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## Prikaz Koronarne jedinice Kliničke bolnice Merkur

### Overview of the University Hospital "Merkur" Coronary Care Unit

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Hrvatsko trgovačko društvo *Merkur* osnovano je 19. siječnja 1873. godine u Zagrebu s težnjom poboljšanja socioekonomskog položaja trgovaca. Kako se broj članova stalno povećavao, osobito između 1920. i 1930. godine, jača želja za tim da se unaprijedi i zdravstvena zaštita članova.

U društvu *Merkur* dolazi do inicijative za izgradnju novog sanatorija. U nemogućnosti da se osiguraju potrebna financijska sredstva za gradnju novog sanatorija, društvo donosi odluku da kupi Pogorelčevu vilu na Florijanskom putu, današnjoj Zajčevoj ulici. Počinje adaptacija vile za potrebe sanatorija te se 6. siječnja 1930. otvara *Merkurov* sanatorij s 36 kreveta.

Nakon triju nadogradnji *Merkurov* sanatorij s 333 kreveta 1959. godine preimenuje se u Opću bolnicu „Dr. Ozren Novosel“, a prvi osnovani odjel u sanatoriju, Interni odjel, postaje Interna klinika. Godine 1974. godine Opća bolnica „Dr. Ozren Novosel“ postaje Klinička bolnica (KB) „Dr. Ozren Novosel“, a prvotno ime *Merkur* klinička bolnica vraća 30. svibnja 1992.

Prva klinika u KB *Merkur*, Interna klinika, nastavlja svoj stručni uspon te 11. studenoga 1970. otvara Jedinicu intenzivnog liječenja (JIL) iz koje se 1976. formira Koronar na jedinica (KJ). KJ je imala pet kreveta, četiri monitora za nadzor vitalnih funkcija *General Electric*, jedan defibrilator i jedan zajednički EKG tvrtke *RIZ*.

Prva glavna sestra KJ bila je ms. Milka Rogić koja je vodila KJ i JIL zajedno s ms. Šteficom Čuljat sve do 1986., kada za glavnu sestru dolazi ms. Dubravka Rovčanić. Prvi voditelj KJ bila je dr. Dženana Rezaković. U tom se razdoblju kupuje još jedan pokretni monitor za nadzor vitalnih funkcija, respirator EV-800 te novi defibrilator tvrtke *Siemens*. Godine 1989./90. za glavnu sestru KJ dolazi Biserka Sedić, a dr. Rezaković zamjenjuje dr. Stjepan Kranjčević. Prvog listopada 1993. glavna sestra postaje ms. Zdenka Čurić, a 1994. dr. Darko Počanić zamjenjuje dr. Stjepana

*Merkur*, a Croatian trade association, was founded on January 19, 1873 in Zagreb with the goal of improving the socio-economic position of merchants. As the number of members constantly grew, especially between 1920 and 1930, so did the desire to improve the healthcare for their members.

An initiative to build a new sanatorium emerged within the *Merkur* society. Since the financial resources for the construction a new sanatorium could not be secured, the society decided to buy the Pogorelac villa on Florijanski put, which is today called Zajčeva Street. The adaptation of the villa to the needs of the sanatorium began, and the *Merkur* sanatorium was opened on January 6, 1930 with 36 patient beds.

After three expansions, the *Merkur* sanatorium, now with 333 beds, changed its name to the dr. Ozren Novosel General Hospital in 1959, and the first department founded in the sanatorium, the Internal Medicine Department, became the Internal Medicine Clinic. In 1974 the dr. Ozren Novosel General Hospital became the Internal Medicine Clinic, but went back to its original name, University Hospital (UH) "Merkur", on May 30, 1992.

The first clinic in UH "Merkur", the Internal Medicine Clinic, continued its professional rise and opened the Intensive Care Unit (ICU) on November 11, 1970, from which the Coronary Care Unit (CCU) was formed in 1976. The CCU had five beds, four *General Electric* vital function monitors, one defibrillator, and one joint ECG device from the *RIZ* company.

The First CCU head nurse was Milka Rogić who headed the CCU and ICU together with Štefica Čuljat until 1986 when Dubravka Rovčanić became head nurse. The first unit head for the CCU was Dr. Dženana Rezaković. Another mobile vital function monitor was acquired during this period, as well as an EV-800 respirator and a new *Siemens* defibrillator. In 1989/90, Biserka Sedić became head nurse, and Dr. Rezaković was re-

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Kranjčevića. U KJ se od samog njezina otvaranja primaju kritično bolesne osobe s AKS-om ili za život opasnim aritmijama. Od samog otvaranja, osim nadzora nad vitalnim funkcijama i provođenja reanimacijskog postupka, postojala je i mogućnost umetanja privremenih, ali i trajnih elektrostimulatora. Trajni elektrostimulatori do otvaranja invazivnog laboratorija 2007. godine implantirali su se u salama Kirurgije, a nadzirali u KJ-u.

Godine 1996./1997. KJ se kompletno renovira novcem iz donacijskih sredstava koje je prikupio dr. Stjepan Kranjčević. Osim mijenjanja i električnih i vodovodnih instalacija, zamjene cjelokupne stolarije, provodi se i plinifikacija prostora (O<sub>2</sub>, vakuum i zrak). Kupuje se kompletan monitoring, novi respirator, EKG i ergometar AT-10 tvrtke Schiller. Ms. Zdenka Čurić i dr. Darko Počanić vode KJ sve do 1. lipnja 2014. Novim ustrojem Interne klinike KJ se udružuje s JIL-om u novi odjel koji se zove Odjel za aritmije, AKS i intenzivnu medicinu te tada glavna sestra tog odjela postaje ms. Petra Kušter, a dr. Darko Počanić voditelj novog odjela. Odjel formalno ima 12 kreveta (5 KJ + 7 JIL). Na tom odjelu rade dva liječnika supspecijalista, jedan liječnik na specijalizaciji i voditelj. U timu je 21 medicinska sestra (9 VŠŠ + 12 SSS, od kojih je 5 polaznica Zdravstvenog veleučilišta, s glavnom sestrom Petrom Kušter. Tim zdravstvenih djelatnika čine:

- liječnici: Darko Počanić, Helena Jerkić, Mario Stipinović, Maja Vučković
- sestre: Petra Kušter; Anita Brumen; Matea Brgles; Martina Jaković; Martina Kostanjčar; Dijana Marčec; Maja Puceković; Melita Starčević; Ana Barišić; Anđa Čondrić; Ivana Čukman; Antonija Gračak; Irena Ivančan; Katarina Ljubičić; Barbara Mateković; Nikolina Mizdrak; Iva Ožvačić; Ivana Stakor Jakšić; Marija Štajcar; Brankica Tuzla; Jelena Vindiš; Domana Vukman.

KJ je opremljena monitoringom tvrtke Dräger, a JIL monitoringom tvrtke Elektoničar. Zajedno imaju četiri respiratora, jedan oksilog, tri defibrilatora, dva elektrokardiografa, dvojica hitna kolica, tri jednokomorna i jedan dvokomorni PEST, jedan aparat za izvantjelesnu membransku oksigenaciju koji je zbog nedostatka educiranog osoblja posuđen Klinici za infektivne bolesti u Zagrebu.

Planirana je nabava mobilnoga ehokardiografskog aparata za oba prostora jer transport bolesnika iz ovih jedinica do ehokardiografskog laboratorija može biti i opasan za život.

U bolničkom proračunu (svaka od jedinica ima svoj posebni limit) KJ je zadužena za zbrinjavanje bolesnika s AKS-om, aritmijama i za nabavu elektrostimulatora (jednokomorni, dvokomorni, ICD, CRT) i „loop rekorder“.

U posljednjih pet godina stalno bilježimo porast broja bolesnika (**tablica 1**) pa postojeći prostor postaje mali kao i financijski limit koji je u posljednje tri godine smanjen za 20 %.

placed by Dr Stjepan Kranjčević. On October 1, 1993, Zdenka Čurić became head nurse, and Dr Darko Počanić replaced Dr Stjepan Kranjčević in 1994. Since its foundation, the CCU accepted critically ill with acute coronary syndrome (ACS) or life-threatening arrhythmias. As soon as it was opened, the CCU performed implantation of both temporary and permanent pacemakers in addition to vital function monitoring and reanimation procedures. Permanent pacemakers were implanted in the surgical department's operating halls and monitored in the CCU until the invasive procedure laboratory was opened in 2007.

Over the course of 1996/1997 the CCU was completed renovated with money from grants collected by Dr Stjepan Kranjčević. In addition to changing the electrical and plumbing systems and completely replacing the furniture, a medical gas supply system was installed as well (O<sub>2</sub>, vacuum, and air). A new monitoring system was bought, as well as a new respirator, ECG, and an AT-10 ergometry machine from the Schiller company. Zdenka Čurić and Dr Darko Počanić led the CCU until June 1, 2014. The CCU was reorganized and merged with the ICU into a new department called the Department for Arrhythmias, Acute Coronary Syndrome, and Intensive Medicine, whereupon Petra Kušter became the head nurse and Dr Darko Počanić the head of the new department. The department formally comprises 12 beds (5 CCU + 7 ICU). This department employs two subspecialist physicians, one cardiology resident, and the department head. The team includes 21 nurses (9 with bachelor's degrees and 12 with vocational nursing school, of which 5 are attending the Zagreb Health Studies college, and the head nurse Petra Kušter).

The healthcare team comprises:

- Physicians: Darko Počanić, Helena Jerkić, Mario Stipinović, Maja Vučković
- Nurses: Petra Kušter; Anita Brumen; Matea Brgles; Martina Jaković; Martina Kostanjčar; Dijana Marčec; Maja Puceković; Melita Starčević; Ana Barišić; Anđa Čondrić; Ivana Čukman; Antonija Gračak; Irena Ivančan; Katarina Ljubičić; Barbara Mateković; Nikolina Mizdrak; Iva Ožvačić; Ivana Stakor Jakšić; Marija Štajcar; Brankica Tuzla; Jelena Vindiš; Domana Vukman.

The CCU is equipped with a monitoring system by the Dräger company, while the ICU has a monitoring system made by the Elektoničar company. Together they have four respirators, one Oxylog ventilator, three defibrillators, two electrocardiographs, two emergency carts, three single-lead and one dual-lead portable pacemaker, and one extracorporeal membrane oxygenation device that has been lent to the University Hospital for Infectious Diseases "Dr Fran Mihaljević", Zagreb due to lack of personnel trained to use it.

TABLE 1. Number of admissions between 2014 and 2018.

Year	2014	2015	2016	2017	2018
Coronary Care Unit	686	682	739	752	797
Intensive Care Unit	399	412	490	558	632
TOTAL	1085	1094	1209	1310	1429

U JIL-u (koja s KJ čini novi odjel) liječe se najkritičniji bolesnici s hematološkom, gastroenterološkom i nefrološkom problematikom, a, posljedično tomu, i bolesnici s predtransplatacijskom i posttransplatacijskom problematikom. Takvi bolesnici zahtijevaju dežurstva specijalista svih grana interne medicine te medicinske sestre koje svojim znanjem i umijećem moraju odgovoriti na sve izazove moderne medicine. Kako bi podigli kvalitetu praćenja i liječenja kardioloških bolesnika u ovom odjelu, posljednje tri godine kardiolozi organiziraju pripravnost s tendencijom uvođenja i kardiološkog dežurstva.



**FIGURE 1. The staff of the Department for Arrhythmias, Acute Coronary Syndrome, and Intensive Medicine.**

Članovi društva Merkur ponosili su se svojim sanatorijem. U „Merkurovu vjesniku“ (studeni 1937.) u uvodniku je tiskan članak „Naš ponos“ u kojemu se, među ostalim, kaže: „Merkurov sanatorij je izraz vrlina naših. On je dokument međusobne ljubavi, samoprijedora i nesebičnog rada. On je najjači dokaz naše socijalne svijesti. On je goruća žiža našeg humanog pregnuća.“ U prilog ovom navodu, djelatnici Odjela za aritmije, AKS i intenzivnu medicinu (**slika 1**) teže stvaranju centra izvrsnosti koji bi podigao vrednovanje klinike, a i bolnice u cijelosti.

The acquisition of a mobile echocardiography device for both units is planned because the transportation of patients to the echocardiographic laboratory can represent a life-threatening risk for patients.

Within the hospital budget (every unit has its special limit), the CCU is responsible for patients with acute coronary syndrome, arrhythmias, and pacemaker (single-lead, dual lead, ICD, CRT) and loop recorder acquisition.

We have recorded a constant increase in admissions over the past five years (**Table 1**), and the existing space has become too small, as has the financial limit which has been reduced by 20% in the last three years.

The ICU (which forms the new department with the CCU) treats the most critical patients with hematological, gastroenterological, and nephrological issues and consequently also patients with pre-transplant and post-transplant issues. Such patients require on-call specialists from all branches of internal medicine and nurses who have the knowledge and skills to respond to all the challenges of modern medicine. In order to improve monitoring and treatment quality for patients at our department, cardiologists have been organizing a readiness program over the last three years, with a tendency to also introduce call duty for cardiologists.

The members of the Merkur society were proud of their sanatorium. The Merkur newsletter published (in November of 1937) an editorial article titled "Our Pride" which said: "The Merkur sanatorium is an expression of our virtues. It is a document of our love for one another, our self-sacrifice, and our altruistic work. It is the strongest proof of our social consciousness. It is the burning focus of our humane efforts."

True to this quote, the staff of the Department for Arrhythmias, Acute Coronary Syndrome, and Intensive Medicine (**Figure 1**) strive to create a center of excellence that will improve the overall quality of the clinic and of the hospital as a whole.