

DRUG-RELATED PROBLEMS OF PATIENTS WITH CARDIOVASCULAR DISEASES ON HOSPITAL ADMISSION

**Ivana Draganov^{1*}, Aneta Drndarević¹, Branislava Miljković¹,
Aleksandar Davidović², Dane Cvijanović², Tatjana Savković³,
Sandra Vezmar Kovačević¹**

¹University of Belgrade – Faculty of Pharmacy, Department of Pharmacokinetics and Clinical Pharmacy, Belgrade, Serbia

²CHC Zvezdara, Intern Clinic, Clinical Ward for Cardiovascular Diseases, Belgrade, Serbia

³CHC Zvezdara, Service for Pharmaceutical Health Care, Belgrade, Serbia

*ivanadraganov@yahoo.com

In patients with cardiovascular diseases drug-related problems (DRPs) can be associated with hospitalization or rehospitalization. The aim of the research was to analyse DRPs in the cardiology department on admission to the hospital. All patient records on admission to the cardiology department of the Clinical Hospital Center Zvezdara during 2018., were analyzed. Demographic and treatment data of the patient before admission to the hospital were collected. DRPs associated with pre-hospital treatment were identified and classified according to the PCNE (Pharmaceutical Care Network Europe, version 9.1) classification. DRPs were also evaluated as cause of the patient's hospitalization. Data were analyzed descriptively and with linear regression analysis. During the research period, 143 patients were admitted to the cardiology department, with an average age of 69.75 ± 10.11 years, of which 65.7% were male. Patients had an average of 4.36 ± 2.13 diagnoses and 5.24 ± 3.39 medications on admission. We observed 1.85 ± 1.37 DRPs per patient (range 0-5). The most common DRP (75.6%) was lack of ≥ 1 drugs in the therapy preceding the admission, most often statins (30.1% of patients), beta-blockers (25.9%), angiotensin-converting enzyme inhibitors (17.5%) and antiarrhythmics/anticoagulants (12.6%). In 96 patients (67.1%) the identified DRPs could be associated with the cause of hospitalization. Atrial fibrillation was the predictor of the number of DRPs in patients ($p < 0.001$). In most cardiovascular patients, the cause of hospitalization could be associated with DRPs before admission. Incomplete therapy of the patient was commonly observed, the cause of which may be inadequate prescribing or lack of adherence of the patient.

TERAPIJSKI PROBLEMI PACIJENATA SA KARDIOVASKULARnim BOlestima NA PRIJEMU U BOLNICU

**Ivana Draganov^{1*}, Aneta Drndarević¹, Branislava Miljković¹,
Aleksandar Davidović², Dane Cvijanović², Tatjana Savković³,
Sandra Vezmar Kovačević¹**

¹Univerzitet u Beogradu – Farmaceutski fakultet, Katedra za farmakokinetiku i kliničku farmaciju, Beograd, Srbija

²KBC Zvezdara, Klinika za interne bolesti, Kliničko odeljenje za kardiovaskularne bolesti, Beograd Srbija

³KBC Zvezdara, Služba za farmaceutsku zdravstvenu delatnost, Beograd, Srbija

*ivanadraganov@yahoo.com

Pacijenti sa kardiovaskularnim bolestima susreću se sa brojnim problemima u terapiji od kojih pojedini mogu biti uzrok hospitalizacije ili rehospitalizacije. Cilj istraživanja je bio da se prikaže analiza terapijskih problema pacijenata na odeljenju kardiologije, prilikom prijema u bolnicu. Analizirani su kartoni svih pacijenata primljenih na odeljenje kardiologije, Kliničko-bolničkog centra Zvezdara tokom 2018. godine. Prikupljeni su demografski i podaci o celokupnoj terapiji pacijenta pre prijema u bolnicu. Identifikovani su problemi u vezi sa terapijom pre prijema u bolnicu i klasifikovani su prema PCNE (*Pharmaceutical Care Network Europe*, verzija 9.1) klasifikaciji. Takođe, procenjeno je da li problemi u vezi sa terapijom mogu biti uzrok hospitalizacije pacijenta. Podaci su analizirani deskriptivno i primenom linearne regresione analize. U periodu istraživanja 143 pacijenta je primljeno na odeljenje kardiologije, prosečne starosti $69,75 \pm 10,11$ godina, od kojih je 65,7% bilo muškog pola. Pacijenti su u proseku imali $4,36 \pm 2,13$ dijagnoze i $5,24 \pm 3,39$ lekova na prijemu. Utvrđeno je prisustvo $1,85 \pm 1,37$ terapijskih problema po pacijentu (opseg 0-5). Najčešći terapijski problem (75,6%) bio je nedostatak ≥ 1 leka u terapiji i to najčešće statina (30,1% pacijenata), beta-blokatora (25,9%), inhibitora angiotenzin-konvertujućeg enzima (17,5%) i antiaritmika/anitkoagulanasa (12,6%). Kod 96 pacijenata (67,1%) su identifikovani terapijski problemi dovedeni u vezu sa uzrokom hospitalizacije. Prediktivni faktor za broj terapijskih problema kod pacijenata je bilo prisustvo atrijalne fibrilacije u anamnezi ($p < 0,001$). Uzrok hospitalizacije pacijenata sa kardiovaskularnim bolestima se često može povezati sa problemima u terapiji pre prijema. Najčešće se uočava nepotpuna terapija pacijenta čiji uzrok može biti neodgovarajuće propisivanje ili nedostatak adherence pacijenta.