



Ostalo

Other

## Prikaz razvoja Kardiologije Opće bolnice Dubrovnik

## Overview of Cardiology Development in the Dubrovnik General Hospital

**Jerko Ferri-Certić**

Opća bolnica Dubrovnik, Dubrovnik, Hrvatska • Dubrovnik General Hospital, Dubrovnik, Croatia

**G**odine 2000. u Općoj bolnici Dubrovnik su radila dva kardiologa uz veliki broj dežurstava u starom neprimjerenom dijelu bolnice. Koronarna jedinica je bila slabo opremljena sa zastarjelom opremom, u sklopu Internog odjela koji je sveukupno brojao 36 kreveta.

Za implantaciju i kontrolu rada elektrostimulatora srca odlazilo se u Kliničku bolnicu Split i kliničke bolnice u Zagrebu. Insuficijentna je bila i ostala kardiološka dijagnostika. Bolesnike koji su se trebali invazivno kardiološku dijagnostiku usmjeravali smo u kliničke bolnice u Zagrebu i Specijalnu bolnicu "Magdalena" Krapinske Toplice (650-700 km). Nije bilo govora o aktivnom urgentnom zbrinjavanju bolesnika s akutnim koronarnim sindromom.

In 2000 two cardiologists were working in the Dubrovnik General Hospital having a great number of duty hours in the old inadequate part of the hospital. The Coronary Care Unit (CCU) was poorly equipped with outdated equipment within the Department of Internal Medicine that had a total 36 beds.

Patients headed for the Split Clinical Hospital Centre and clinical hospitals in Zagreb for the purpose of implantation and control of pacemakers. The cardiology diagnostics was and is still insufficient. We referred all those patients who were in need of invasive cardiac diagnostics to clinical hospitals in Zagreb and Specialized Hospital "Magdalena" Krapinske Toplice (650-700 km). Urgent management of patients with acute coronary syndrome was out of question.



No, u to doba Dubrovnik je bio u poratnoj recesiji s kosovskom krizom, turizam je stagnirao pa se sve to nekako toleriralo.

Stabiliziranjem političke situacije i ekspanzijom gospodarstva i turizma, dolaskom velikog broja kruzera i VIP gostiju, uz razvitak medicinske znanosti i tehnike u kojem je invazivni pristup liječenja koronarne bolesti srca postao standard, našli smo se u bezizlaznoj situaciji. Zahtjevni gosti i domicilno stanovništvo tražili su usluge na europskoj i svjetskoj razini, a tada nije bilo moguće ponuditi niti najosnovnije liječenje kardioloških bolesti i akutnog koronarnog sindroma. Tada smo osmislili nekoliko projekata koji su kroz nekoliko godina realizirani, tako da danas imamo sasvim drukčiju situaciju.

Odjel kardiologije sudjeluje u dvije velike kliničke stude, ima trideset kreveta i pet liječnika kardiologa dok je šesti na specijalizaciji. Godine 2008. implantirano je 100 elektrostimulatora srca, sada kontroliramo sve vrste elektrostimulatora srca kao i kardioverter defibrilatora, uz (po potrebi) online vezu s Medtronicovim centrom. Koronarna jedinica ima medicinske uređaje najnovije generacije (srednji monitoring, bifazične defibrilatore, monitore, stalno dostupan ehokardiografski aparat) kao i osoblje koje se trajno educira na području kardiopulmusalne reanimacije. Odjel je pokriven telemetrijom s opcijom holter snimanja. U polikliničkom dijelu imamo najmoderniji ehokardiografski uredaj i digitalnu ergometriju. Razvili smo sustav telemedicinskog EKG-a gdje smo centar koji tijekom 24 sata pruža usluge konzultacije kolegama iz županije. Ucrtani smo na svjetskoj karti centra za kontrolu elektrostimulatora srca.

Kruna razvoja Kardiologije OB Dubrovnik bilo je prošlotjedno otvaranje invazivnog laboratorija za interventnu kardiologiju. U jednom danu učinili smo četiri elektivne planirane koronarografije i prvu primarnu perkutanu koronaru intervenciju (pPCI) bolesniku koji je to jutro primljen u koronarnu jedinicu s akutnim infarktom miokarda s elevacijom ST-segmenta. Ustroj ovog dijela interventne kardiologije bio je vrlo zahtjevan i trajao je oko dvije godine. Voditelj projekta je dr. sc. B. Starčević, invazivni kardiolog iz Kliničke bolnice Dubrava u Zagrebu, uz asistenciju liječnika kardiologinja iz OB Dubrovnik dr. Matana Prižmić i dr. Mejić Krstulović. U pričuvi je bio i kardio-kirurg prof. dr. sc. Željko Sutlić iz KB Dubrava, a kao gost je bio prisutan i kardiokirurg dr. Letica iz Kliničkog bolničkog centra Split. Za sada planiramo mjesечно raditi oko desetak elektivnih intervencija uz kontinuiranu edukaciju osoblja. Cilj koji ćemo postići u budućnosti je da s vlastitim osobljem budemo sposobni činiti pPCI te da postaneмо dio mreže interventne kardiologije.

Dan kada su učinjene prve koronarografije zapisan je zlatnim slovima u povijest medicine naše regije.

Svi projekti koji su realizirani na odjelu kardiologije su bili vrlo zahtjevni i podrazumijevali su niz detalja i angažman svog osoblja kako kardiologije tako i cjelokupne bolnice te veliku stručnu i finansijsku podršku managmenta bolnice.

However, at that time Dubrovnik was in post-war recession along with crisis in Kosovo and tourism plummeted, so even such phenomena were tolerated.

After the political situation stabilized and economy and tourism took off, after arrival of a large number of cruisers and VIP guests followed by development of medical sciences and technique when an invasive approach to the treatment of coronary heart diseases became a standard, we had to face a very difficult and hopeless situation. Demanding guests and local citizens asked for services matching European and international level, and at that time it was even impossible to offer the most basic treatment of cardiac diseases and acute coronary syndrome. This was the time when we designed several projects that were implemented throughout several years, so that nowadays we are dealing with a completely different situation.

The Cardiology Department participates in two large clinical studies, has 30 beds and five cardiologists, while the sixth is receiving residency training. In 2008, around 100 pacemakers were implanted, now we control all types of pacemakers and cardioverter defibrillator, maintaining (if required) online connection with Medtronic center. The CCU has up-to-date medical devices (central monitoring, biphasic defibrillators, monitors, continuously accessible echocardiography device) as well as personnel that is continuously trained in the area of cardiopulmonary reanimation. The Department possesses telemetry with an option of holter monitor. In the Polyclinic Department, we have the state-of-the art echocardiography device and digital ergometry. We have developed the system of telemedical ECG whereas we are the center that provides 24-hour consultancy services to our colleagues in the county. We are marked in the world map of centers for the control of pacemakers.

The last week opening of invasive laboratory for emergency cardiology was the culmination of development of the Dubrovnik General Hospital Cardiology Department. On one day we performed four elective planned coronary angiographies, and the first primary percutaneous coronary intervention (pPCI) for the patient who during that morning was admitted to the CCU with acute myocardial infarction with ST-segment elevation. The organization of this part of interventional cardiology was very demanding and lasted for about two years. The project leader is B. Starčević, MD, PhD interventional cardiologist from the Dubrava Clinical Hospital in Zagreb assisted by cardiologists from the Dubrovnik General Hospital, Matana Prižmić, MD and Mejić Krstulović, MD. There was a cardiac surgeon prof. Željko Sutlić, MD, PhD from the Dubrava Clinical Hospital as a cardio-surgical backup and a cardiac surgeon Letica, MD from the Split Clinical Hospital Centre as a guest. For the time being, we are planning on performing around ten elective interventions per month along with continuous staff training. The goal we are trying to accomplish is to be able to perform pPCI with our own staff in the future and to become a part of interventional cardiology network.

The day when the first coronary angiographies were performed has been written down with golden letters in the history of medicine in our region.

All the projects that were implemented in the cardiology department were very demanding and implied a whole series of details and engagement of its staff not only in cardiology department, but also the whole hospital and a great professional and financial aid by the hospital management.