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# MODERN THERAPEUTIC PRINCIPLES IN THE FIGHT AGAINST HYPERTENSION

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Hypertension is the major modifiable cardiovascular (CV) disease risk factor. Despite the availability of numerous efficacious and safe medications and non-pharmacological measures, rates of blood pressure (BP) adequate control in hypertensive patients are not satisfactory, both in Serbia and in the world. Lifestyle adjustments (dietary sodium limitation, weight reduction, healthy diet, regular physical activity, alcohol consumption moderation and smoking cessation) remain the basic component of successful hypertension treatment and lowering overall CV risk. First-line antihypertensive agents are angiotensin-converting enzyme inhibitors or angiotensin receptor blockers, calcium channel blockers, thiazide/thiazide-like diuretics, and β-blockers (the latter are first-line agents only in presence of a compelling comorbidity). These classes of antihypertensives have an advantage over others because, in addition to lowering BP, they have been shown to reduce the risk of major CV events (myocardial infarction and/or stroke) and death in hypertensive patients. Majority of the latest guidelines give primacy to the combination of antihypertensive agents from the very beginning of treatment for most patients. By combining drugs that target different mechanisms involved in BP regulation, greater efficacy and/or improved tolerability may be achieved, due to additive or synergistic interaction between components. Utilization of single-pill containing two or more antihypertensive agents enables improving patient adherence. Second line antihypertensive agents (mineralocorticoid receptor antagonists, centrally acting agents, α-blockers, vasodilators and other classes of diuretics) are added when satisfactory BP control cannot be achieved with first-line drugs combinations or when comorbidities favor their use. Device-based treatments (e.g. renal denervation) are reserved for treatment of pharmacologically intractable hypertension.

## References

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Hipertenzija je glavni faktor rizika za kardiovaskularne (KV) bolesti na koji se može uticati. Uprkos dostupnosti mnogih efikasnih i bezbednih lekova i nefarmakoloških mera, stope adekvatne kontrole krvnog pritiska (KP) u hipertoničara nisu zadovoljavajuće, kako u Srbiji tako i u svetu. Prilagođavanje životnih navika (ograničenje unosa natrijuma, smanjenje telesne mase, zdrava ishrana, redovna fizička aktivnost, umerenost u konzumiranju alkohola i prestanak pušenja) ostaje osnovna komponenta uspešnog lečenja hipertenzije i smanjenja ukupnog KV rizika. Antihipertenzivi prve linije su inhibitori angiotenzin-konvertujućeg enzima ili blokatori angiotenzinskih receptora, blokatori kalcijumovih kanala, tiazidni/tiazidima slični diuretici i β-blokatori (smatraju se lekovima prve linije samo kada postoje komorbiditeti u kojima su β-blokatori indikovani). Ove klase antihipertenziva imaju prednost u odnosu na druge jer, osim što snižavaju KP, dokazano smanjuju rizik od KV događaja (infarkta miokarda i/ili mozga) i smrti kod hipertoničara. Većina aktuelnih smernica daje primat kombinaciji antihipertenziva od samog početka lečenja kod većine pacijenata. Kombinovanjem lekova usmerenih na različite mehanizme uključene u regulaciju KP mogu se postići veća efikasnost i/ili bolja podnošljivost terapije, zbog aditivne ili sinergističke interakcije između komponenti. Primena fiksne kombinacije koja sadrži dva ili više antihipertenziva poboljšava adherencu pacijenta. Antihipertenzivi druge linije (antagonisti mineralokortikoidnih receptora, centralno delujući antihipertenzivi, α-blokatori, vazodilatatori i druge klase diuretika) dodaju se kada se kombinacijama lekova prve linije ne može postići zadovoljavajuća kontrola KP ili kada komorbiditeti favorizuju njihovu upotrebu. Različite intervencije (npr. renalna denervacija) rezervisane su za pacijente u kojih se hipertenzija ne može kontrolisati lekovima.

### Literatura

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