

CRITICAL LEG ISCHEMIA AND INSULIN RESISTANCE

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BACKGROUND: The Metabolic Syndrome (MS) is a clustering of risk factors for cardiovascular diseases. Insulin resistance may be a part of the MS.

AIM: To examine cardiovascular risk factors and insulin resistance (IR) or MS in patients with critical leg ischemia (CLI) that could prevent, or delay treatment or cause undertreatment of CLI.

METHODS: Three hundred eight consecutive patients with CLI, referred to the University Hospital for surgical vascular treatment, were prospectively evaluated for cardiovascular risk factors and their treatments.

MS was defined by the Third Report of the National Cholesterol Education Program (ATP3) and homeostasis model HOMA-IR for insulin sensitivity analysis.

RESULTS: Patients consisted of 81.2 % males and 18.8 % females with a mean age of 70.2 ± 11.1 years. 13.5 % were obese (11.1% males and 24.1% females; $p=0.0025$). 72.8 % were hypertensive and 93.5 % dyslipidemic or on statin treatment, with no sex differences. 43.1 % of the patients were diabetic (38.1 % males vs. 64.9 females; $p<0.0001$)

26.1 % had increased HOMA-IR, with obesity (33.9 %), hypertriglyceridaemia (39.3 %) and fasting glucose ≥ 6.1 mmol/l (70.5 %), vs 8.6, 21.5 and 26.6 of normal HOMA-IR, respectively ($p<0.05$).

20.4 % of the dyslipidemic patients were on treatment (statins), and 32.2 % of them had an increased HOMA-IR vs. 67.8% of non-treated dyslipidemic patients ($p=0.013$).

Arterial occlusion was proximal in 63.9% of insulin-resistant vs 47.9% in insulin-sensitive patients ($p=0.0037$). MS was present in 15.5 % of all patients

DISCUSSION/CONCLUSIONS: 26.1 % of CLI patients had insulin resistance, with a more frequent proximal localization of arterial occlusion.

Dyslipidemic patients and those on statin treatment were less insulin-resistant than those without treatment, suggesting a pleiotropic action of statins on insulin resistance.