

**REVIEW OF THERAPY AND TREATMENT PROBLEMS IN PATIENTS WITH  
ASTHMA IN PRIMARY HEALTH CARE**

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Asthma represents a serious global burden because, despite available therapy, poor health and socio-economic outcomes are reported. The aim of this paper is to analyse treatment in patients with asthma and to identify drug-related problems. An observational study included 57 adult asthma patients of both genders. Data were collected in community pharmacies during 2016, by filling out questionnaires. Descriptive analysis was performed in Microsoft® Office Excel 2010. Respondents' average age was  $49.7 \pm 17.4$ , 38.6% were men. Patients used short-acting (36.8%) and long-acting beta-2 agonists (8.8%), inhaled corticosteroids (28.1%) and combined preparations (73.7%). More than 50% of patients used inhaled anticholinergics, while theophylline was used in 31.6%, which is in discordance with the asthma guidelines, due to poor efficacy and safety profile. Also, this may indicate that patients do not accept inhalation therapy because of demanding technique or higher cost. Allergic rhinitis, obesity, hypertension, and gastroesophageal reflux disease were the most common comorbidities. Potentially inadequate co-therapy included beta-blockers (21.1%), angiotensin-converting enzyme inhibitors (28.1%), aspirin/nonsteroidal antiinflammatory drugs (21.1% and 29.8%), which may worsen asthma. It is discouraging that 26.3% of patients were smokers, 35.1% did not know the triggers for asthma, and only 1 patient used the asthma action plan. The results show a higher prevalence of therapy appropriate for severe asthma stages, which implies poor disease control and poor outcomes. There is a need for the implementation of pharmaceutical care services and better education of patients with asthma.

## **PREGLED TERAPIJE I TERAPIJSKIH PROBLEMA KOD PACIJENATA SA ASTMOM U PRIMARNOJ ZDRAVSTVENOJ ZAŠTITI**

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Astma predstavlja veliko globalno opterećenje jer se uprkos dostupnoj terapiji beleže loši zdravstveni i socio-ekonomski ishodi. Cilj ovog rada je analiza primenjene terapije i koterapije kod pacijenata obolelih od astme i identifikacija terapijskih problema. Sprovedena opservaciona studija je uključila 57 odraslih pacijenata sa astmom, oba pola. Podaci su prikupljeni tokom 2016. godine u javnim apotekama, popunjavanjem upitnika. Deskriptivna analiza je izvršena u programu *Microsoft® Office Excel 2010*. Prosečna starost iznosila je  $49,7 \pm 17,4$  godina, 38,6% činili su muškarci. Kratkodelujuće beta-2 agoniste primenjivalo je 36,8% pacijenata, dugodelujuće beta-2 agoniste 8,8%, inhalacione kortikosteroide 28,1%, dok je kombinovane preparate upotrebljavalo 73,7%. Više od 50% koristilo je inhalacione antiholinergike, a primećena je upotreba teofilina/aminofilina kod 31,6%, što nije u saglasnosti sa smernicama za terapiju astme usled slabe efikasnosti, odnosno lošeg bezbednosnog profila. Takođe, ovaj rezultat može ukazati na to da pacijenti ne prihvataju inhalacionu terapiju zbog zahtevnijeg načina primene ili zbog više cene lekova. Od pridruženih komorbiditeta, najčešći su bili alergijski rinitis, gojaznost, hipertenzija i gastroezofagealna refluksna bolest. Potencijalno neadekvatna koterapija uključivala je beta-blokatore (21,1%), inhibitore angiotenzin-konvertujućeg enzima (28,1%), acetilsalicilnu kiselinu/nesteroidne antiinflamatorne lekove (21,1% i 29,8%) čija primena može precipitirati pogoršanje astme. Obeshrabrujuće je da su 26,3% pacijenata pušači, 35,1% ne zna koji su okidači za njihovu bolest, a samo 1 pacijent koristi astma akcioni plan. Rezultati ukazuju na veću zastupljenost terapije koja odgovara težim stadijumima astme, što može ukazivati na lošiju kontrolu bolesti i lošije ishode. Uočava se potreba za uvođenjem usluga farmaceutske zdravstvene zaštite i boljom edukacijom pacijenata o astmi.