

## Vrsta i učestalost komplikacija nakon perkutane koronarne intervencije te mogući predskazatelji za njihov nastanak kod bolesnika liječenih u Kliničkoj bolnici Dubrava u razdoblju od godinu dana

### The type and frequency of complications after percutaneous coronary intervention and possible predictors of their occurrence in patients treated at the University Hospital Dubrava in a period of one year

Senka Pejković\*,

Biljana Šego ,

Sanja Piškor,

Zoran Marić

Klinička bolnica Dubrava,  
Zagreb, Hrvatska

University Hospital Dubrava,  
Zagreb, Croatia

**KLJUČNE RIJEČI:** perkutana koronarna intervencija, komorbiditet, komplikacije.

**KEYWORDS:** precutaneous coronary intervention, comorbidities, complications.

**CITATION:** Cardiol Croat. 2016;11(10-11):565. | DOI: <http://dx.doi.org/10.15836/ccar2016.565>

**\* ADDRESS FOR CORRESPONDENCE:** Senka Pejković, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-98-167-75-99 / E-mail: [senka.pejkovic@gmail.com](mailto:senka.pejkovic@gmail.com)

**ORCID:** Senka Pejković, <http://orcid.org/0000-0002-7557-9358> • Biljana Šego, <http://orcid.org/0000-0002-0806-1233> Sanja Piškor, <http://orcid.org/0000-0002-7133-4433> • Zoran Marić, <http://orcid.org/0000-0002-9121-4631>

**Uvod:** Perkutana koronarna intervencija (PCI) danas predstavlja dio standardnog liječenja bolesnika s koronarnom bolesti srca. Do danas je identificiran niz čimbenika za nastanak komplikacija vezanih uz PCI.<sup>1-4</sup> Istraživanje prikazuje vrstu i učestalost komplikacija nakon PCI (hitne – u akutnom koronarnom sindromu i elektivne – u stabilnoj koronarnoj bolesti), kao i potencijalne predskazatelje koje mogu ukazivati na povećan rizik za nastanak tih komplikacija.

**Pacijenti i metode:** U istraživanju uključeni su svi bolesnici koji su u Kliničkoj bolnici Dubrava bili podvrgnutih PCI u razdoblju od godinu dana. Obrađeno je ukupno 727 bolesnika (523 muškaraca i 204 žena). Od toga je kod 354 bolesnika učinjena primarna PCI, a kod 377 bolesnika učinjen je elektivni zahvat.

**Rezultati:** Najzastupljenija dobra skupina bolesnika je između 60 i 71 godina (30,3%). Najmanje zastupljena skupina je od > 80 godina kojoj je pripadalo 6,3% bolesnika. U ispitivanoj skupini bilo je 71,9% muškaraca i 28,1% žena. Kod 48,7% bolesnika s akutnim infarktom miokarda s elevacijom ST-segmenta bila je indicirana primarna PCI. Ukupno, 18,9% muškaraca i 21,1% žena je imalo komplikacije u sali za kateterizaciju. Od komplikacija 9,9% bolesnika je imalo krvarenje, 2,1% febrilitet, 5% poremećaje srčanog ritma, 8,7% bol, 6,7% hematoma, a umrlo je 3,35% bolesnika. Ostale komplikacije javile su se kod 24,2% bolesnika.

**Zaključak:** Primjena PCI predstavlja učinkovit metodu liječenja bolesnika s koronarnom bolesti srca. Rezultati prikazuju stvarnu sliku učestalosti i vrste primjene PCI zahvata, kao i sliku komplikacija i nepovoljnijih događanja nakon zahvata te se većina dobivenih rezultata poklapa s podacima iz literature. Identificirani čimbenici za nastanak komplikacija vezanih uz PCI: ženski spol, starost iznad 60 godina, komorbiditeti bolesnika. Medicinska sestra je nužna karika za pravodobno sprečavanje i uočavanje nastanka komplikacija bolesnika podvrgnutih PCI-u.

**Introduction:** Percutaneous coronary intervention (PCI) is today a standard therapy of patients with coronary heart disease. So far several factors causing the complications of PCI have been identified.<sup>1-4</sup> This study presents types and frequency of complications after PCI (both urgent in the setting of acute coronary syndrome, and elective due to stable coronary disease), as well as potential predictors, that can identify elevated risk situations.

**Patients and Methods:** This study enrolled all patients who underwent PCI in University Hospital Dubrava over a period of one year. Data of 727 patients was analyzed (523 men and 204 women). 354 patients underwent a primary PCI, and 377 patients underwent an elective or delayed PCI.

**Results:** Most numerous were the patients between 60 and 71 years of age (30.3%), and least numerous those >80 years (6.3% patients); male were 71.9% patients. Acute ST segment elevation myocardial infarction was present in 48.7% patients, and they underwent primary PCI. In general, 18.9% men and 21.1% women have experienced some kind of complication during the hospitalization: 9.9% had bleeding, 2.1% febrility, 5% arrhythmia, 8.7% pain, 6.7% hematoma and 3.35% patients died. 24.2% patients experienced some other form of complication.

**Conclusion:** PCI is an effective method for treating patients with coronary heart disease. Results show a real picture of incidence a type of PCI procedure as well as complications and adverse events after procedure, and most results are similar to those previously reported in literature. Risk factors for complications which are identified comprise female gender, age over 60 years and presence of other comorbidities. Nurse is an essential factor for timely detection and prevention of complications in patients undergoing PCI.

#### LITERATURE

- Wong, ND. Epidemiological studies of CHD and the evolution of preventive cardiology. *Nat Rev Cardiol.* 2014;11(5):276-89.  
DOI: <http://dx.doi.org/10.1038/nrcardio.2014.26>
- Kumar A, Cannon CP. Acute coronary syndromes: diagnosis and management, part I. *Mayo Clin Proc.* 2009;84(10):917-38.  
DOI: <http://dx.doi.org/10.4065/84.10.917>
- Hurten M, Abdelnoor M, Smith P, Eriksson J, Arnesen H. Warfarin, aspirin, or both after myocardial infarction. *N Engl J Med.* 2002;347(13):969-74.  
DOI: <http://dx.doi.org/10.1056/NEJMoa020496>
- Werner N, Bauer T, Hochadel M, Zahn R, Weidinger F, Marco J, et al. Incidence and clinical impact of stroke complicating percutaneous coronary intervention: results of the Euro heart survey percutaneous coronary interventions registry. *Circ Cardiovasc Interv.* 2013;6(4):362-9.  
DOI: <http://dx.doi.org/10.1161/CIRCINTERVENTIONS.112.000170>

RECEIVED:  
October 2, 2016

ACCEPTED:  
October 13, 2016

