

# POVEZANOST METABOLIČKIH POREMEĆAJA SA HIPERTENZIJOM KOD ŽENA U MENOPAUZI

## THE ASSOCIATION BETWEEN METABOLIC DISORDERS AND HYPERTENSION IN POSTMENOPAUSAL WOMEN

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### SAŽETAK

**Uvod:** Kardiometaboličke bolesti, uključuju diabetes melitus tipa 2 i kardiovaskularne bolesti, su među vodećim uzrocima morbiditeta i mortaliteta u Srbiji. U mlađem životnom dobu, prevalenca kardiovaskularnih bolesti je veća kod muškaraca nego kod žena, ali ova prednost postepeno nestaje sa starenjem, posebno nakon menopauze, i tada su žene pod većim kardiovaskularnim rizikom.

**Cilj našeg istraživanja** bio je da ukažemo na učestalost metaboličkih poremećaja i povezanost istih a hipertenzijom kod žena u menopauzi.

**Metodologija:** U ispitivanje je bilo uključeno 200 sredovečnih žena, 131 (65,5%) pre menopauze mlađih od 49 godina i 69 (34,5%) u menopauzi (50-59 godina), koje su se javile na preventivni lekarski pregled lekaru u domu zdravlja u Kosovskoj Mitrovici u periodu od septembra do decembra 2024.g.

**Rezultati:** Hipertenzija je statistički značajno učestaliji kod žena u menopauzi (84.1%), u odnosu na žene pre menopauze ( $p<0.001$ ). Žene u menopauzi su značajno češće imale metaboličke poremećaje, povećanu telesnu masu i gojazost i to kod 66,7% ispitaničica i veći obim struka kod 63,8% ( $p=0.003$ ) ispitaničica. Nivo ukupnog holesterola, LDL-holesterola i triglicerida su bili statistički značajno viši kod žena u menopauzi u odnosu na žene pre menopauze ( $p=0.002$ ). Diabetes mellitus je statistički značajno učestaliji kod žena u menopauzi gde je zastupljen kod 27% žena ( $p=0.002$ ). Većina drugih biohemijskih varijabili bila je slična kod obe grupe ispitaničica kao i nivo homocisteina, mokraćne kiseline i vitamina D.

**Zaključak:** Žene u menopauzi su značajno češće imale hipertenziju, gojaznost, dislipidemiju i diabetes mellitus 2. Zato su neophodni preventivni pregledi žena u perimenopauzi i menopauzi kako bi se pravovremeni prepoznali i lečili kardiometabolički poremećaji i tako sprečile teže kardiovaskularne bolesti.

**Ključne reči:** kardiometaboličke bolesti, hipertenzija, menopauza

### ABSTRACT

**Introduction and the purpose:** Cardiometabolic diseases, including type 2 diabetes (T2D) and cardiovascular disease, and their associated factors, such as hypertension, dyslipidemia, insulin resistance and obesity are among the leading causes of morbidity and mortality. The purpose of our research was to indicate the frequency of metabolic disorders and their association with hypertension in menopausal women.

**Method:** The study included 200 middle-aged women, 131 (65.5%) premenopausal women under the age of 49, and 69 (34.5%) women in menopause (aged 50-59), who participated in a preventive screening in December 2024. The aim of our research was to highlight the prevalence of metabolic disorders and their association with hypertension in women during perimenopause and menopause.

**Results:** Hypertension was statistically significantly more common in women in menopause (84.1%) compared to premenopausal women ( $p<0.001$ ). Women in menopause had significantly higher rates of metabolic disorders, increased body mass and obesity, with 66.7% of the participants affected, as well as a larger waist circumference in 63.8% of the participants ( $p=0.003$ ). Menopausal women had statistically significant higher levels of triglycerides, LDL cholesterol, and total cholesterol than premenopausal women ( $p=0.002$ ). Among women going through menopause, diabetes mellitus was statistically substantially more prevalent, affecting 27% of them ( $p=0.002$ ). Premenopausal women had a statistically significant greater prevalence of hyperhomocysteinemia than did menopausal women ( $p = 0.002$ ). These two groups of participants did not differ significantly in terms of sedentary habits, smoking, or family history of hypertension.

**Conclusion:** Hypertension, type 2 diabetes, hypercholesterolemia, and obesity were all substantially more common in menopausal women. Menopausal women have a higher risk of metabolic disorders and cardiovascular diseases than premenopausal women and men of the same age.

**Key words:** cardiometabolic diseases, hypertension, menopause