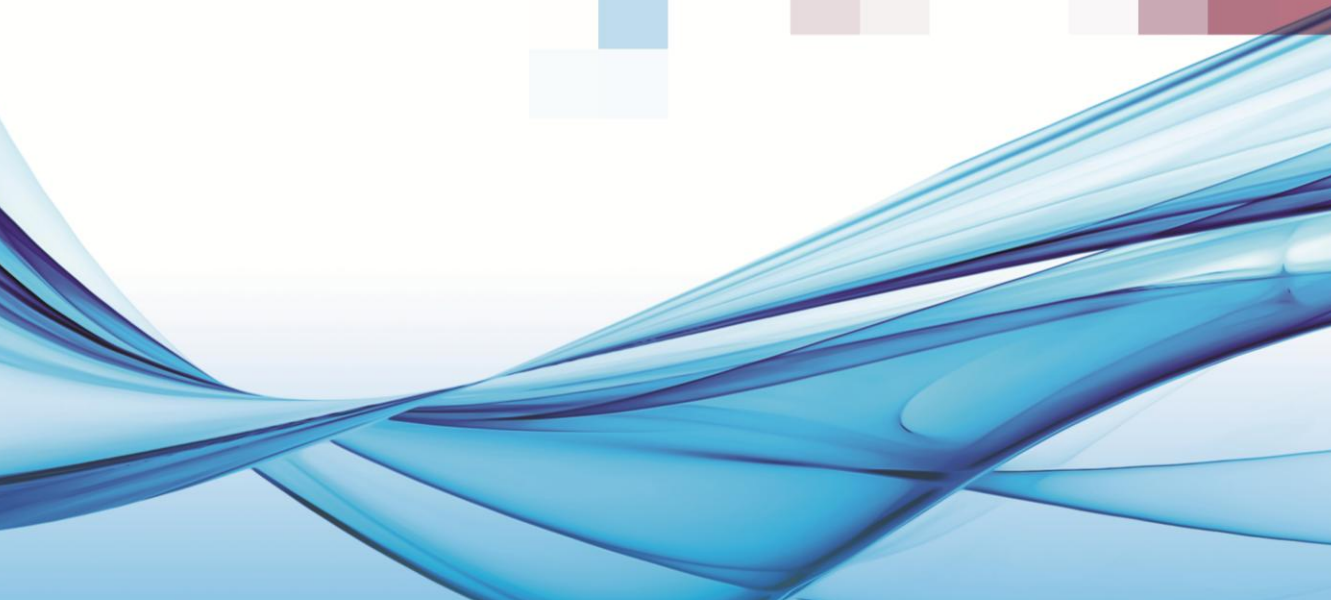
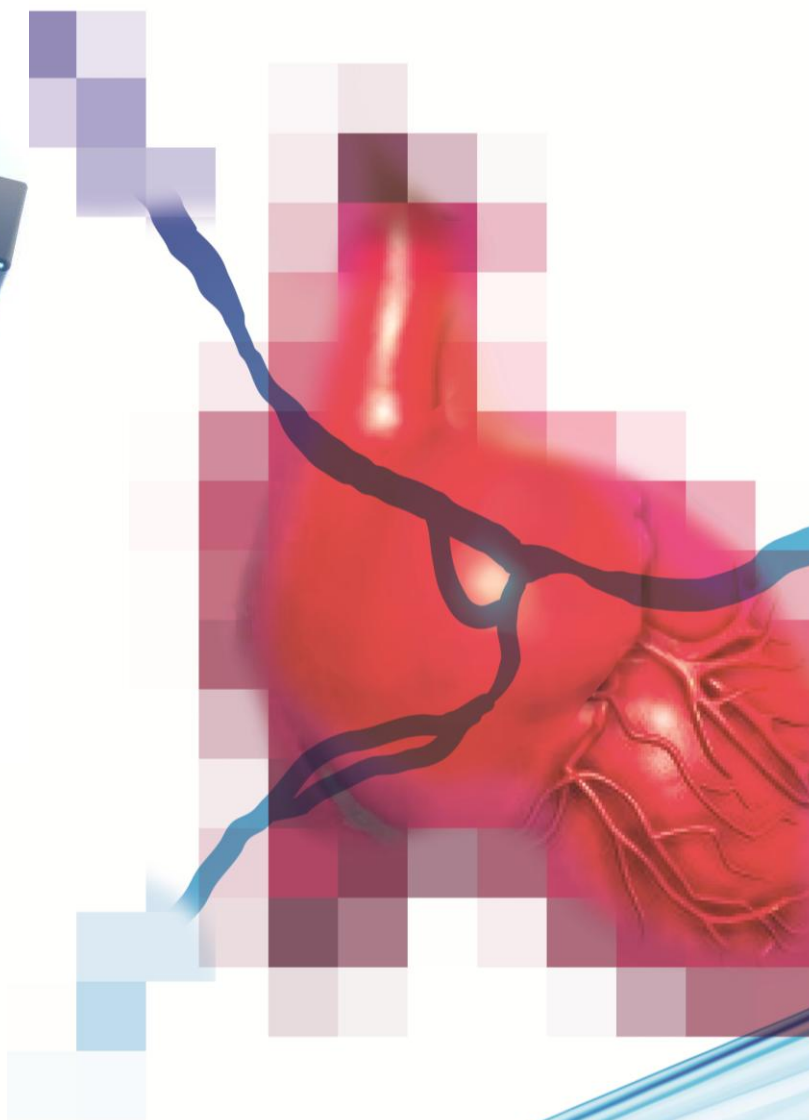
- General medicine specialist, City *Institute* for Emergency Medical Aid, Belgrade

PROFESSIONAL ACTIVITIES

- Mentor in the Institute for emergency medical aid, undergraduate and postgraduate teaching, determined by School of Medicine, University of Belgrade (2007)
- Participation in the training of nurses in Institute of Emergency Belgrade, to CPR and trauma of the *European Resuscitation Council* standards (ERC) (2005)
- Center for CME Sarajevo - American Standards for CPR and treatment of serious injuries.
- Active participant, ERC Congress (2004)
- Active participant, Paris Hesculaep project (2005),
- EURACT Leonardo course for general practitioners (2006), EURACT course evaluation for mentoring in general practice (2009)
- Active participant Seventh Symposium of Emergency Medicine, Kragujevac (2006)
- Active participant, Seville Hesculaep project - Stroke (2006)
- Lecturer at the Department of General Medicine, since 2004
- Organizer and active participant of Second and Third Serbian Congress of General Medicine and Congress AGPFM Southeast Europe
- Symposium on Emergency Medicine, Kladovo - ER approach to abdominal disease and injuries (2012)
- 2013 participant Bled course EURACT course in general family medicine : Learning and teaching about " difficult patients " in general practice - family medicine

EDITORIAL BOARD AND PUBLICATIONS

- 6 published papers in journals cited by CC/SCI





Odabrani abstrakti

Slected abstracts

A-1. CHOOSE THE BEST: MEDICAL THERAPY, PCI OR CABG IN PATIENTS WITH DIABETES**Rade Babić**

Cardiovascular morbidity is a major burden in pts with type 2 diabetes. BARI trial (1996) was first to draw attention to the negative impact of diabetes on coronary revascularization. PTCA did not significantly compromise five-year survival in pts with multivessel disease. However, for treated diabetics, survival was significantly better after CABG than after PTCA.

BARI-2D trial searched for optimal treatment of pts with both type 2 diabetes and stable coronary artery disease (2009). Diabetic pts with stable angina were randomized to either intensive medical therapy or intensive medical therapy plus revascularization with CABG or PCI. At 5 years f-up in the CABG group, the rates of all-case mortality, or MI were significantly lower in the CABG group versus intensive medical therapy alone. There was no significant difference in outcome between intensive medical therapy and intensive medical therapy plus PCI.

The CARDia trial (2010) was the first randomized trial comparing PCI and CABG in pts with diabetes and multivessel disease. Study found neither significant difference in 1-year mortality PCI vs. CABG, nor in 1-year composite clinical endpoint; however, repeat revascularization was more frequent in PCI group. Overall, CARDia trial showed that multivessel PCI is feasible in pts with diabetes, yet CABG remains the preferred method of revascularization.

SYNTAX trial (2009) was comparing CABG to PCI with DES in main stem and multivessel disease. At 12 months CABG was associated with fewer repeat revascularizations compared with DES PCI, but with a higher rate of stroke. In the predefined diabetes cohort, the difference in major adverse cardiac and cerebral events at 1-year follow-up between CABG and PCI groups was doubled, mostly driven by repeat revascularization.

Results at SYNTAX 3-year follow-up (2011) demonstrated a significantly higher rate of MACE in pts treated with PCI. For pts with SYNTAX scores of 33 or greater, MACE rates were lower with CABG (18.5% versus 45.9%, $p < 0.001$ diabetic; 19.8% vs. 30.0%, $p < 0.01$ non-diabetic). Study revealed that diabetes increased MACE rates among PES-treated pts, but had little impact on results after CABG. Latest FREEDOM trial (2011) used contemporary PCI and CABG techniques and ancillary medical therapies to determine whether CABG or PCI with DES is superior in pts with diabetes and multivessel coronary artery disease. After 5 years, in pts with diabetes and advanced coronary artery disease, CABG was superior to PCI.

In conclusion: Low to intermediate risk diabetic pts with stable angina pectoris can be initially managed safely without interventions. Pts with extensive ischemia and more

obstructive disease benefit from revascularization. Diabetic pts with more extensive disease do better with CABG. Repeat coronary revascularization is required more frequently in the PCI group.

A-2. BOLESNIK SA SRČANOM SLABOŠĆU I NORMALNOM EJEKCIONOM FRAKCIJOM: DIABETES, GOJAZNOST I HIPERTENZIJA

Nada Čemerlić Ađić

Uvod: Srčana slabost je kompleksan klinički sindrom sa visokim morbiditetom i mortalitetom i predstavlja veliki zdravstveni problem u svetu. Oko 30–50% bolesnika sa srčanom slabošću imaju normalnu funkciju leve komore. Mnoge studije su pokazale da prevalenca srčane slabosti sa očuvanom ejekcijom frakcijom (HFpEF) raste. Ona je naročito uobičajena kod starijih bolesnika sa komorbiditetima kao što su hipertenzija, dijabetes i gojaznost. Za HFpEF ne postoje veliki dokazi za uspešno lečenje.

Metod: Ovaj rad prikazuje aktuelne preporuke kardioloških udruženja, rezultate istraživanja i kliničkih studija, kao i neke od opcija tretmana ove bolesti.

Rezultati: Trenutno, osnova lečenja HFpEF je kontrola simptoma bolesti, kao i upravljanje osnovnim komorbiditetima: hipertenzijom, dijabetesom, gojaznosti, ishemijom i poremećajima ritma. Terapije su skromno efikasne u olakšavanju simptoma i neefikasne u smanjenju smrtnosti.

Zaključak: Ne postoji koncenzus u kardiološkoj stručnoj javnosti oko etiologije, dijagnoze i tretmana HFpEF. Postoji hitna potreba da se razviju efikasne strategije lečenja za bolesnike sa HFpEF.

A-3. FIVE MOST IMPORTANT BIOMARKERS IN CARDIOLOGY

Marina Deljanin Ilić

Biomarkers are biological parameters that can be objectively measured and quantified as indicators of normal biologic processes, pathogenic processes, or responses to a therapeutic intervention. Cardiac biomarkers provide a powerful approach to understanding the spectrum of cardiovascular diseases with applications in at least 5 areas: screening, diagnosis, prognosis, prediction of disease recurrence, and therapeutic monitoring. They play a pivotal role in the diagnosis, risk stratification, and treatment of patients with chest pain and suspected acute coronary syndrome and those with acute exacerbations of heart failure. Regardless of the purpose for its use, a biomarker will be of

clinical value only if it is: accurate, standardized, reproducible, acceptable to the patient, easy to interpret by clinicians, if it has high sensitivity and high specificity, consistent and cost effective and has an impact on clinical/risk management. The various biologic pathways and physiologic processes of cardiovascular diseases biomarkers represent a host of different including inflammation, remodeling, strain, neurohormonal activation, metabolism and cardiac myocyte injury.

Interest in cardiac biomarkers is on the rise, with an exponential increase in basic, clinical, and translational research focused on heart failure biomarkers during the last decade. In the "TSUNAMI" of data on cardiac biomarkers, it is not easy to mark the most important. However, based on the level of evidence, C-reactive protein, cardiac troponins, creatine kinase MB fraction, natriuretic peptides and albuminuria, have important role in diagnostic evaluation, treatment strategies and prognosis in those with high cardiovascular risk or with established cardiovascular disease. A multi-marker strategy that utilizes the various mechanisms for biomarker release may become the approach used in the future. This technique has shown promise in a recent studies, as suggested by the use of NT-proBNP and CRP. Personalization of cardiac care, may be the future for biomarkers in the milieu of cardiovascular diseases. However, more data comparing this strategy and other meticulously designed head to head trials of individual and panels of markers are needed.

A-4. HIPERTENZIJA I DIJABETES MELITUS: DILEME U TERAPIJI

Siniša Dimković

Arterijska hipertenzija (AH) i dijabetes melitus (DM) spadaju u grupu glavnih faktora rizika za kardiovaskularne bolesti. Njihovo pojedinačno prisustvo višestruko povećava kardiovaskularni morbiditet i mortalitet. Prvenstveno se to odnosi na ishemijsku bolest srca, cerebrovaskularnu bolest i terminalna oštećenja bubrega. To je posledica ne samo njihove velike prevalencije u svetu i Srbiji, već prvenstveno njihovog potencijala da sistemski oštećuju sve organe. Drugi problem koji nas sputava u namerama da držimo ova dva faktora rizika pod kontrolom su rezultati studija koji pokazuju da samo mali broj bolesnika ima dobro regulisane vrednosti krvnog pritiska i glikemije. Udruženost ova dva faktora rizika je velika, a zajednički efekt na ciljne organe je sinergistički a ne aditivni.

Zajedničke osobine AH i DM su: velika prevalencija; povećanje prevalencije; progresivnost bolesti uz hroničnost; često asimptomatske; kasno se otkrivaju; kasno se započinje lečenje; bolesnici nedovoljno edukovani o bolestima; bolesnici često samovoljno prekidaju terapiju. Udruženost nepoželjnih efekata AH i DM u patofiziološkom smislu se javlja na tri nivoa. Prvi nivo je insulinska rezistencija, drugi metabolički sindrom i treći manifestni dijabetes posmatrano sa endokrinološke tačke gledišta.

Pri medikamentnom lečenju AH udruženoj sa DM postavljaju se tri osnovna pitanja: kako pojedini antihipertenzivni lekovi utiču na nastanak novog dijabetesa?, kakav je metabolički profil antihipertenzivnih lekova tj. kako utiču na pogoršanje postojećeg dijabetesa?, kako utiču na već oštećenje ciljne organe?

Tiazidni diuretici ili tiazidima slični diuretici imaju negativan metabolički efekt kako na metabolizam glukoze, tako i na metabolizam lipida. Kako čine osnovu antihipertenzivne terapije smanjenje negativnog metaboličkog efekta može da se postigne smanjenjem doze(bilo pojedinačno ili u okviru fiksnih kombinacija). Kod bolesnika sa uznapredovalom dijabetičkom nefropatijom i terminalnom bolešću bubrega tiazide treba zameniti diureticima Henlejeve petlje. „Stari beta blokatori“ takođe imaju negativan metabolički efekt. Mogu biti zamenjeni bisoprololom ili vazodilatatornim predstavnicima: karvedilol i nebivolol. Inhibitori ACE ili blokatori AT1 receptora predstavljaju lekove prvog izbora u lečenju hipertenzije kod bolesnika sa dijabetes melitusom. To su dokazale velike randomizovane studije. Antagonisti kalcijuma su takođe lekovi prvog izbora. Ostali antihipertenzivni lekovi(alfa blokatori, centralno delujući) su lekovi trećeg izbora. Podela na antihipertenzivne lekove prve, druge tj. treće linije nije samo u tome kako deluju na sniženje vrednosti krvnog pritiska već i kao deluju na protekciju vitalnih organa

Zaključak: zato je osnovni princip u lečenju hipertenzije kod bolesnika sa dijabetes melitusom da pored antihipertenzivnog dejstva imaju i kardioprotektivno, vaskuloprotektivno i renoprotektivno dejstvo.

A-5. PATHOPHYSIOLOGIC TARGETS AS CLINICAL GOALS IN TREATING AHF

Salvatore Di Somma, I. Lalle

Acute heart failure (AHF) is a complex syndrome, arising from a variety of etiologies manifesting as diverse clinical presentations in patients with systolic dysfunction as well as in those with preserved ejection fraction (EF). Various forces are involved in the pathophysiology of AHF, ranging from molecular and immunologic disturbances to ischemic and mechanical dysfunction. Many of these disorders are driven by neurohormones, including the renin-angiotensin-aldosterone system (RAAS), the sympathetic nervous system, antidiuretic hormone (ADH), natriuretic peptides (NPs), and endothelins, that are elevated in AHF, resulting in increased afterload and preload, decreased natriuresis and diuresis, and decreased ventricular contractility.

As widely known, dyspnea, pulmonary rales, and/or peripheral edema are the most common symptoms and clinical signs in patients hospitalized for AHF. For this reason, fluid overload was considered the key-factor in the pathogenesis of symptoms and clinical signs of AHF leading to patient hospitalization.

However, dyspnea and pulmonary rales may not necessarily imply fluid accumulation, but rather, a redistribution of fluid from the peripheral to the pulmonary circulation.

Cotter et al. proposed that fluid accumulation is not the main characteristic but just one of many aspects of AHF presentation and they distinguished 2 main categories of AHF: acutely decompensated heart failure (ADHF) and acute vascular failure (AVF). In fact most of the episodes of AVF occur in the absence of fluid accumulation and as a consequence of increased aortic impedance with increased LV filling pressure, pulmonary venous and capillary pressure, and lung fluid accumulation. This hypothesis is consistent with the rapid onset of vascular AHF, the frequent finding of high blood pressure, and the beneficial effects of vasodilator therapy as compared with high doses of diuretics in some patients. This is the case for most patients admitted in emergency department (ED) with acute pulmonary edema or de novo AHF (ie, AVF), while patients with ADHF have more gradual clinical worsening, characterized by progressive increase in body weight and peripheral edema, due to fluid accumulation. The first-line management for AHF consists of intravenous diuretic therapy, which improves ventricular contraction and decreases heart failure (HF) symptoms via natriuresis and diuresis, however current literature is showing a great attention to the use of vasodilators, especially in the early phases of AHF.

The distinction between ADHF and vascular AHF may be essential for understanding the pathophysiologic target for treatment of AHF.

A-6. KARDIOLOG I LEKAR OPŠTE PRAKSE: USPEŠAN DVOJAC U LEČENJU SRČANE SLABOSTI. SRČANA INSUFICIJENCIJA U ORDINACIJI LEKARA OPŠTE MEDICINE

Marija Glavinić

Srčana insuficijencija se definiše kao klinički sindrom nastao zbog poremećaja strukture ili funkcije srca, što ga onemogućava da zadovolji potrebe perifernih tkiva za kiseonikom. Prevalencija srčane insuficijencije u opštoj populaciji na svetskom nivou iznosi oko 2%. Lekar opšte prakse, sa oko dve hiljade opredeljenih pacijenata, ima u svojoj kartoteci oko četrdeset do pedeset pacijenata sa ovom bolešću, ili u proseku pet novootkrivenih slučajeva godišnje.

Lekar opšte prakse je taj koji prvi dolazi u kontakt sa pacijentom, i koji iz velikog broja tegoba na koje se pacijenti žale treba da izvuče značajne tegobe i usmeri ga ka postavljanju prave dijagnoze. U odnosu na srčanu insuficijenciju, postoje tri zadatka koje lekar opšte prakse treba da ispuni. Prvi, nimalo beznačajan, jeste prevencija srčane insuficijencije. To se pre svega odnosi na identifikaciju faktora rizika za kardiovaskularne bolesti i rad na njihovoj korekciji. Takođe, rana identifikacija i lečenje bolesti koje mogu dovesti do srčane insuficijencije mogu se smatrati prevencijom ove bolesti. Drugi korak je rana dijagnoza

srčane insuficijencije. Ovde su mogućnosti lekara opšte prakse donekle ograničene. Ipak, dobro uzeta anamneza, detaljan klinički pregled i dostupna dijagnostička sredstva daju dobru osnovu za postavljanje sumnje na ovu bolest i njene moguće uzroke. Dostupna dijagnostička sredstva su EKG, RTG srca i pluća i osnovne laboratorijske analize. Ni jedan od pojedinačnih testova nije ni dovoljno specifičan ni senzitivan, ali se njihovim kombinovanjem dolazi do rezultata koji uveliko povećavaju verovatnoću postavljanja dijagnoze srčane insuficijencije.

Veliki hendikep u primarnoj zdravstvenoj zaštiti predstavlja nemogućnost određivanja natriuretskih peptida, te se ovde mogućnosti lekara opšte prakse iscrpljuju. Pacijent se na dalju dijagnostiku upućuje kardiologu, ambulantno ili na hospitalizaciju. Treći korak lekara opšte prakse je prihvatanje i vođenje pacijenta kome je kardiolog dijagnostikovao srčanu insuficijenciju i ordinirao mu određenu terapiju. Upravo mogućnost čestog viđanja pacijenta i stvaranje tzv. partnerskog odnosa, gde lekar i pacijent aktivno sarađuju, doprinosi dobroj kontroli same bolesti, ali i komorbiditeta, i faktora rizika. Takođe, ovaj odnos poverenja omogućava lekaru da ima uvid u komplijansu pacijenta i da minimizira njegove otpore kada je u pitanju redovno uzimanje terapije. Uloga lekara opšte prakse je i da edukuje pacijenata o precipitirajućim faktorima za pogoršanje srčane insuficijencije, i kako da samo pogoršanje prepoznaju.

Zaključak: Zajednički cilj pacijenata, kardiologa i lekara opšte prakse je smanjenje broja hospitalizacija i poboljšanje prognoze pacijenata sa srčanom insuficijencijom, što se može postići saradnjom lekara sa različitih nivoa zdravstvene zaštite.

A-7. NE ZABORAVITE TRIKUSPIDALNU VALVULU: GREŠKA KOJA SE SKUPO PLAĆA

Branislava Ivanović, Marijana Tadić

Trikuspidna regurgitacija (TR) može biti primarna ili sekundarna. Primarna (organska) TR može biti posledica reumatskog oštećenja, miksomatozne izmenjenosti valvule, Ebštajnovе anomalije, endomiokardne fibroze, endokarditisa, karcinoida, traume ili jatrogena nakon implantacije veštačkog srčanog vodiča. Sekundarna (funkcionalna) TR je daleko češća i čini 75% svih TR, a vidjamo je kod disfunkcije leve komore i u levostranim valvularnim manama kao rezultat plućne hipertenzije, ali i u plućnoj hipertenziji zbog hronične plućne bolesti, plućnog tromboembolizma i levo-desnog šanta, kao i u disfunkciji desne komore zbog ishemije ili miokardne bolesti. Primarnu TR po pravilu karakterišu patološke promene na listićima valvule i hordama, dok je za sekundarnu karakteristična promena arhitekture trikuspidnog anulusa bez promena na kuspisima.

Godinama je zanemarivano prisustvo sekundarne TR koja prati valvularnu bolest levog srca zato što se smatralo da korekcija osnovne bolesti dovodi do njenog smanjenja. Tehnološki

napredak u dijagnostici i proceni težine TR učinio je da „zaboravljena valvula“ postane bitna komponenta adekvatnog i sveobuhvatnog lečenja levostranih srčanih mana.

Tehnološki napredak u dijagnostici i proceni težine TR podrazumeva ehokardiografsko određivanje širine vene kontrakte, PISA dijametara, površine regurgitantnog otvora PISA metodom, nalaz reverznog hepatičnog sistolnog protoka, kao i određivanje dijametara desne komore, volumena desne pretkomore, dijametara VCI i njene respiratorne kinetike i sistolnog pritiska u plućnoj arteriji. Kod sekundarnih TR veoma važno mesto ima određivanje anularnog dijametara.

Bez obzira na tehnološki napredak u dijagnostici i proceni težine TR ne postoji mogućnost predviđanja da li će doći do reverzije TR nakon korekcije levostranih valvularnih mana. Zato je hirurška intervencija indikovana kod svih pacijenata sa teškom primarnom ili sekundarnom TR koji se upućuju na hirurški korekciju levostranih srčanih mana. Takodje, intervencija je indikovana i kod pacijenata sa blagom i umerenom sekundarnom TR sa dilatacijom anulusa koji se upućuju na operaciju mitralne ili aortne valvule. Osnovni cilj hirurške intervencije je eliminacija TR i normalizacija veličine trikuspidnog anulusa.

Medikamentno lečenje diureticima kojima se mogu dodati beta blokatori i blokator RAAS se preporučuje pre i nakon intervencije da bi se smanjilo re-modelovanje desne komore i redukovao dijametar trikuspidnog anulusa.

Značajnu funkcionalnu TR ne treba zanemariti zato što ona po pravili ne nestaje nakon zadovoljavajuće hirurške korekcije levostranih valvularnih mana, a reoperacija je povezana sa visokim mortalitetom. Opravdanost minimalno invazivnih ili perkutanih pristupa će dokazati vreme.

A-8. PHARMACOLOGICAL MANAGEMENT OF HEART FAILURE: OPTIMIZING EFFECTIVENESS AND ADHERENCE

Tiny Jaarsma

Despite an increasing body of knowledge on pharmacological management in heart failure patients, the need for effective interventions to improve guideline adherence from the side of the practitioner and patient compliance/adherence to the pharmacological and non-pharmacological treatment is needed. Five dimensions that affect adherence will be presented and discussed consisting of social and economic factors, factors related to the health care system, to the condition of the patient, the therapy and factors related to the patient. Since non-adherence is a multidimensional problem, interventions need to be directed to all factors that are related to adherence in elderly heart failure patients. For example Social and economic strategies include economic and political interventions that

might at least partly, improve adherence by stimulating affordable prices for medication, easy access to health care providers or deal with poverty and illiteracy. Other strategies that are related to the patient include simplification of the medication regimen with a decrease of dose frequency, the reduction of polypharmacy (if possible) and the use of medication dispensing aids. Furthermore, a multidisciplinary approach in a heart failure team is crucial to improve adherence in this vulnerable patient group.

A-9. SRČANA INSUFICIJENCIJA U DIJABETESU: MOLEKULARNI I METABOLIČKI MEHANIZMI

Dorđe Jakovljević

Veliki broj eksperimentalnih i kliničkih studija potvrđuje direktnu povezanost između dijabetes melitus-a (DM) i srčane insuficijencije. Prevalenca srčane insuficijencije kod osoba koje boluju od DM je oko 20% u poređenju sa 4-6% u kontrolnoj populaciji. Povećan rizik za razvoj srčane slabosti kod dijabetičara izražen je pre svega zbog oslabljene metaboličke kontrole dugotrajne hiperglikemije koja je direktno povezana sa srčanom insuficijencijom. Različiti molekularni i metabolički mehanizmi su odgovorni za ovakvu kliničku sliku a kao prekursori razvoja srčane slabosti kod osoba sa dijabetesom indikovani su: 1) arterijska hipertenzija; 2) razvoj ishemijskog oboljenja srca; i 3) dijabetička kardiomiopatije čija je patogeneza nezavisna od arterijske hipertenzije i oboljenja koronarnih arterija. Od molekularnih mehanizama koji se izdvajaju u patogenezi razvoja srčane insuficijencije u dijabetesu izdvajaju se poremećaji membranskog prenosa kalcijuma, izmenjena struktura proteina miokarda i intersticijalna fibroza. Od metaboličkih factora izdvajaju se 1) hiperglikemija, koja dovodi do aktivacije protein-kinaze C izazivajući nekrozu i fibrozu miokarda, povećanja koncentracije slobodnih radikala i oksidanata koji pogoršavaju funkciju endotela smanjujući koncentraciju azot-oksida i izazivajući inflamaciju miokarda stimulacijom poli (ADP-riboza) polimeraze; i 2) rezistencija insulina i hiperinsulinemija, kao glavni etiološki faktori u nastanku hipertrofije leve komore. Hiperglikemija i rezistencija na insulin dovode do povećanja koncentracije slobodnih masnih kiselina i proizvode njihove oksidacije koji deluju depresivno na miokard i dovode do njegove disfunkcije.

Dijabetes melitus je hronično kliničko stanje čija se prevalenca graniči sa epidemijom. Incidenca i prevalenca dijabetes melitusa (DM) se značajno povećavaju tako da prema podacima Svetske Zdravstvene Organizacije oko 350 miliona osoba boluje od diabetesa. Pretpostavlja se da će do 2030 godine smrtnost uzrokovana DM biti udvostručena. Osobe sa dijabetesom imaju značajno povećan rizik da obole od, hipertenzije, i srčane slabosti.

Kardiovaskularna oboljenja su mnogo učestalija kod osoba sa dijabetesom. Dok su hipertenzija i ishemijska oboljenja srca mnogo češće zastupljeni kod dijabetičara, postoji i drugi tip oboljenja srca koji nije povezan sa hipertenzijom niti sa oboljenjem koronarnih

arterija. Takva abnormalnost Dijabetes predstavlja veoma važan i prevalent faktor rizika za srčanu insuficijenciju.

A-10. EKSTRAKARDIJALNI UZROCI AKUTNO NASTALOG GUŠENJA SA BOLOM U GRUDIMA

Dragana Jovanović

Dispnoja je glavni simptom pre svega oboljenja kardiorespiracijskog sistema. Udružena sa bolom u grudnom košu predstavlja urgentno stanje kada je neophodno da se definišu okolnosti pod kojima ona nastaje i da se hitno utvrdi uzrok. Iznenadne ili neočekivane epizode dispnoje u mirovanju sa bolom u toraksu mogu da budu posledica srčanih obolenja i stanja počev od akutne koronarne bolesti, embolije pluća, spontanog pneumotoraksa, akutnog pleuritisa ili pleuro- i bronhopneumonije, različitih gastroenteroloških stanja ili pak anksioznosti i dr. Razlikovanje srčane od plućne dispnoje sa bolom u grudima je lako u većine bolesnika kod kojih je jasno da postoji oboljenje srca i/ili pluća, ali ne i kada koegzistiraju oboljenja ova oba sistema što inače nije redak slučaj. Diferencijalna dijagnoza dispnoje praćene bolom u grudnom košu, kada se govori o ekstrakardijalnim uzrocima obuhvata dakle niz stanja i obolenja.

Opstruktivska bolest disajnih puteva je verovatno najčešći ekstrakardijalni uzrok pri čemu opstrukcija protoku vazduha može da nastane bilo gde od vangrudnih disajnih puteva do malih disajnih puteva na periferiji pluća. Opstrukcija velikih vangrudnih disajnih puteva nastaje akutno, praćena bolom, kao npr. pri aspirisanju hrane ili stranog tela ili kod angioedema glotisa. Akutna opstrukcija velikih disajnih puteva povremeno nastaje zbog tumora ili fibrozne stenoze posle traheotomije ili produžene endotrahejske intubacije. Opstrukcija intratorakasnih puteva može da nastane akutno i intermitentno i može da bude stalna s pogoršanjima tokom respiracijskih infekcija. Akutna intermitentna opstrukcija praćena zviždanjem u grudima tipična je za astmu. Epizode noćne teške paroksizmalne dispnoje jesu karakteristične za popuštanje leve komore, ali iznenadna ortopnoja može da se javi praćena bolom u sredogruđu i u obolelih od astme ili hronične opstrukcije disajnih puteva, kao i u slučaju obostrane paralize dijafragme. Difuzne bolesti plućnog parenhima počev od akutne pneumonije do hroničnih bolesti sa akutnim pogoršanjima kao što su pneumonitisi (npr. akutni radijacioni), i razne fibroze mogu biti uzrok dispnoje sa toraksnim bolom. Gastrointestinalni poremećaji poput gastroezofageolne refluksne bolesti, spazma ezofagusa, peptičkog ulkusa i sl. mogu takođe biti uzrokom akutno nastale dispnoje sa bolom u grudima. Oboljenje zida grudnog koša ili respiracijskih mišića, muskuloskeletni poremećaji kao što su sindrom zida grudnog koša (kostohondritis, kostosternalni sindrom, Tietze-ov sindrom i dr.), teška kifoskolioza, „kokošje“ grudi, kao i slabost i paraliza respiracijskih mišića (neuromišićna oboljenja) mogu da izazovu akutnu dispnoju i torakсни bol. Ponekad je i trauma izvor ovih simptoma. Zajedničko svim

navedenim bolestima i stanjima je neophodnost da se hitno utvrdi uzrok akutno nastale dispnoje i bola u toraksu, i pravovremeno terapijski adekvatno reaguje.

A-11. PET ZLATNIH DIJAGNOSTIČKIH STANDARDA I PET NAJČEŠĆIH ZAMKI U EHOKARDIOGRAFIJI

Ljiljana Jovović

Klinička primena ehokardiografije je izmenila dijagnostiku i lečenje mnogih bolesti a neke od ranije suverenih dijagnostičkih metoda skoro u potpunosti zamenila. Zlatni standard predstavlja pravilno korišćenje konvencionalnih i naprednih ultrazvučnih tehnika koje omogućavaju detaljnu procenu, ne samo anatomske strukture srca, već i značajnih hemodinamskih parametara koje neke druge tehnike nisu u mogućnosti da pruže. Osim toga pravilnom primenom ehokardiografije može se pratiti tok bolesti kao i uspeh lečenja bilo da se radi o nehirurškom (medikamentoznom i/ili perkutanom) ili operativnom.

Pored brojnih mogućnosti ehokardiografija nije u svim bolestima suverena metoda, nekada je dopunska a neke parametre treba posmatrati u funkciji kliničke slike. Osim toga brojne su i zamke u ehokardiografiji. S obzirom da omogućava relativno laku procenu sistolne funkcije leve komore, često se previđa da je moguće da i pored dobre ejeckione frakcije pacijent ima srčano popuštanje zbog poremećene dijastolne disfunkcije. Kod pacijenta sa malim gradijentom pritiska preko izmenjene aortne valvule sa očuvanom sistolnom funkcijom leve komore, previđa se da imaju značajnu aortnu stenozu zbog nekomplijantne komore. Kod pacijenta sa uvećanim levim srčanim šupljinama i atrijalnom fibrilacijom, samo na osnovu eho nalaza, često se lako odustaje od konverzije srčanog ritma, verujući da će biti neuspešna. Plućna hipertenzijom (HAP) kod intrakardijalnih šantova se često izjednačava sa primarnom plućnom hipertenzijom a pacijenti proglašavaju neoperabilnim previđajući da je mehanizam HAP kod ovih grupe pacijenta različit. Kod osoba sa veštačkim srčanim zaliscima i povećanim gradijentom pritiska zanemaruje se činjenica da razlog za to ne mora uvek biti disfunkcija proteze već da se može raditi o disproporciji između velične proteze i pacijenta, kao i da brojna druga stanja, pa čak fiziološka (npr. trudnoća) mogu imati uticaja na izmereni gradijent pritiska.

Neosporna je činjenica da plavilan izbor i primena različitih ehokardiografskih tehnika predstavlja apsolutog pobednika među dijagnostičkim procedurama u kardiologiji ali isto tako ne treba izgubiti iz vida da ehokardiografija iako dostpuna, neivazivna i relativno jeftina dijagnostička metoda, može biti izvor brojnih zabluda koje mogu imati ozbiljne a nekad i fatalne posledice.

A-12. HIRURŠKA REVASKULARIZACIJA JE SUPERIORNA?

Saša Kačar

Do pred samu poslednju dekadu prošlog veka, uspešnost lečenja stabilne angine pectoris je procenjavana poredeći medikamentozni tretman i hiruršku revaskularizaciju srčanog mišića (CABG). Tada je CABG postala zlatni standard lečenja koronarne bolesti, pre svega zahvaljujući odličnim rezultatima. Razvojem interventne kardiologije, CABG postepeno gubi svoje vodeće mesto u revaskularizaciji, međutim, i dalje ostaje zlatni standard, pre svega zahvaljujući boljim dugoročnim rezultatima.

S obzirom na činjenicu da se sve tri metode lečenja ishemijske srčane bolesti paralelno razvijaju, neophodno ih je stalno ponovo komparirati da bi benefit za pacijenta bio što bolji. U eri „evidence-based“ medicine, multicentrične randomizirane studije su najbolji način procenjivanja efekata lečenja. Na osnovu dobijenih rezultata, vodeća svetska udruženja kardiologa daju i preporuke lečenja u datom momentu, koje se s vremena na vreme ažuriraju i menjaju.

Danas je poznato da je kod pacijenata sa stabilnom anginom, a koji imaju oboljenje glavnog stabla leve koronarne arterije, koji imaju višesudovnu koronarnu bolest, kod dijabetičara, kao i kod pacijenata sa oštećenom funkcijom leve komore, hajbolje učiniti hiruršku revaskularizaciju miokarda, ne samo zbog dugoročnog preživljavanja, već i zbog boljeg kvaliteta života, života bez anginoznih tegoba, manjeg broja hospitalizacija i ponavljanih revaskularizacija. Međutim, CABG je i metoda koja je, u najmanju ruku, komparabilna, ako ne i bolja od drugih terapijskih modaliteta i pri lečenju ostalih pacijenata sa koronarnom bolešću, a to su oni sa nižim SYNTAX skorom, sa jednosudovnom ili dvosudovnom bolešću, jer dugoročni benefit je na osnovu rezultata randomiziranih studija isti. Osnovna mana hirurškog lečenja je neophodnost duže hospitalizacije nakon kardiohirurške intervencije nego nakon PCI, sama hirurška trauma, i sklonost pacijenata da odaberu metodu koja je naizgled jednostavnija i brža. Nedostaci multicentričnog analiziranja hirurškog lečenja leže u činjenici da svi kardiohirurški centri, kao i svi kardiohirurzi, nisu isti, te da postoje različite hirurške tehnike, različiti pristupi lečenju, različiti graftovi za premošćavanje aterosklerotskih lezija, a od svega toga i zavise i kratkoročni i dugoročni rezultati lečenja.

Naravno, za određen broj pacijenata, razumna alternativa je i perkutana koronarna intervencija (PCI), a ponekad i medikamentozni tretman, pogotovo kod onih sa jedno ili dvosudovnom bolešću, odnosno kod onih sa nižim SYNTAX skorom. Takođe, kod starijih pacijenata, kao i kod onih sa izraženim komorbiditetom, takva alternativa je više nego opravdana. U svakom slučaju ozbiljan i multidisciplinarni pristup u toku analiziranja svakog pojedinačnog pacijenta je neophodan da bi se obezbedio što veći terapijski benefit.

A-13. IZAZOVI GASTROPROTEKCIJE U DUALNOJ ANTIAGREGACIONOJ I ANTIKOAGULANTNOJ TERAPIJI

Tomica Milosavljević

Krvavljenja u toku terapije oralnim antikoagulantnim lekovima najčešće su porekla GIT (41%) i urinarnog trakta (14%) .

U polovini slučajeva krvarenja u toku OAT su tzv. velika krvarenja. Prosečna dužina hospitalizacije ovih pacijenata je čak 23 dana, a mortalitet je 10% u toku epizode *velikog krvarenja*. Po ponovnom uvođenju OAT jedan od 12 pacijenata će ponovo krvariti . U 58% slučajeva krvareća lezija je peptički ulkus, dok su u 42% slučajeva krvarenja drugog porekla . Upotreba većeg broja ulcerogenih lekova povećava rizik za krvarenje iz GIT. Pokazano je da je rizik za ponovnu epizodu krvarenja moguće smanjiti tako što će INR biti redovno i striktno kontrolisan tako da bude u terapijskom opsegu. Takođe je neophodno pre ponovnog uvođenja OAT endoskopski verifikovati zarastanje ulkusa . Faktori rizika za krvarenje u pacijenata koji započinju ili su na hroničnoj terapiji oralnim antikoagulansima su: prethodno krvarenje iz GIT, starost- osobe starosti iznad 65-70 godina imaju 5 puta veći rizik za krvarenje, istovremena upotreba antiagregacione terapije, kortikosteroida, NSAID, ASA, SSRI, *Helicobacter pylori* infekcija, *ženski pol*, CYP2C9 i/ili VKORC1 genski polimorfizam, veći intenzitet AT (INR > 4.5), nestabilan INR (TTR<60%, TTR-time in therapeutic range), komorbiditet (hipertenzija, bolesti jetre, bubrega, CMP, maligne bolesti). Rizik je kumulativno veći što je prisutno više faktora rizika.

Preporuke za gastroprotekciju u toku terapije oralnim antikoagulansima: optimalna preporuka je sa makar jednim faktorom rizika, stariji od 65 godina, sa nestabilnim INR, u toku prvih 90 dana OAT, a minimalna preporuka je za osobe koje su ranije krvatile ili imale ulkusnu bolest, koje uz OAT koriste još jedan ili više lekova iz grupa NSAID, kortikosteroida, SSRI, ASA, Clopidogrel.

U izboru leka za gastroprotekciju savetuje se isključivo inhibitor protonske pumpe u najmanjoj dovoljnoj dozi, onoliko dugo koliko se uzima OAT.

Što se tiče eradikacije *Helicobacter pylori* infekcije Mastriht IV konsenzus za dijagnostiku i lečenje *Helicobacter pylori* infekcije ne donosi jasne preporuke za pacijente na oralnoj antikoagulantnoj terapiji, ali , jasno definiše da dugotrajna terapija inhibitorom protonske pumpe predstavlja indikaciju za eradikacionu terapiju.

A-14. SRČANA INSUFICIJENCIJA RETKE, SLOŽENE KONGENITALNE MANE ODRASLIH**Zorica Mladenović**

Uvod: Kompleksne urođene mane odraslih su relativno retka obolenja sa visokom stopom morbiditeta i mortaliteta.

Prikaz bolesnika: dvadesetdvogodišnji bolesnik se obratio u našu ustanovu sa znacima i simptomima srčane insuficijencije i elektrokardiografski verifikovanom supraventrikularnom aritmijom. Nakon sprovedene neinvazivne kardiološke dijagnostike zaključeno je da se radi o bolesniku sa Situs Inversus – om. Kardiološki verifikovana transpozicija velikih arterija, "double outlet right ventricle", ventrikularni septalni defekt, perzistentna leva vena cava superior, te infundibularna i valvularna stenoza arterije pulmonalis. Obzirom na izraženu plućnu hipertenziju i Eisenmenger-ov sindrom indikovano je nastavak medikamentoznog lečenja

Zaključak: Prikaz bolesnika ukazuje na značaj detaljne procene složenih kongenitalnih mana odraslih bolesnika usled preciznijeg sagledavanja njihovog funkcionalnog statusa, dalje prognoze, kao i adekvatnog modaliteta lečenja.

A-15. PORUKE ZA PRIMARNU ZDRAVSTVENU ZAŠTITU IZ NOVIH EVROPSKIH PREPORUKA ZA LEČENJE ATRIJALNE FIBRILACIJE**Nebojša Mujović**

Atrijalna fibrilacija (AF) je najčešća dugotrajna (>30 sec) aritmija sa prevalencom 1-2% u opštoj populaciji. Prevalenca AF je viša među muškarcima i povećava se sa starenjem. Prisustvo AF udvostručuje mortalitet i pet puta povećava rizik od ishemijskog šloga. Asimptomatska AF nosi isti rizik od moždanog udara kao i simptomatska aritmija i može voditi kognitivnoj disfunkciji usled kriptogenih centralnih mikroembolizacija. Tromboembolijski rizik paroksizmalne i perzistentne AF je sličan. AF vodi učestalim hospitalizacijama i remeti kvalitet života, povećava rizik od razvoja srčane slabosti. Prisustvo komorbiditeta, kao što su hipertenzija, srčana insuficijencija, valvularna, koronarna i kongenitalna srčana bolest, gojaznost, tireodina disfunkcija, dijabetes, hronična bolest pluća i sleep apneja stvaraju uslove za formiranje supstrata AF. AF se klasifikuje kao paroksizmalna (trajanja <7 dana sa spontanom terminacijom), perzistentna (>7 dana uz neophodnost kardioverzije), dugotrajna perzistentna (>1 god) i permanentna. Paroksizme AF pokreću fokalni trigeri iz plućnih vena, dok je za održavanje perzistentne/permanentne AF neophodan fibrozno-zapaljenski supstrat u levoj pretkomori. Simptome AF potrebno je klasifikovati prema EHRA (European Heart Rhythm Association) klasifikaciji (I-IV), a tromboembolijski rizik u skladu sa CHADS₂/CHA₂DS₂-VAS_c skorom. Specifični uzroci AF mogu

se otkriti ehokardiogramom, testovima tireoidne funkcije i stres-testovima/koronarografijom kod sumnje na koronarnu bolest. Terapija AF usmerena je ka redukciji simptoma i prevenciji komplikacija AF. Za sada, jedino antikoagulantna terapija redukuje mortalitet usled AF. Tahiaritmijom-indukovana kardiomiopatija je najčešći potencijalno reverzibilni uzrok srčane slabosti. Neophodan je individualan pristup u izboru strategije kontrole ritma i kontrole frekvence, jer je potencijalna korist sinusnog ritma ostvarenog antiaritmijom lekovima poništena njihovim sporednim efektima. IC-klasa antiaritmika i sotalol prvi su izbor kod bolesnika bez strukturne bolesti srca, a dronedaron kod bolesnika sa koronarnom bolešću i/ili hipertrofijom miokarda. Za bolesnike sa značajnom srčanom insuficijencijom rezervisan je amjodaron, međutim toksičnost leka ograničava njegovu dugoročnu primenu kod oko 20% bolesnika. Elektrokonverzija perzistentne AF obavezuje na adekvatnu antikoagulaciju (>4 nedelje) antagonistima vitamina-K (INR 2-3) ili novim oralnim antitrombotičnim lekovima (dabigatran/rivaroksaban). Kateter-ablacija AF (radiofrekventnom strujom ili kriobalonom) bazira se na električnoj izolaciji plućnih vena kod paroksizmalne AF i dopunskoj ablaciji supstrata u levoj/desnoj pretkomori kod perzistentne AF. Ablacija je efikasnija u kontroli sinusnog ritma i bezbednija od nastavka medikamentne terapije kod bolesnika sa AF refrakternom na barem jedan antiaritmik I/III klase. Kod permanentne AF neophodna je adekvatna kontrola komorske frekvence u mirovanju (60-80/min) i umerenom naporu (90-115/min) i može se kod većine bolesnika postići blokatorima AV-čvora (beta-blokatori, verapamil i digoksin). Alternativno, može se izvršiti kateter-ablacija AV-spojnice uz implantaciju trajnog pejsmejкера.

A-16. FARMAKOLOŠKA TERAPIJA I PRAĆENJE BOLESNIKA NAKON TRANSPLANTACIJE SRCA I IMPLANTACIJE UREĐAJA ZA MEHANIČKU CIRKULATORNU POTPORU

Emilija M. Nestorović

Jedini efikasan način lečenja pacijenata sa terminalnom srčanom insuficijencijom je transplantacija srca. U svetlu nedovoljne dostupnosti donatorskih srca, uređaji za asistiranu cirkulaciju levog srca sa kontinuiranim protokom (LVAD) postali su standard i opcija izbora u lečenju ovih pacijenata. LVAD-ovi se mogu koristiti u terminalnom stadijumu srčane insuficijencije kao "most" do transplantacije srca, kao definitivna terapija za one koji nisu pogodni kandidati za transplantaciju, kao "most" do donošenja definitivne odluke o lečenju, ili kao "most" do oporavka miokarda. Selekcija pacijenata, vreme transplantacije i implantacije LVAD-a, optimalno intra i postoperativno monitorisanje pacijenta i uređaja, razumevanje implantacione tehnike i prepoznavanje potencijalnih komplikacija, su neophodni elementi od važnosti za uspešno odvijanje programa transplantacije srca i asistirane cirkulacije. Klinika za kardiohirurgiju KC Srbije započela je uspešan program transplantacije srca i mehaničke cirkulatorne potpore. U periodu od jedanaest meseci uradjeno je pet uspešnih operacija transplantacije srca sa periodom praćenja od osam,

sedam, šest, četiri i mesec dana, kao i četiri uspešne implantacije srčanih pumpi (LVAD) sa periodom praćenja od jedanaest i četiri meseca. Kod svih transplantiranih pacijenata je registrovan potpuni oporavak uz odsustvo operativnih komplikacija kao i komplikacija od strane korišćenja imunospresivne terapije (Pronizon, Tacrolimus i Mycophenolate). Pacijenti sa implantiranom mehaničkom cirkulatornom podrškom pokazali su potpuni oporavak NYHA funkcionalne klase, smanjenje dimenzija leve komore i redukciju stepena plućne hipertenzije. Time je otvorena nova era u Srbiji u lečenju terminalne srčane insuficijencije.

A-17. TREATMENT FOCUSED ON INOTROPY: BACK TO THE FUTURE

Zoltán Papp

Acute heart failure (AHF) emerges as a major and growing epidemiological concern with high morbidity and mortality rates. For the pharmacological management of AHF not a single conventional treatment strategy proved convincingly effective in reducing symptoms and improving short- and long-term mortality rates. For this reason, newly developed cardiovascular agents were designed to have different mechanisms of action from those of traditional drugs.

Current therapies in patients with AHF rely on two different strategies. Patients with hypotension, hypoperfusion or shock require inotropic support, while diuretics and vasodilators are recommended in patients with systemic or pulmonary congestion. According to current ESC guidelines cardiotonic agents are recommended in patients with low systolic BP and low cardiac index in the presence of hypoperfusion.

Inotropic agents can be classified by their mechanisms of actions, and the majority of cardiotonic drugs currently in clinical use can be referred to as Ca^{2+} mobilizers acting by increasing the amplitude of the intracellular Ca^{2+} transient. Accordingly, Ca^{2+} mobilizer inotropic agents load the cardiomyocytes with Ca^{2+} to improve cardiac contractility. Hence, this inotropic intervention can be complicated by enhanced myocardial oxygen (O_2) consumption, increased HR and greater risk of arrhythmias contributing to the higher morbidity and mortality rates.

Over the years an alternative approach received increasingly more and more attention: to support the failing human heart by targeting the cardiac sarcomere. This strategy is attractive because it promises to evoke positive inotropy without changes in the Ca^{2+} homeostasis. Direct activation of the cardiac sarcomere may be achieved by either sensitizing the cardiac myofilaments to Ca^{2+} or activating directly the cardiac myosin. Theoretically, clinical use of sarcomere targeted drugs would avoid the disadvantages of Ca^{2+} mobilizers in the therapy of AHF syndrome. This is because pharmacological

modification of the cardiac sarcomere is not expected to interfere with the intracellular Ca^{2+} homeostasis, hence their clinical application should not be associated either with increased risk of arrhythmias or cell injury. Furthermore, the ability of sarcomere activating inotropes exert their effects presumably without considerable changes in myocardial O_2 consumption and thereby they can improve the efficiency of chemo-mechanical energy transduction of the contractile protein machinery. Finally, cardiac sarcomere targeted agents can be effective in the diseased myocardium, where cardiac dysfunction is accompanied by diverse patho-physiological conditions (e.g. acidosis, ischemia-reperfusion injury). This lecture will overview the currently available information on myofilament targeted agents and illustrate their applicability in AHF.

A-18. ULOGA ANTAGONISTA MINERALOKORTIKOIDNIH RECEPTORA U LEČENJU SRČANE INSUFICIJENCIJE POSLE EVROPSKIH PREPORUKA 2012

Milan Pavlović

Krajem devedestih godina studija RALES je pokazala da kod bolesnika sa redukovanom sistolnom funkcijom leve komore i teškom srčanom insuficijencijom (NYHA klasa III-IV) spironolacton popravlja klinički ishod lečenja i smanjuje mortalitet i ponovljene hospitalizacije. U to vreme su beta blokatori počeli da se uvode u terapiju sistolne srčane insuficijencije, i u studiji je samo 11% bolesnika koristilo beta blokatore. Nešto kasnije je selektivni antagonist mineralokortikoidnih receptora elperenon, u studiji EPHESUS, kod bolesnika sa akutnom srčanom insuficijencijom u sklopu akutnog infarkta miokarda, pokazao smanjenje mortaliteta i ponavljanih hospitalizacija. U ovoj studiji je eplerenon davan bolesnicima sa ejekcionom frakcijom manjom od 40% i prisutnim znacima srčane insuficijencije ili sa dijabetom. Eplerenon je ušao u vodiče za lečenje akutnog infarkta miokarda, bolesnika sa sistolnom disfunkcijom leve komore, sa preporukom da se uključi u ranoj fazi hospitalizacije, od trećeg dana i nastavi u terapiji posle otpusta.

Strategija lečenja srčane insuficijencije se promenila u poslednjih 10 godina, i korišćenje ACE inhibitora (ili blokatora angiotenzin receptora) i beta blokatora je postalo standardno u lečenju bolesnika sa sistolnom srčanom insuficijencijom. U novoj situaciji je trebalo proveriti efikasnost i sigurnost antagonista mineralokortikoidnih receptora. Kod bolesnika sa sistolnom srčanom insuficijencijom i ejekcionom frakcijom $\text{EF} < 35\%$ i simptomatskim statusom NYHA II, u studiji EMPHASIS HF, je eplerenon u dozi 25-50 mg postigao redukciju i mortaliteta i smanjenje ponovljenih hospitalizacija. Selektivni antagonist mineralokortikoidnih receptora je tako ušao u preporuke evropskog kardiološkog udruženja 2012 godine, za lečenje bolesnika sa ejekcionom frakcijom leve komore $\leq 35\%$ i blagom srčanom insuficijencijom, pored standardne terapije ACE inhibitorima i beta blokatorima.

Kod uključivanja antagonista minerakloktikoidnih receptora je potrebno voditi računa o vrednosti kalijuma u serumu, jer postoji rizik nastanka hiperkalijemije. Bolesnicima sa kalijumom preko 5.0 mmol/l ne treba uvoditi ove lekove u terapiju srčane insuficijencije. Važno je obratiti pažnju i na bubrežnu funkciju, pre uključivanja leka i vrednost kreatinina preko 220 μ mol /l kod mušaraca, 170 μ mol /l kod žena predstavlja kontraindikaciju za uključivanje leka. U početku terapije antagonistima mineralokortikoidnih receptora treba proveravati nivo kalijuma i kreatinina u serumu, nakon nedelju dana, zatim posle mesec dana i nakon 3 meseca, da bi se izbegli neželjeni učinci leka.

Korišćenje spironolactona u lečenju bolesnika sa srčanom insuficijencijom nije ispitivano u uslovima današnje optimalne terapije, prema aktuelnim preporukama kardioloških udruženja za lečenje sistolne srčane insuficijencije. Nije proveravan učinak spironolaktona ni kod bolesnika sa blagim simptomima srčane insuficijencije (NYHA II), tako da se rezultati RALES studije, kod bolesnika sa teškom srčanom insuficijencijom, ne mogu automatski ekstrapolirati na bolesnike sa lakšim simptomima, u uslovima današnje terapije srčane insuficijencije.

A-19. KOMORSKE ARITMIJE: STRATIFIKACIJA RIZIKA I KLINIČKI ZNAČAJ

Siniša U. Pavlović

Pojmovi stratifikacije rizika i njihovog kliničkog značaja su u malo oblasti toliko blisko uzročno povezani, kao što je to slučaj u komorskim poremećajima srčanog ritma. Pojednostavljeno, klinički značaj komorskih aritmija se ogleda u stepenu rizika koje nose sa sobom, pa se u odnosu na to one dele na aritmije koje ne zahtevaju posebnu terapiju, koje imaju klinički značaj i životnougrožavajuće komorske aritmije. Za svaku od ovih grupa progresija je povezana sa pogoršanjem osnovne bolesti koja je izazvala aritmiju, a krajnja procena rizika se neposredno povezuje za rizik iznenadne srčane smrti. U fenomenu iznenadne srčane smrti, naknadnom analizom je potvrđeno da je u oko 85% slučajeva postojala komorska tahiaritmija. Od tahiaritmija po učestalosti dominiraju komorske tahikardije (75%), od kojih su dve trećine monomorfne, a jedna trećine polimorfne. Preostalih 25% slučajeva iznenadne srčane smrti najčešće je povezano sa primarnim komorskim fibrilacijama. Procenat preživljavanja se kreće između 1 i 4%.

Etiologija je neposredno povezana sa prognozom ovih bolesnika, a ona se može podeliti: (1) na uzroke koji su povezani sa strukturnim oboljenjem srca i (2) bolesti kod kojih ne postoji strukturno srčano oboljenje.

Precizna dijagnostika kardiološkog statusa i pažljiva analiza strukture poremećaja ritma predstavljaju realan pristup ovim bolesnicima, ali je registrovanje poremećaja ritma teži zadatak nego što na prvi pogled izgleda. U tom smislu su primena produženog monitoringa,

primena dvadesetčetvoročasovne dinamske elektrokardiografije i registratora događaja poznatih kao „loop-recorder“, povećali mogućnost elektrokardiografske verifikacije poremećaja ritma. Takođe, na raspolaganju su nam i invazivne metode i provokacioni testovi.

Procena kliničkog rizika i neposredne ugroženosti ovih pacijenata predstavlja osnovu terapijske odluke. Najznačajnije je primeniti pristup otklanjanja uzroka, kada je to moguće, i ublažavanje posledice, kada korekcija uzroka nije moguća. Obzirom na mogućnost neposredne životne ugroženosti, poslednjih decenija se primenjuje ugradnja implantabilnog kardioverter defibrilatora kao dominantnog pristupa u otklanjanju neposredne životne ugroženosti.

A-20. DISEKCIJA AORTE: PODMUKLA I OPASNA

Jovan Peruničić

Akutna disekcija aorte (ADA) je retko ali visoko letalno oboljenje koje se može prezentovati šarolikim ili atipičnom simptomima i znacima koji se često viđaju i kod drugih, znatno češćih visoko rizičnih bolesti. Bez obzira na dobru obuku i kontinuiranu edukaciju, disekcija aorte se ne dijagnostikuje pri inicijalnoj prezentaciji kod 15-43% slučajeva. Štaviše, neki eksperti koji se bave ADA tvrde da su teškoće i kašnjenje u postavljanju dijagnoze tako česti da to postaje uobičajeno za ovu bolest čak i kod najiskusnijih lekara. Samo jedna četvrtina pacijenata sa ADA se prezentuje kombinacijom klasičnih karakteristika a jedan od 25 pacijenata nema nijedan klasični simptom ili znak tako da se često kaže da je ADA medicinski kameleon.

Brza dijagnostika i adekvatna terapija je od prvorazrednog značaja, jer mortalitet kod nelečene akutne disekcije aorte iznosi 1-2% u prvih 24-48 sati od početka simptoma. Na ovo oboljenje uvek treba posumnjati kod bolesnika sa naglo nastalim bolom u grudima i/ili leđima koji je najjači na početku, kod postojanja faktora rizika za ovo oboljenje i karakterističnih fizikalnih znakova kao što su odсутni ili smanjeni arterijski pulsevi, znaci malperfuzije organa ili akutna aortna insuficijencija. Rentgengrafija grudnog koša je korisna metoda ali nalaz može biti normalan u 10-20% pacijenata sa ADA a transtoraknom ehokardiografijom se ne može isključiti ADA.

CT aortografija sa kontrastom se danas najčešće koristi u dijagnostici i klasifikaciji ADA. Visoku senzitivnost i specifičnost u dijagnostici ADA ima i TEE a izbor dijagnostičke metode zavisi od stanja pacijenta, dostupnosti tehnike i obučenosti operatera. Najnovije preporuke izdvajaju visoko rizičnu grupu pacijenata uz vrlo koristan dijagnostički i terapijski algoritam. Inicijalno lečenje dijagnostikovane ili vrlo suspektne ADA je fokusirano na agresivnu kontrolu bola, upotrebu brzo delujućih lekova za smanjenje srčane

frekvencije na oko 60 u minuti i sistolnog krvnog pritiska od 100 -120 mHg uz neophodnu hitnu hiruršku evaluaciju.

A-21. DEBATA: LEČENJE STABILNE ANGINE PECTORIS-KOME LEKOVI, KOME REVASKULARIZACIJA? KADA SU SAMO LEKOVI DOVOLJNI?

Milan Petrović

Pojava bola u grudima na prvom mestu podrazumeva koronarnu bolest, koja klinički može različito da se manifestuje. Stabilna angina pectoris (SAP) je široko rasprostranjeni oblik koronarne bolesti sa značajnim implikacijama po zdravlje stanovništva. Optimalni tretman SAP je još uvek kontraverzan. I pored široko rasprostranjene primene perkutanih koronarnih intervencija (PCI) i uvođenja novih oblika medikamentne terapije, još uvek ne postoji na dokazima zasnovan najbolji izbor za lečenje SAP. Stalno je prisutna dilema, da li je za lečenje SAP bolja kombinacija PCI + medikamentna terapija ili samo optimalna medikamentna terapija (OMT). Pole 2000g. publikovano je više studija koje se bave ovim problemom: RITA-2, TIME i MASS-II studija. Pravu pometnju u dosadašnjoj praksi lečenja SAP izazvali su rezultati COURAGE studije (2007 g) i BARI-2D studije. CAURAGE studija obuhvata 2287 pts sa najmanje jednom značajno suženom koronarnom arterijom. Polovina pacijenata lečena je sa PCI + OMT, druga polovina samo sa OMT. Primarni cilj studije bili su svi uzroci mortaliteta ili nefatalni IM. Nakon prosečnog praćenja od 4g (2.5-7.0 g), studija je pokazala da kod SAP nema jasne koristi od PCI u odnosu na tretman sa OMT u pogledu mortaliteta, nefatalnog infarkta miokarda i ukupnih kardiovaskularnih događaja. BARI-2D studija pratila je osobe sa diabetesom tip 2 i SAP, koji su lečeni sa CABG ili PCI u kombinaciji sa OMT nasuprot samo OMT. Primarni cilj su bili svi uzroci mortaliteta, sekundarni cilj veliki CV događaji: infarkt miokarda ili šlog.. Između dveju grupa pts nije bilo statistički značajne razlike u posmatranim ciljevima praćenja. Meta analiza 12 randomizovanih studija koja obuhvata 7182 pts sa SAP (Pursnani S et al 2012) poredi primenu PCI nasuprot OMT: primarni cilj studije su svi uzroci mortaliteta; sekundarni cilj: kardiovaskularna smrt, nefatalni IM, revaskularizacija i period bez anginoznih bolova. Pokazalo se da kod PCI ne postoji signifikantno poboljšanje posmatranih ciljeva, osim oslobađanja od anginoznih bolova.

Navedene studije pokazale su da pacijenti sa SAP imaju mogućnost izbora za lečenje. Dva su razloga za prihvatanje lečenja: osećati se bolje i živeti duže. Ako pacijent nema anginozne bolove, PCI otvaranje koronarne arterije ne čini da se oseća bolje. A COURAGE studija je pokazala da se posle PCI ne živi ni duže. Sa OMT postižu se dva cilja: pacijent se oslobađa anginoznog bola i sprečava novi CV događaj. PCI rešava problem samo lokalno. Potrebna je sistemska borba protiv ateroskleroze primenom lekova i promenom stila života. Prethodne studije podržale su inicijelno konzervativni tretman u lečenju SAP. Ipak izbor lečenja za

svakog pacijenta je individualan, kada PCI i OMT mogu biti komplementarne metode lečenja.

A-22. ASIMPTOMATSKE KOMORSKE TAHIARITMIJE – DIJAGNOZA I PROGNOСТИČKE IMPLIKACIJE

Tatjana Potpara

Asimptomatske pojedinačne ventrikularne ekstrasistole (VES) mogu se elektrokardiografski dokumentovati kod približno 1% odraslih osoba bez poznate strukturne srčane bolesti, a primenom 24-48-satne ambulantne elektrokardiografije (holter-monitoring), asimptomatske VES se mogu zabeležiti kod >50% takvih osoba. Učestalost VES raste sa godinama života i pojavom strukturnih srčanih oboljenja. Kratkotrajne ventrikularne tahikardije (3-5 ili više uzastopnih QRS kompleksa koji polaze ispod AV čvora, sa RR intervalom <600msec, trajanja do 30sec) se mogu pojaviti u nizu različitih kliničkih okolnosti, počev od asimptomatskih, naizgled zdravih osoba do bolesnika sa uznapredovalim strukturnim srčanim oboljenjima.

Prognostički značaj VES i kratkotrajnih komorskih tahikardija kod osoba bez srčanog oboljenja nije jasno definisan. Pojava komorskih tahiaritmija tokom fizičke aktivnosti, a naročito u fazi odmora, ukazuje na povećan rizik od kardiovaskularnog mortaliteta tokom narednih godina. Nasuprot tome, komorske ekstrasistole i kratkotrajna komorska tahikardija kod dobro utreniranih sportista nemaju obavezno negativne prognostičke implikacije, ukoliko se mogu suprimirati fizičkom aktivnošću. U akutnom koronarnom sindromu bez ST elevacije, pojava komorske tahiaritmije posle 48 sati od prijema označava povećan rizik od srčane i naprasne smrti, posebno ako je i dalje prisutna ishemija miokarda. Komorske tahiaritmije koje se jave posle prvih 24 sata akutnog infarkta miokarda takođe imaju nepovoljne prognostičke implikacije. Sa druge strane, kod bolesnika koji su ranije preboleli infarkt miokarda i lečeni su reperfuzijom i beta blokatorima, pojava VES ili kratkotrajne komorske tahikardije nije nezavisni prognostički marker dugoročnog mortaliteta, već dugoročna prognoza više zavisi od sistolne funkcije leve komore. Kod bolesnika sa hipertrofičnom kardiopatijom, kao i kod bolesnika sa kongenitalnim aritmogenim sindromima (genetske kanalopatije) kratkotrajna komorska tahikardija ima nepovoljan prognostički značaj, dok kod obolelih od dilatativne kardiomiopatije i kod bolesnika sa srčanom insuficijencijom usled ishemijske bolesti srca nezavisni prognostički značaj kratkotrajne komorske tahikardije nije potvrđen.

Imajući u vidu veoma različite okolnosti u kojima se može javiti asimptomatska komorska tahiaritmija, sa različitim prognostičkim implikacijama, neophodno je među prividno zdravim osobama sa asimptomatskim komorskim tahiaritmijama identifikovati one kod kojih je pojava aritmije prvi znak subkliničke srčane bolesti. Kod bolesnika sa već poznatim

srčanim oboljenjem, neophodno je aktivno lečenje osnovne srčane bolesti, kao i procena rizika od kardiovaskularne i iznenadne srčane smrti radi primene odgovarajuće preventivne terapije (defibrilator). Imajući u vidu da česte pojedinačne VES (npr. >10000/24h) mogu posle nekog vremena uzrokovati dilataciju leve komore sa pojavom sistolne disfunkcije (takozvana tahikardiomiopatija) i kod osoba bez strukturne srčane bolesti, u takvim okolnostima treba pored farmakološke terapije razmotriti i lečenje komorske aritmije ablacijom.

A-23. NOVI ORALNI ANTIKOAGULANTNI LEKOVI: EFIKASNOST, PREDNOSTI I SPOREDNI EFEKTI

Tatjana Potpara

Oralna antikoagulantna terapija antagonistima vitamina K (varfarin, acenokumarol, fenpropakumon) do skora je bila jedino terapijsko rešenje za bolesnike kojima je potrebna dugoročna antikoagulantna terapija. Antagonisti vitamina K, su po svojoj efikasnosti, u samom vrhu farmakoterapije (na primer, rizik od tromboembolijskih komplikacija povezanih sa atrijskom fibrilacijom smanjuju za 67% u odnosu na placebo), ali je dugoročna primena ovih lekova problematična zbog niza ograničavajućih činilaca (antikoagulantni efekat ovih lekova značajno zavisi od interakcija sa hranom i drugim lekovima, individualnih razlika u enzimskom sistemu jetre itd.) koji nameću neophodnost redovne laboratorijske kontrole antikoagulantnog efekta, što značajno remeti kvalitet života mnogih bolesnika i vremenom neretko dovodi do odustajanja od dalje terapije.

'Novi' oralni antikoagulantni lekovi (dabigatran, rivaroxaban, apixaban, edoxaban) imaju drugačiji, selektivniji mehanizam dejstva u odnosu na antagoniste vitamina K (dabigatran je direktni inhibitor trombina, a ostali inhibiraju aktivirani faktor X). Antikoagulantni efekat ovih lekova je proporcionalan dozi, stabilan (vrlo je malo klinički značajnih interakcija sa drugim lekovima, a nema interakcija sa hranom) i nema potrebe da se rutinski kontroliše intenzitet antikoagulantnog dejstva. Ovi lekovi se primenjuju u fiksnim dnevnim dozama, tako da je dugoročna terapija mnogo jednostavnija u poređenju sa antagonistima vitamina K. Efikasnost 'novih' antikoagulantnih lekova je ista ili veća u poređenju sa antagonistima vitamina K, a glavna prednost ovih lekova ogleda se u značajno većoj bezbednosti u odnosu na rizik od najtežih komplikacija oralne antikoagulantne terapije – intrakranijalnih hemoragija, koji je sa 'novim' lekovima upola manji u poređenju sa antagonistima vitamina K. Najvažnija mera opreza tokom terapije 'novim' oralnim antikoagulantnim lekovima jeste povremena kontrola bubrežne funkcije, jer je primena ovih lekova kontraindikovana kod bolesnika sa značajno sniženim klirensom kreatinina ($\text{CrCl} < 30 \text{ mL/min}$ – dabigatran, $\text{CrCl} < 15 \text{ mL/min}$ – rivaroxaban i apixaban).

'Novi' oralni antikoagulansi imaju vrlo malo klinički značajnih sporednih dejstava. Dabigatran može uzrokovati dispepsiju, ukoliko se uzima na prazan stomak (zbog toga se preporučuje uzimanje leka sa čašom vode ili u toku obroka, a ukoliko ova mera ne otkloni tegobe mogu se primeniti inhibitori protonske pumpe). Sa pojavom direktnih oralnih inhibitora faktora koagulacije, dugoročna oralna antikoagulantna terapija je nesumnjivo postala bezbednija i jednostavnija.

A-24. BOLESNIK KOJI IMA JAKO GUŠENJE: AKUTNA SRČANA INSUFICIJENCIJA

Mira Ranković

Uvod: Dispneja (lat:dyspnoe) :glad za vazduhom,teškoća u disanju,je nedostatak vazduha praćen subjektivnim osećajem otežanog disanja,kao posledica nesklada između ventilacije i potrebe za vazduhom.Pacijenti ga najčešće opisuju kao: osećaj da će da se uguše, to im je poslednji udah, da ne mogu da uzmu dovoljno vazduha.

Cilj rada: Značaj medicinskih sestara/tehničara u lečenju bolesnika sa srčanom slabošću.

Sestrinske intervencije: Prijem pacijenata koji mora biti brz i organizovan radi ugroženih vitalnih funkcija. Smeštaj bolesnika:omogućiti mu da zauzme položaj koji mu najviše odgovara, pravilnim pozicioniranjem postiže se najbolja respiratorna funkcija. Izbegavati nepotrebne aktivnosti. Pokušati umiriti anksioznog pacijenta uspostavljanjem odgovarajuće komunikacije. Pružiti mu podršku i ohrabrenje ljubaznim i profesionalnim stavom. Postavljati mu tako formulisana pitanja na koje može davati kratke odgovore. Terapija kiseonikom (po nalogu lekara). Uspostavljanje dve venske linije i uzimanje krvi za hitne i standardne laboratorijske analize. Monitoring bolesnika trba započeti što je moguće ranije.Osnovni monitoring uključuje merenje telesne temperature, broja respiracija, pulsa, arteriskog krvnog pritiska, satne diureze i seriskog ekg-a. Sve opservacije moraju biti precizno i vremenski tačno ubeležene u pacijentovu listu. U slučaju plasiranja invazivnog monitoringa (intraarteriske kanile, centralnog venskog katetera i plućnog arteriskog katetera) sestra asistira doktoru u toku procedure i obezbeđuje sve tehničke uslove za precizno i verodostojno merenje hemodinamskih parametara. Aplikacija i administracija lekova uz praćenje terapiskog odgovora. Procena bilansa tečnosti,uključujući unos i gubitke,sa ciljem optimilizacije volumnog statusa. Praćenje i prepoznavanje stepena perifernih edema.

Zaključak: Dispnea je za bolesnika veoma bolno i zastrašujuće iskustvo i kao takvo zahteva veoma pažljivu i sveobuhvatnu negu od strane sestre,a sve u cilju što brže

A-25.TRANSPLANTACIJA SRCA I UREĐAJI ZA MEHANIČKU CIRKULATORNU POTPORU: KOME I KADA?

Miljko Ristić

Ograničen broj donora i visoki troškovi srčane transplantacije čine ovu metodu lečenja rezervisanom za bolesnike koji nemaju velike šanse za preživljavanje a kojima se posle transplantacije ili ugradnje uređaja za mehaničku potporu cirkulacije omogućava povratak u potpuno aktivan život. Zbog toga bolesnik mora da bude mentalno očuvan i komplijantan i to pod uslovom da srčana insuficijencija nije izazvala teška ili definitivna oštećenja drugih organa. Preživljavanje bolesnika sa transplantiranim srcem u prvoj godini iznosi 80%, u pet 60-70% i deset 50%. Na klinici za kardiohirurgiju Kliničkog centra Srbije prva transplantacija srca urađena je 21.9.2013.godine, nakon čega je do danas urađeno još 5 transplantacija, sa operativnim mortalitetom od 1/6. U istom periodu ugrađeno je, takođe, 5 uređaja za mehaničku cirkulatornu potporu, uz mortalitet 1/5. Trenutak definitivne odluke o transplantaciji srca je težak i zahteva detaljnu evaluaciju bolesti i verovatnoću preživljavanja u narednih 6-12 meseci. EF ispod 15-20% i poremećaji ritma ventrikularnog tipa ukazuju na verovatnoću preživljavanja ovih bolesnika manju od 50% za godinu dana, u slučaju nastavka isključivo medikamentoznog lečenja. Indikacije za transplantaciju srca su: procenjeno vreme preživljavanja bez transplantacije kraće od 6-12 meseci, terminalna srčana insuficijencija rezistentna na maksimalnu medikamentoznu terapiju, koronarna bolest srca koja nije pogodna ni za jednu revaskularizacionu metodu i maligne ventrikularne aritmije. Kontraindikacije za srčanu transplantaciju su različite, maligne bolesti, hronične infekcije, skorašnja plućna embolija, terminalna bubrežna ili hepatična insuficijencija. Pre nego što se preduzme teško i skupoceno ispitivanje kandidata za transplantaciju, prioritet ima evaluacija plućne hipertenzije, jer desno srce donora nije pripremljeno da se bori protiv povišene plućne rezistencije. Plućna vaskularna rezistencija od 5-6 Woodovih jedinica smatra se apsolutnom kontraindikacijom za operaciju. Kao i kod transfuzija krvi, kod transplantacije srca, mora biti poštovan ABO sistem krvnih grupa. Ispitivanje citotoksičnih antitela HLA sistema je važno jer limfocitarni "skrining" pozitivan 10%, ukazuje na mogućnost "cross-matcha" specifičnog između davaoca i primaoca. Poseban akcenat se mora staviti na odnos površine tela donora i primaoca, koji ne sme da bude ispod 20% one koju ima primalac. Sredstva mehaničke asistiranice cirkulacije, često se koriste kao most ka transplantaciji srca u period čekanja odgovarajućeg donora ali i kao definitivni način lečenja srčane insuficijencije. Okolina u kojoj bolesnik živi je poseban faktor koji se mora uzeti u obzir prilikom odabira kandidata za transplantaciju srca. Porodica, socijalne prilike, geografska udaljenost, kao i psihofizičko stanje bolesnika imaju bitnu ulogu u postoperativnom tretmanu bolesnika, koji podrazumeva svakodnevno uzimanje lekova i adekvatnu vezu sa lekarom u slučaju pojave komplikacija.

A-26. DIAGNOSTIC APPROACH TO AORTIC STENOSIS: THE NEW CRITERIA AND THEIR PREDICTIVE VALUE

Raphael Rosenhek

Aortic stenosis severity encompasses a continuous spectrum of disease, ranging from aortic sclerosis without hemodynamic obstruction to very severe aortic stenosis. In context, the measures of disease severity need to be viewed in a continuous way. Definition of grades of severity of aortic stenosis is consequently to some extent arbitrary. In clinical practice, peak transaortic jet velocities, mean gradients and valve areas (calculated with the continuity equation) should be considered and the findings are ideally concordant. The prognostic importance of peak aortic jet velocity across the whole spectrum of aortic stenosis and even beyond the threshold of severe stenosis has been demonstrated. It should be recognized that in clinical practice, a relatively large variability in aortic valve area measurements for a given peak aortic jet velocity has been reported.

Because of the poor outcome of symptomatic patients with severe aortic stenosis, the threshold characterizing severe aortic stenosis is the most relevant, clinically. A valve area $<1.0 \text{ cm}^2$ and a peak aortic jet velocity $>4.0 \text{ m/s}$ define severe aortic stenosis according to both, the ESC and the ACC/AHA guidelines. Patient stature should also be considered. An aortic valve area indexed to body surface area of $<0.6 \text{ cm}^2/\text{m}^2$, has been proposed as a threshold for severe aortic stenosis. However, this value may not be valid in tall and very obese or very slim and small patients in whom the indexed valve area may lead to a misinterpretation of true aortic stenosis severity.

Recent prognostic data, seem to justify the definition of very severe stenosis, based on a peak aortic jet velocity $>5 \text{ m/s}$.

Risk stratification is of utmost importance in asymptomatic patients and peak aortic jet velocity, aortic valve calcification and hemodynamic progression are important predictors of outcome.

An essential criterion indicating the need for aortic valve replacement surgery is the onset of symptoms since the outcome is very poor after this moment with a very high mortality. Earlier elective valve replacement surgery may be useful in selected patients who are still asymptomatic. In this decision-making process, pros (avoidance of waiting lists for surgery, lower operative risk for less symptomatic patients) and cons (immediate surgical risk, prosthesis-associated morbidity and mortality) have to be individually weighed and echocardiography allows the identification of high-risk patients having a high likelihood of becoming symptomatic in the short term. In addition risk-stratification permits to optimize the scheduling of follow-up intervals in these patients.

While transaortic jet velocities correlate with aortic stenosis severity, they have the potential limitation of being flow-dependent. Thus, they may be lower than expected when stroke volume is reduced. In the presence of left ventricular dysfunction peak jet velocities smaller than 4.0 m/s therefore do not systematically rule out the presence of significant aortic stenosis and the measurements need to be interpreted with caution.

Some patients with impaired left ventricular function may still present with elevated transaortic gradients and small, calculated valve areas corresponding to severe aortic stenosis. Even patients with markedly depressed ventricular function may have preserved gradients. In this setting the quantification of stenosis severity may thus be unequivocal. Low-flow low-gradient aortic stenosis is characterized by a small calculated aortic valve area corresponding to severe stenosis ($<1.0 \text{ cm}^2$) and a low transvalvular gradient (mean gradient smaller than 30 to 40 mmHg) in the presence of a depressed ventricular function. This situation may either be the consequence of true severe aortic stenosis with consequently depressed left ventricular function or of moderate aortic stenosis with an independent reason of left ventricular dysfunction such as ischemic heart disease or a primary cardiomyopathy. From a diagnostic point of view, the workup of these patients may be challenging. A dobutamine stress echocardiography may provide additional information and help to differentiate between these two entities and guide decision-making.

It allows identification of the presence or absence of contractile reserve, which is defined as an increase in stroke volume $\geq 20\%$ during stress. In the presence of a contractile reserve, differential diagnosis between true severe and relative, non-severe stenosis may be possible.

In patients with true severe aortic stenosis, a significant increase in transaortic gradients with increasing flow is observed whereas the calculated valve area remains small.

Additional information permitting to differentiate between these true severe and relative aortic stenosis can be obtained by assessing the extent of aortic valve calcification – extensive calcification being suggestive of severe stenosis. Furthermore planimetry may be of help in selected cases.

When these patients have a contractile reserve and true severe aortic stenosis, aortic valve replacement is associated with an improved long-term outcome, although the operative risk is non-negligible

Recently the concept of “paradoxical low flow aortic stenosis” has been proposed. It is defined by a small calculated valve area, while the measured transaortic gradients correspond to a non-severe stenosis. In contrast to low-flow low-gradient aortic stenosis, these patients have a normal ejection fraction, but nevertheless a reduced stroke volume (a

stroke volume index of $\leq 35 \text{ ml/m}^2$ has been proposed to define a low stroke volume). This situation may be observed in the presence of a severely hypertrophied left ventricle with a small left ventricular cavity, leading to a reduced stroke volume. Prior to diagnosing paradoxical low flow aortic stenosis, it is important to rule out both, an underestimation of peak aortic jet velocity and a potential measurement error of left ventricular outflow tract area, both of which may also lead to a similar constellation of measurements. Some patients presenting with paradoxical low flow aortic stenosis may benefit from surgery, but careful individualized decision-making is warranted.

A-27. KVALITET ŽIVOTA PRE I POSLE TRANSPLANTACIJE SRCA – ŽIVOTNA PRIČA I ISKUSTVO PACIJENTA I PROFESORA

Dušan Šćepanović

Srčana slabost (SS) je strašna bolest koja se u terminalnom stadijumu sigurno završava smrću osim ako se ne preduzme operativno lečenje u smislu mehaničke cirkulatorne potpore ili transplantacije srca. Smrt nastupa relativno brzo i po stepenu mortaliteta samo se karcinomi pankreasa i želuca brže i u većem procentu završavaju letalno od SS. Obzirom da su KVB u adultnom periodu faktor broj 1 kao uzrok smrti (preko 52%), jasno je da je SS odavno poprimila epidemijske razmere i da kao takva nije samo medicinski, već i društveni problem. SS se „regrutuje“ na širokoj bazi pacijenata sa veoma „potcenjenim“ simptomima koji progrediraju godinama maskirani nekom drugom bolešću ili pogrešno postavljenom dijagnozom. Naivno shvaćeni hronični kašalj i gušenje, otok trbuha (ascites) ili nogu i pacijenta i neiskusnog doktora odmah upućuje na mnogo „atraktivnije“ i češće dijagnoze kao što su infarkt miokarda, astma, otoci zbog bubrežnih bolesti, i dr. Banalne infekcije koje brzo prodju i nezapaženo zahvate miokard su veoma podmukle, terapijski podcenjene, neophodna dijagnostika izostaje, a dragoceno vreme prolazi. Tako se ulazi u početne stadijume SS i samo kvalitet života obolelog koji još nije svestan veličine svog problema predstavlja alarm za kardiologa.

Kvalitet života je predmet našeg rada. Lečenje SS treba da pruži dodatne godine kvalitetnog života – QALYs (Quality Adjusted Life Years) i može se prikazati veoma egzaktnim parametrima koristeći metode i tabele EUROQoL-5D-5L. Sistem 5D (dimenzija) obuhvata: 1. Pokretljivost; 2. Sposobnost brige o sebi; 3. Svakodnevne aktivnosti; 4. Bol – neugodnost; 5. Anksioznost – depresija. Sistem 5L (level) ocenjuje 5D od 1-5, gde je 1 najbolja.

Težina bolesti, složenost i procena terapijskog pristupa, finansijska visina lečenja i neizbežno maksimalno angažovanje članova porodice obolelog, definiše SS kao veliki društveni problem i bolest cele porodice. Analiziraju se i finansijski aspekti obzirom da pogadjaju i porodicu i društvo.

Lečenje terminalnog stadijuma SS iziskuje pored finansijskih i stručnih preduslova koje sa sobom nosi implantacija ECMO, LVAD i BVAD i etičke, zakonodavne i organizacione izazove koji dotiču i najveću prepreku – zaveštanje organa za pacijente kojima je jedini spas transplantacija srca.

Sve izneseno u radu je lično iskustvo autora kao hirurga, naučnika, profesora, a potom i pacijenta koji živi već 8 godina sa presadjenim srcem. Autor iznosi stavove i nastupa u ime TRANSPLANTACIONE MREŽE SRBIJE (TMS) NVO koju je osnovao i kojoj predsedava.

A-28.SAVREMENE TERAPIJSKE MOGUĆNOSTI U AKUTNOJ SRČANOJ SLABOSTI: KORAK NAPRED ILI SLEPA ULICA?

Petar M. Seferović

Srčana insuficijencija je ne samo smrtonosna već i onesposobljavajuća bolest. Procenjuje se da u zemljama Evropske unije oko 2% odraslih ima srčanu insuficijenciju, dok taj broj raste posle 65 godine na 6-10%. Epidemiološka istraživanja ukazuju da 30-40% bolesnika umire u prvoj godini od postavljanja dijagnoze, dok 60-70% doživi smrtni ishod unutar nekoliko godina, najčešće zbog progresije bolesti ili iznenadne aritimične smrti. Mortalitet je veći kod bolesnika koji su imali hospitalizaciju i znatno premašuje smrtnost bolesnika obolelih od karcinoma. Incidencija pojave srčane insuficijencije je stabilna u poslednjih 20 godina, dok je prevalenca u porastu, delimično jer je preživljavanje od kardiovaskularnih bolesti bolje.

Ovaj sindrom je uzrok 5% svih medicinskih, naročito kod starijih od 65 godina, pa se ističe značaj preventivnog i pravovremenog lečenja. Srčana insuficijencija je glavni uzrok velikih troškova zdravstvenih fondova, u kojima čini 2% ukupnih troškova, od čega na bolničko lečenje odlazi najveći deo, oko 70%.

Najvažnije kliničke manifestacije sindroma srčane insuficijencije nastaju kao posledica akutnog zadržavanja tečnosti u organizmu i podrazumevaju gušenje, sa tipičnim nedostatkom vazduha ili zamorom i otok članaka. Ovaj sindrom je uvek posledica srčanog obolenja i prepoznaje se po aktivaciji kompenzatornih kardijalnih i ekstrakardijalnih mehanizama, uključujući hemodinamske, bubrežne, neurogene i hormonalne manifestacije. U preporukama za lečenje srčane insuficijencije Evropskog udruženja kardiologa iz 2012 ne postoje jaki dokazi za primenu postojećih lekova za akutno popuštanje srca. Trenutno samo diuretici imaju najviši nivo dokaza, dok je za ostale lekove potrebna procena odnos koristi i štete prilikom primene. Smatra se da je za bolji uspeh i udaljene efekte lečenja srčane insuficijencije, važna što brža primeuna lekova koji deluju diuretski i vazodilatatorno. U tom smislu poslednjih godina se sprovode studije sa lekovima koji imaju upravo ovaj efekat, sa obećavajućim preliminarim rezultatima. Lekovi koji se ispituju su direktni reninski

inhibitori, analozi natriuretskih peptida, novi kalcijumski antagonisti i aktivatori kardijalnog miozina.

A-29. PERIMIOKARDITIS: BOLEST SA DESET LICA...

Dejan S. Simeunović

Perimiokarditis predstavlja prevashodno perikardni inflamatorni sindrom ako su zadovoljeni dijagnostički kriterijumi za postojanje akutnog perikarditisa uz postojanje umerene miokardne inflamacije dokazane postojanjem povišenih biomarkera u krvi (npr. troponina). U razvijenim zemljama najčešći uzrok bolesti su virusne infekcije, ali može biti uzrokovan i hipersenzitivnošću na lekove, zračenjem, hemikalijama ili drugim toksičnim agensima.

Kardiotropni virusi mogu uzrokovati perikardnu i miokardnu inflamaciju direktnim citolitičkim i/ili citotoksičnim dejstvom uz aktiviranje različitih imunoloških mehanizma. Kliničke manifestacije perimiokarditisa su u rasponu od asimptomatskog stanja sa tranzitornim elektrokardiografskim promenama do fulminantnog stanja sa teškom dilatativnom kardiomiopatijom, malignim aritmijama, srčanom insuficijencijom i smrtnim ishodom. Kod nekih bolesnika perimiokarditis može da simulira akutni infarkt miokarda sa bolom u grudima, elektrokardiografskim promenama i povišenim miokardnim enzimima.

Uz adekvatne anamnestičke podatke, dijagnostičke metode koje se primenjuju za postavljanje dijagnoze i praćenje bolesnika su: elektrokardiografija, ehokardiografija, laboratorijske analize (naručito zapaljenski parametri, troponini), Holter/test opterećenja (ne u akutnoj fazi), a u tercijarnim ustanovama i kateterizacija srca sa endomiokardnom biopsijom i magnetna rezonanca (MR) uz primenu kompleksinih laboratorijskih analiza.

U najvećem broju slučajeva bolesnike treba lečiti simptomatski i pratiti neinvazivnim metodama barem tokom faze kada su povišeni nivoi CK-MB/troponina. Međutim, ako se funkcija leve komore progresivno pogoršava i pored terapije srčane insuficijencije, mora se uzeti u obzir i dodatna imunomodulatorna terapija. Kod ovih bolesnika je potrebno uraditi endomiokardnu biopsiju uz imunohistohemijsku procenu inflamacije, molekularno-biološko dokazivanje kardiotropnih virusa, kao i antimocična antitela u krvi i njihovu funkcionalnu aktivnost. Inače, kod najvećeg broja bolesnika kompletna remisija nastupa u periodu od 3 do 6 meseci.

A-30. BOLESNIK KOGA MALO GUŠI: ŠTA KARDIOLOG TREBA DA URADI**Dragan Simić**

Nedostatak daha ili glad za vazduhom je simptom koji natera skoro 4% svih pacijenata da se za pomoć obrate Urgentnom Centrima širom Sjedinjenih Američkih Država: polovina bude zbog toga i zadržana na bolničkom lečenju, a čak 13% umre tokom prve godine, dok iste statistike donose podatak da je nedostatak vazduha dominantni simptom kod 75% umirućih bolesnika.

Dok nedostatak vazduha najčešće uzrokuju poremećaji kardiovaskularnog ili respiratornog sistema, razlozi se mogu pronaći i u oboljenjima drugih sistema tj. može biti manifestacija neurološkog, mišićno-skeletnog, endokrinog i hematološkog oboljenja ili psihijatrijske prirode. Na taj način, konsenzus medicinskih eksperata je Oktobra 2010, listirao 497 različitih uzroka.

Najčešći kardiovaskularni uzroci su infarkt miokarda ili miokardna ishemija i kongestivna srčana insuficijencija ili srčana slabost uopšte, dok sa pulmološke strane najviše se sreću hronična opstruktivna bolest pluća, astma, pneumotoraks, plućna embolija ili pneumonija. Patofiziološki, mehanizmi u osnovi se dele na povećanu svest o normalnom disanju, kao u napadu panike, potom povećani rad pri disanju ili poremećaj ventilatornog sistema. Oni uključuju hemoreceptore, mehanoreceptore i receptore u plućima. Smatra se da tri glavne komponente regulišu dispneju: aferentni signali, eferentni signali i centralno procesiranje dobijenih informacija koje razliku između potražnje (aferentno) i obezbeđenog fizičkog disanja (eferentno) kodira kao nedostatak vazduha. Cela mreža je ekstenzivna: aferentni signali pristižu iz karotidnih tela, medule, pluća i zida grudnog koša; hemoreceptori u karotidnim telima i meduli pružaju informacije o nivoima O_2 , CO_2 i H^+ ; jukstakapilarni plućni receptori su osetljivi na intersticijalni edem, dok se iz drugih receptora takođe primaju informacije o bronhokonstrikciji; receptori iz zida grudnog koša informišu o istezanju i tenziji respiratorne muskulature. Tako slaba ventilacija vodi hiperkapniji, srčano popuštanje intersticijalnom edemu koje ometa razmenu gasova, astma bronhokonstrikciji koja ograničava protok vazduha i mišićni zamor vodi ne-efektivnom radu respiratorne muskulature što zajedno doprinosi osećaju nedostatka daha. Nezavisno od ovih, realnih parametara, psihološka komponenta je skoro podjednako značajna i može potencirati glad za vazduhom koja realno može prevazilaziti stvarne potrebe organizma, ali ju je u osnovi teško kvantifikovati i kontrolisati.

Dijagnostika nedostatka vazduha predstavlja standardnu internističku koja se diferencijalno-dijagnostički podrazumeva, a terapijski pristup diktiraju rezultati sprovedenih ispitivanja.

A-31. ANGINA PEKTORIS: USPEŠNO LEČENJE ZAHTEVA ZAJEDNIČKI PRISTUP OPŠTE PRAKSE I KARDIOLOGA

Vlada Sretenović

Ishemijske bolesti srca, među njima i angina pectoris, predstavljaju značajan uzrok mortaliteta u Srbiji.

Uloga lekara opšte medicine vezana za anginu pectoris počinje prevencijom kardiovaskularnih bolesti u opštoj populaciji, pre svega, kroz sistematske preglede koji podrazumevaju anamnezu i pregled pacijenata, identifikaciju faktora rizika, procenu individualnog ukupnog kardiovaskularnog rizika te preduzimanje mera na modifikaciji faktora rizika.

Kod pacijenata koji se jave sa bolom u grudima pažljiva anamneza predstavlja ključni element u diferencijalnoj dijagnozi. Pri sumnji na anginalne bolove lekari opšte prakse vrše procenu faktora rizika i komorbiditeta prisutnih kod pacijenta kao i fizikalni pregled sa posebnim osvrtnom na znake vezane za poremećaje kardiovaskularnog sistema. Ustanove primarne zdravstvene zaštite na raspolaganju imaju i osnovnu laboratorijsku dijagnostiku, elektrokardiografe i kabinete za rendgen dijagnostiku. Dalja dijagnostika angine pectoris podrazumeva upućivanje pacijenata kardiolozima koji postavljaju indikacije za dodatne dijagnostičke metode. Upućivanje pacijenata vrši se urgentno u slučaju sumnje na nestabilnu anginu pectoris dok bi pacijente sa sumnjom na anginu pectoris i istorijom infarkta miokarda, koronarnih arterijskih bajpas graftova i perkutane koronarne intervencije trebalo upućivati po prioritetu.

Osnovni ciljevi lečenja angine pectoris jesu otklanjanje tegoba, unapređenje kvaliteta života i poboljšanje prognoze prevencijom infarkta miokarda i smrti. Terapiju ovog oboljenja potrebno započeti što pre, kako nefarmakološkim tako i farmakološkim merama u nadležnosti lekara opšte prakse. Osnovne nefarmakološke mere odnose se na modifikaciju štetnih životnih navika i kontrolu faktora rizika (pušenje, fizička neaktivnost, nezdrava ishrana, prekomerna telesna težina, unos alkohola). Farmakološku terapiju lekari opšte prakse treba da započnu kako u smislu otklanjanja/smanjenja anginoznih tegoba tako i poboljšanja prognoze. Iako su preporučeni lekovi dostupni pacijentima, u Srbiji postoje i značajne barijere, pre svega finansijske a potom i administrativne, koje u izvesnoj meri mogu ugroziti pravovremene adekvatne farmakološke mere. U cilju što bolje komplijanse važan element svake konsultacije sa pacijentom u ordinaciji lekara opšte prakse treba da bude ukazivanje na značaj i benefite od održavanja zdravih životnih navika i redovnog uzimanja propisane terapije.

Praćenje pacijenata sa anginom pectoris u nadležnosti je izabranog lekara a u određenim slučajevima specijaliste kardiologije. Učestalost konsultacija treba da odredi lekar opšte

prakse u zavisnosti od dužine trajanja i stepena težine bolesti, kontrole tegoba i izbora terapije.

Značaj lekara primarne zdravstvene zaštite ogleda se u prevenciji i ranom otkrivanju angine pektoris, praćenju pacijenata i njihovom vođenju kroz zdravstveni sistem, uloga kardiologa nezaobilazna je u potvrdi dijagnoze i odluci o izboru terapije, a saradnja je najbolji put do uspeha u lečenju angine pektoris.

A-32. SAVREMENE MOGUĆNOSTI HIRURŠKE REKONSTRUKCIJE MITRALNE VALVULE

Ivan Stojanović

Rekonstruktivna hirurgija mitralnog zalistka je terapija izbora u lečenju mitralne bolesti. Najbolje rezultate u smislu mogućnosti izvodjenja valvuloplastike kao i funkcionalne trajnosti procedure vidimo kod degenerativne mitralne mane. Mogućnost njenog izvodjenja je manja kod funkcionalne ishemijske i reumatske mitralne bolesti što je takodje praćeno i slabijim dugoročnim rezultatima.

Rekonstruktivna hirurgija je naporan i složen proces koji obuhvata sistematski rad na razumevanju mitralne bolesti, savladavanju rekonstruktivnih tehnika i razvijanju njihove primene kod što većeg broja bolesnika. Poznavanje anuloplastike i osnovnih resekcionih tehnika omogućava hirurgu da reparira od 70 - 80% posteriornih prolapsa, što medjutim iznosi tek oko 60% degenerativnih mitralnih mana. Ovladavanje rekonstruktivnim tehnikama za prolaps prednjeg listića omogućava izvodjenje valvuloplastike kod anteriornih i "biliflet" prolapsa. Mogućnost izvodjenja i dugoročni rezultati mitralne valvuloplastike u velikoj meri zavise i od očuvanosti miokarda. Leva komora je sastavni deo mitralnog aparata i uvećanje njenih dimenzija kao i uznapredovala sistolna disfunkcija otežavaju dovodjenje elemenata mitralnog zaliska u anatomske odnose koji su osnova funkcionalne trajnosti. Postoji tesna povezanost izmedju procesa reverznog remodelovanja leve komore i funkcionalne trajnosti te je stoga od suštinskog interesa bolesnike uputiti na rekonstruktivnu hirurgiju u ranim fazama bolesti. Naravno preduslov je postojanje hirurškog tima koji će garantovati visoku verovatnoću izvodjenja valvuloplastike.

Prema tome, kod degenerativne mitralne bolesti iskusan hirurški tim i odlazak na operaciju u ranim stadijumima bolesti obezbedjuju rekonstrukciju kod preko 99% posterionih prolapsa, odnosno kod preko 95% prolapsa prednjeg ili oba listića. Ovakvim pristupom možemo obezbediti da većina bolesnika nastavi potpuno normalan život nakon mitralne valvuloplastike. Tehnike minimalno invazivne mitralne hirurgije ovaj osećaj upotpunjuju malom hirurškom traumom praćenog malim i skrivenim ožiljkom.

Druga krajnost su bolesnici sa uznapredovalom mitralnom bolesti koja podrazumeva značajan stepen oštećenja funkcije leve komore. Mogućnosti mitralne valvuloplastike i njena prognoza su slabiji u ovoj grupi. To međutim ne znači da im ne treba ponuditi rekonstruktivnu hirurgiju kao terapijsku mogućnost imajući u vidu nizak nivo evidencije efekata različitih terapijskih pristupa kod ovih bolesnika. Iskustvo hirurga u ovoj situaciji pored mogućnosti individualnog i kreativnog rekonstruktivnog pristupa podrazumeva i značajan stepen kritičnosti i odustajanja od procedure kada se proceni da ona neće imati zadovoljavajući efekat ili biti štetna za bolesnika.

A-33. DIJAGNOSTIČKI I TERAPIJSKI ASPEKTI MITRALNE STENOZE / DIAGNOSTIC AND THERAPEUTIC ASPECTS OF MITRAL STENOSIS

Bosiljka Vujisić Tešić

Reumatska groznica (RG), koja je najčešnji uzročnik mitralne stenozе (MS), ostaje značajan uzrok morbiditeta i mortaliteta širom sveta, mada se zbog dobre prevencije RG sve manje se dijagnostikuje u industrijalizovanim zemljama. Redji uzroci MS su teške kalcifikacije mitralnog anulusa ili kongenitalna malformacija mitralne valvule koja se registruje se uglavnom kod novorodjenčadi i dece.

Bolesnici sa mitralnom stenozom mogu biti bez simptoma godinama, a onda početi da se postepeno zamaraju. Prvi simptomi dispneje kod bolesnika sa blagom MS su obično provocirani naporom, emocionalnim stresom, infekcijom, trudnoćom, ili atrijalnom fibrilacijom sa brzim ventrikularnim odgovorom. Dijagnoza se najčešće postavlja fizičkim pregledom, rendgenom grudnog koša, EKG nalazom i ehokardiografijom. Ehokardiografija je osnovna metoda za procenu značajnosti i posledica MS, kao i opsega anatomske lezije. 2-D ehokardiografija se može upotrebiti za procenu morfološkog izgleda mitralnog aparata, uključujući mobilnost kuspisa, debljinu kuspisa i prisustvo kalcifikacija, subvalvularnu fuziju i izgled komisura. Ovi nalazi su od značaja kada se razmatra kada i koji tip intervencije treba primeniti. Površinu mitralnog ušća treba proceniti metodom poluvremena pada pritiska i planimetrijom iz 2D prikaza. Doppler ehokardiografiju takodje treba koristiti za procenu plućnog arterijskog sistolnog pritiska iz signala brzine TR i za procenu težine udružene MR ili AR. TEE se koristi za isključenje postojanja tromba u levoj pretkomori pre perkutane balon dilatacije mitralne valvule (PMC) ili nakon embolijske epizode. TTE se koristi za vođenje i praćenje PMC procedura. 3DE poboljšava procenu morfologije zaliska, (posebno vizuelizaciju komisura), omogućava veću tačnost i reproduktivnost planimetrije. Stres test je indikovao kod asimptomatskih bolesnika ili simptomatskih kod kojih postoji diskrepanca između kliničkog nalaza i ehokardiografske značajnosti MS. Medikamentna terapija podrazumeva prevenciju tromboembolijskih komplikacija primenom antikoagulantne terapije, prevenciju recidiva reumatske groznice i infektivnog endokarditisa. Lekovi sa negativnim hronotropnim osobinama kao sto su β -blokatori ili blokatori kalcijumovih kanala

mogu biti od koristi kod bolesnika u sinusnom ritmu koji imaju simptome u naporu ako se ovi simptomi javljaju na većoj srčanoj frekvenci. PMS će biti izvedena kod bolesnika sa povoljnom anatomijom mitralnog valvularnog aparata, dok će se kod ostalih bolesnika sa hemodinamski značajnom MS sprovesti hiruško lečenje.

A-34. PET ZAGONETNIH EKG-A: DA LI ĆETE POGODITI DIJAGNOZU?

Vladan Vukčević

Moderna elektrokardiografija je u poslednjih 10-tak godina ima nekoliko glavnih pravaca razvoja. Prvo, dosta je urađeno na polju transtelefonskog prenosa EKG snimka, a time i brže postavljanje dijagnoze kako poremećaja ritma tako i ishemije miokarda. Ovo je omogućilo da se značajno smanji vreme od pojave infarktnog bola do otvaranja arterije odgovorne za infarkt, kao i uvođenje paramediksa u cilju zbrinjavanja bolesnika sa STEMI infarktom. Druga značajna oblast u razvoju EKG-a je rekonstrukcija 12 standardnih odvoda iz manjeg broja snimljenih odvoa, čime je omogućeno kontinuirano praćenje 12 EKG odvoda kod bolesnika kod kojih tehnički nije moguće njihovo snimanje. I treća važna oblast istraživanja je bila rekonstrukcija vektrokardiograma iz standardno snimljenih 12 odvoda korišćenjem Korsove ili Dowerove matrice, sa detaljnom kompjuterskom analizom vektrokardiogramai dobijanja dodatnih informacija koje se ne mogu iskoristiti čitanjem standardnih 12 odvoda.

A-35. PORUKE ZA PRIMARNU ZDRAVSTVENU ZAŠTITU IZ NOVIH EVROPSKIH PREPORUKA ZA LEČENJE ATRIJALNE FIBRILACIJE: PERSPEKTIVA LEKARA OPŠTE PRAKSE

Slavoljub Živanović

Da bi Opšta Medicina (OM) mogla da se upozna sa preporukama, smatramo da bi trebalo što pre da se ove nove preporuke prevedu na nacionalni jezik što i piše u preporukama, i u elektronskom obliku postave na sajt SLDa. Mi iz Opšte Medicine ćemo ovako prevedene preporuke takodje postaviti na svoj sajt Opšte Medicine.

Što se tiče skrininga, opšta Medicina uglavnom može da radi ekg i radi ga pacijentima. Većina ambulanti domova zdravlja ima ecg aparat, mada ne sve, pogotovu one manje. I Dijagnostika AF je moguća i to se uveliko radi.

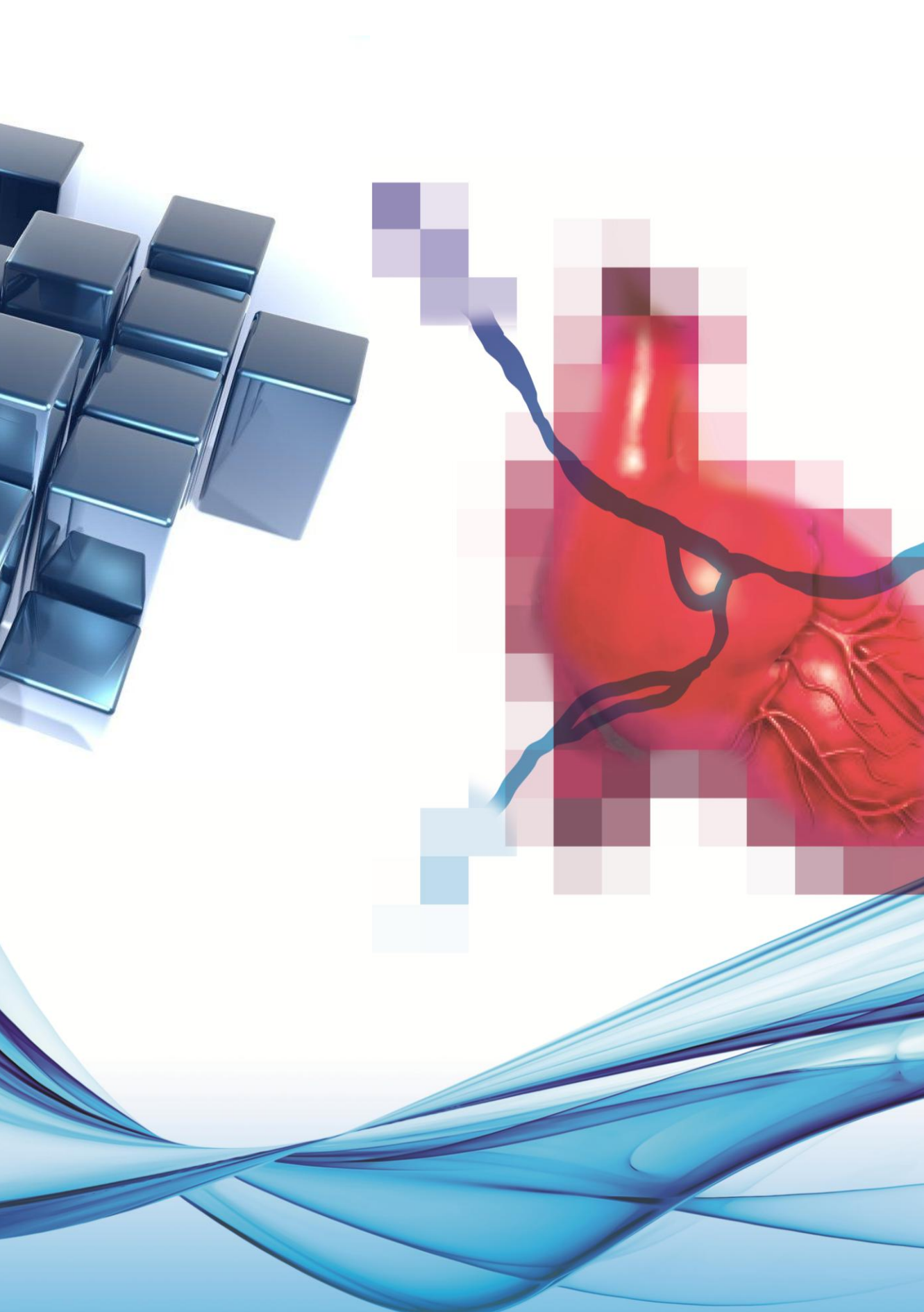
Pitanje: kome bi se skrining radio, npr pacijentima starijim od 65 godina ili i onim mlađim od 65 godina sa pridruženim nekim bolestima. Koliko puta godišnje? Jednom ili kako već?
Pitanje : Ko postavlja dijagnozu AF. Lekar Opšte Medicine, ili on postavlja sumnju pa onda šalje pacijenta dalje. Kome: internisti u domu Zdravlja ili kardiologu na sekundarnom nivou

Šta sa AF i Srčanom insuficijencijom, da li ovakvi bolesnici imaju neki prioritet u zakazivanju, da li su oni npr hitniji od npr samo onih sa AF:

Preporuke dobre dobre prakse! U OM ima samostalnosti ali i obaveza prema fondu Možda je sve ove probleme najbolje rešavati pisanjem preporuka na našem jeziku- kao što već postoje za dijabetes melitus, hipertenziju, CVI, ili druga obolenja a što postoji na sajtu ministarstva zdravlja. Najveći broj lekara iz ambulanti OM te preporuke ima na svom računaru i u svakom trenutku može da se podseti.

Uočili smo da naši pacijenti vrlo malo ili nimalo ne znaju o lečenju npr oralnim koagulantima i interakcijama sa lekovima ili hranom, pa bi bilo dobro da se u medijima više o tome govori. Takođe, veliki broj lekova koje naši stariji bolesnici piju, zajedno sa npr oralnim antikoagulantima nosi određene rizike interakcija.

Što se tiče novih lekova u lečenju AF, da li bi se ti lekovi propisivali na teret fonda ili bi pacijenti morali sami da ih kupuju. Imati u vidu trenutno materijalno stanje zemlje i stanovništva.



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