






Liječenje hiperlipidemije u bolesnika s vrlo visokim i ekstremno visokim rizikom u Hrvatskoj

Management of hyperlipidemia in very high and extremely high-risk patients in Croatia

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Cilj: Provedena je opservacijska studija, koja je uključivala bolesnike koji su liječeni zbog hiperlipidemije u središnjoj/istočnoj Europi i Izraelu, sa svrhom procjene trenutnog liječenja povišenih vrijednosti LDL kolesterola (LDL-C). Ovdje predstavljamo podatke iz hrvatske populacije.

Bolesnici i metode: U studiju su uključeni punoljetni bolesnici, koji su primali terapiju za snižavanje lipida (LLT) i kontrolirali su se kod specijalista (kardiologa/dijabetologa) ili liječnika obiteljske medicine u Hrvatskoj. Podaci su prikupljeni retrospektivno tijekom 12 mjeseci iz bolesničke medicinske dokumentacije. Bolesnici su podijeljeni s obzirom na kardiovaskularni rizik u dvije grupe: grupu s vrlo visokim rizikom (VHR) prema europskim

Aim: An observational study was conducted to evaluate current management of elevated low-density lipoprotein cholesterol (LDL-C) in patients being treated for hyperlipidemia across central/eastern Europe and Israel. Information from this region is somewhat limited at present. Here we present data from the Croatian subpopulation.

Patients and Methods: We enrolled adult patients who were receiving lipid-lowering therapy (LLT) and attending a specialist (cardiologist/diabetologist/lipidologist) or general practitioner (GP) for a routine visit at a participating academic/specialist/GP centre in Croatia. Data were collected retrospectively from patients' records for the preceding 12 months. Patients were classified by car-

TABLE 1. Patient population. Values are shown as n (%) unless otherwise indicated.

	Very High Risk (n=41)	Extreme High Risk (n=48) ^a
Male/female	35 (85.4%)/6 (14.6%)	34 (70.8%)/14 (29.2%)
Age (mean, range), years	66.1 (56-78)	64.3 (46-82)
Weight (mean, range), kg	88.9 (57-173)[n=32]	85.0 (49-125)[n=38]
Current Smoker	9 (22.0%)	10 (20.8%)
Diabetes	6 (14.6%)	24 (50.0%)
STEMI	12 (29.3%)	13 (27.1%)
Statin-intolerant ^b	1 (2.4%)	2 (4.2%)
Time from diagnosis ^c		
< 1 Year	9 (22.0%)	13 (27.1%)
≥1 to <2 Years	2 (4.9%)	2 (4.2%)
≥2 to <3 Years	1 (2.4%)	1 (2.1%)
≥3 to <4 Years	0 (0%)	1 (2.1%)
≥4 to <5 Years	1 (2.4%)	1 (2.1%)
≥5 Years	8 (19.5%)	12 (25.0%)
Missing	20 (48.8%)	18 (37.5%)
HDL-C (mmol/L) ^d	1.1 (1.0, 1.3)	1.0 (0.8, 1.2)
Triglycerides (mmol/L) ^d	1.3 (1.1, 1.5)	1.5 (1.0, 2.4)
Total cholesterol (mmol/L) ^d	3.5 (3.2, 3.9)	3.7 (3.3, 4.8)

a. Progressive ASCVD after achieving LDL-C <1.8 mmol/L; established clinical CV disease in patients with diabetes mellitus, CKD stage 3/4, or heterozygous FH; history of premature ASCVD (aged <55 years male, <65 years female); b. Symptoms of statin intolerance; c. Time from diagnosis of hyperlipidemia to study enrolment; d. Median (Q1, Q3) values at the last visit.

smjernicama^{1,2}, ili ekstremno visokim rizikom (EHR) prema nedavnim kriterijima američke udruge kliničkih endokrinologa (AACE)³.

Rezultati: U okviru 4 centra uključeno je 89 bolesnika (svi bolesnici su dobivali terapiju za snižavanje lipida kao mjeru sekundarne prevencije: VHR 41 / EHR 48) (**tablica 1**). Svi su primali statine, kao monoterapiju: 38 VHR (92,7%) / 40 EHR (83,3%) ili kombinaciju statina s fibratima (VHR 4,9% / EHR 14,6%) ili ezetimibom (VHR 2,4% / EHR 2,1%). Oko 70% bolesnika u obje podskupine liječeno je visokim dozama statina (atorvastatin 40-80mg ili rosuvastatin 20-40mg/dan). Tijekom opservacije u VHR grupi medijan vrijednosti LDL-C (Q1; Q3) iznosio je 2,5 (2,0; 3,8) mmol/L u prvoj i 1,9 (1,6; 2,4) mmol/L u zadnjoj posjeti. U grupi bolesnika s EHR odgovarajuće vrijednosti LDL-C (Q1; Q3) bile su 2,4 (1,7; 3,7) mmol/L i 2,1 (1,5; 3,1) mmol/L. Samo 17 (41,5%; 95% CI 26,3-57,9) bolesnika s VHR i 13 (27,1%; 15,3-41,9) bolesnika s EHR imali su razine LDL-C unutar ciljane razine (<1,8 mmol/L i <1,42 mmol/L). EHR skupina imala je niži medijan HDL-C od VHR skupine (1,0 vs 1,1 mmol/L, P <0,05) (**tablica 1**).

Zaključak: Rezultati studije pokazuju kako unatoč mjerama sekundarne prevencije velik broj visokorizičnih bolesnika i bolesnika s ekstremnim rizikom ima razine LDL-C koje premašuju ciljane vrijednosti preporučene u europskim i novijim AACE smjernicama¹⁻³. Usprkos navedenom mnogi bolesnici nisu liječeni statinima u visokoj dozi. Identifikacija bolesnika s ekstremnim rizikom i njihovih lipidnih obrazaca mogla bi povećati upotrebu visokih doza statina, samostalno ili u kombinaciji s novijim lijekovima, radi bolje kontrole povišenog LDL-C.

diovascular risk category: Very High Risk (VHR), according to European guidelines^{1,2} or Extremely High Risk (EHR) according to recent American Association of Clinical Endocrinologists (AACE) criteria.³

Results: 89 patients (all secondary prevention: VHR 41/EHR 48) were enrolled at 4 sites (**Table 1**). All were receiving statins, as monotherapy (VHR 92.7%/EHR 83.3%) or combined with fibrates (VHR 4.9%/EHR 14.6%) or ezetimibe (VHR 2.4%/EHR 2.1%). Approximately 70% of patients in both subgroups were taking high-intensity statins (atorvastatin 40-80mg or rosuvastatin 20-40mg/day). Median (Q1, Q3) LDL-C levels were 2.5 (2.0, 3.8) mmol/L at the first, and 1.9 (1.6, 2.4) mmol/L at the last, visit of observation for VHR. Corresponding levels were 2.4 (1.7, 3.7) mmol/L and 2.1 (1.5, 3.1) mmol/L for EHR. Only 17 (41.5%; 95% CI 26.3-57.9) VHR patients and 13 (27.1%; 15.3-41.9) EHR patients had LDL-C levels within target (<1.8 mmol/L and <1.42 mmol/L, respectively). In general, the EHR group had lower median HDL-C (P <0.05) than the VHR group (e.g. 1.0 vs. 1.1 mmol/L at last visit; **Table 1**).

Conclusion: Our findings indicate that a substantial proportion of VHR and EHR secondary prevention patients being treated across Croatia have LDL-C levels exceeding targets recommended in European and newer AACE guidelines.¹⁻³ Despite this, not all patients are receiving high intensity statins as recommended. Identification of EHR patients and their lipid patterns may help to optimize usage of high-intensity statin treatment, alone or in combination with newer treatments, for better control of elevated LDL-C.

LITERATURE

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