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People who have more proximal leg artery occlusion in type 2 diabetes are attracted to shorter life duration: 10 years follow up study

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Background and aim: We have sought to determine factors associated with age at death in patients with type2 diabetes (T2DM) investigated for peripheral arterial disease (PAOD).

Materials and Methods: There were n=167 T2DM, 140 with PAOD (G1-4) and n=27 Controls; patients were monitored from Jan-1997 till Dec-2006. CW-Doppler examination and segmental pressures showed: 35pts with crural PAOD (G1), 28 popliteocrural (G2), 36 femoropopliteal (G3) and 41 iliofemoral (G4). G1-4 and Controls were comparable in age and diabetes duration.

Results: In the beginning there was no difference either in their age or the duration of the diabetes for G1-4 and Controls (65.9±9.2 vs. 66.4±9.3, p 0.72; 16.8±8.1 vs. 18.2±7.4, p0.27). However in the end G1-4 died earlier (69.4±8.9) vs. Controls (74.1±7.4; p 0.045). At the end of this study, only 10 out of 167pts with PAOD (5.9%) and 7 out of the 27 Controls (25.9%) (X^2 p<0.001) were alive. Comparison of G1-4 subgroups and Controls concerning age at death: G1 (p 0.85), G2 (p 0.11), G3 (p 0.07), G4 (p 0.01). T-test between G4 (n=21 died pts) and Controls (who died, n=20): 67±8.4 vs.74.1±8.95, p 0.01, at the time of death; Lec 9.4±2.5 vs.7.3±2.3x10^9/l, p 0.05; insulin dependence after 12.8±7.7 vs. 18.8±7.9yrs, p0.05. X2 test: male 76 vs. 52%, p0.04; stroke 24% vs. 10%, p 0.03. NDS (neuropathy disability score) >4 86% vs. 60%, p<0.01; smoking 90% vs. 40%, p<0.01. In univariate analysis of both G4 and Control groups shorter life expectancy was connected with: HDL (r=+0.41, p<0.01), tg/HDL (r=-0.32, p0.04), BMI before DM (r=-0.28 p0.04), DM beginning (r=+0.63 p<0.01), IRI (isnulinemia) 9h (r=+0.40, p<0.01), age starting insulin therapy (r=+0.87 p<0.01); Thigh segmental pressure (r=+0.42, p <0.01), cigarette number (r=-0.54, p<0.01). In multiple logistic regression analysis statistically significant remained: shorter DM duration, earlier insulin dependence and number of cigarettes per day.

Conclusion: PAOD that had reduced the life span most significantly was noticed in iliofemoral region; it was more characteristic for diabetics whose disease started at earlier age, who were insulin resistant (tg/HDL) and whose pancreas was not as potent (IRI9h). Early introduction of rapid insulins is a very speculative therapeutic option.