Šećerna bolest: faktor rizika i prognostički čimbenik u perifernoj arterijskoj bolesti

Diabetes – a risk factor and a prognosticator in peripheral vascular disease

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Uvod: Prognostička uloga šećerne bolesti, iako poznata u ishemijskoj bolesti srca i cerebrovaskularnoj bolesti, do sada nije podrobije istraživana u perifernoj arterijskoj bolesti (PAB). Proturječni rezultati su dobiveni istraživanjima o utjecaju dijabetesa na ukupnu smrtnost bolesnika s PAB.¹⁻³ Obzirom na navedeno, cilj je bio istražiti ulogu šećerne bolesti kao prognostičkog čimbenika ukupne smrtnosti bolesnika s PAB.

Metode: U svrhu provođenja meta-analize, a s ciljem istraživanja prognostičke uloge šećerne bolesti, sustavno je pregledana literatura iz baza podataka MEDLINE/PubMed i Scopus zaključno sa siječnjem 2016. godine. U završnu analizu uključeno je 21 istraživanje s ukupno 15,857 bolesnika.

Rezultati: Šećerna bolest bila je značajno povezana s povećanim rizikom ukupne smrtnosti bolesnika s PAB (OR 1,89; 95% CI 1,51-2,35, $p < 0,001$), bez zabilježene pristranosti uslijed nepotpunog objavljivanja ($p = 0,631$). Značajniji učinak na ishod zabilježen je u populaciji bolesnika s kritičnom ishemijom ekstremiteta, kao najtežom manifestacijom periferne vaskularne bolesti (OR 2,38, 95% CI 1,22-4,63, $p < 0,001$).

Zaključak: Šećerna bolest povezana je s povećanim rizikom ukupne smrtnosti u oboljelih od periferne arterijske bolesti, sa značajnijim učinkom u bolesnika s kritičnom ishemijom ekstremiteta.

Background: The prognostic role of diabetes, although well established in ischemic heart disease and cerebrovascular disease, was not extensively studied in peripheral artery disease (PAD). Due to the decrease trend in smoking globally, diabetes is fast becoming the major risk factor for PAD. There are accumulating studies showing the association between diabetes and all-cause mortality in peripheral vascular disease. However, the results in these studies were conflicting regarding the impact of diabetes on outcome.^{1,3} Therefore, we performed a comprehensive systematic review and meta-analysis to assess the prognostic significance of diabetes to predict all-cause mortality in PAD patients.

Methods: A meta-analysis was conducted to evaluate the association of diabetes with peripheral artery disease outcomes. Using MEDLINE and SCOPUS, we searched for studies published before January 2016. Additionally, studies were identified by manual search of references of original articles or review studies on this topic. In the final analysis, 21 studies with 15,857 patients were included.

Results: Diabetes was associated with a statistically significant increased risk of all-cause mortality (odds ratio: 1.89, 95% confidence interval: 1.51-2.35, $p < 0.001$), without detected publication bias (Egger bias = 0.75, $p = 0.631$). The stronger effect on outcome was obtained in patients with critical limb ischemia (odds ratio: 2.38, 95% confidence interval: 1.22-4.63, $p < 0.001$), as the most severe form of peripheral vascular disease.

Conclusion: Diabetes is associated with an increased risk of mortality in peripheral vascular disease, and the effect is even more pronounced in patients with critical limb ischemia.

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LITERATURE

1. Beckman JA, Paneni F, Cosentino F, Creager MA. Diabetes and vascular disease: pathophysiology, clinical consequences, and medical therapy: part II. *Eur Heart J.* 2013;34:2444-52. DOI: <http://dx.doi.org/10.1093/eurheartj/ehi142>
2. Vrsalović M, Vučur K. Diabetes and critical limb ischemia: the deadly duo in patients with symptomatic peripheral artery disease. *Acta Clin Croat.* 2016;55:240-6. DOI: <http://dx.doi.org/10.20471/acc.2016.55.02.09>
3. Vrsalović M, Vučur K. Diabetes, renal dysfunction, inflammation, and anemia: the deadly quartet in peripheral artery disease. *Endocr oncol metab* 2016 Mar 15;2(1):82-7. DOI: <http://dx.doi.org/10.21040/eom/2016.2.9>