

## **Transcutaneous oxygen tension in hyperbaric condition as a predictor of ischaemia in non-healing diabetic foot ulcers**

**Cechurova D, Rusavy Z, Lacigova S, Ruzicka J, Novak M, Jankovec Z.**

I. interni klinika Lekaiske fakulty UK a FN, Plzen.

The aim of the study was to evaluate the contribution of basal and modify transcutaneous oxygen tension measurement (T<sub>cp</sub>O<sub>2</sub>) to diagnosis of ischaemia and indication of angiography in non-healing diabetes foot ulcers: **METHOD:** 69 patients with non-healing diabetic ulcers localised on 76 legs underwent angiography (DSA) and basal and modify T<sub>cp</sub>O<sub>2</sub> measurement after 100 % O<sub>2</sub> exposition under normo- and hyperbaric conditions.

**CHARACTERISTIC OF PATIENTS:** mean age 66 years (42 81), diabetes duration 14.3 years (1 - 36), glycated hemoglobin 7.9 % (+/-1,35). **RESULTS:** Clinically important angiographic findings were obtained in 80 % (61/76) all ulcers. Basal T<sub>cp</sub>O<sub>2</sub> < or = = 30 mm Hg was detected in 82 % diabetic ulcers with positive DSA (sensitivity - SN). The specificity (SP), positive and negative predictive value (PPV, NPV), relative risk (RR) and accuracy (A) of test were 60 %, 89 %, 47 %, 1.7 and 78 % respectively. T<sub>cp</sub>O<sub>2</sub> with hyperbaric 100 % O<sub>2</sub> was determined as the strongest predictor of ischaemia by statistical logistic regression. SN (91%), SP (77%), PPV (94 %), NPV (67 %, RR (2.8) and A (88 %) of test were increased (cut off 270 mmHg). **CONCLUSION:** T<sub>cp</sub>O<sub>2</sub> measurement contributes to the diagnosis of ischaemia in non-healing diabetic ulcers. Modify T<sub>cp</sub>O<sub>2</sub> increases the test value.

PMID: 16737148 [PubMed - indexed for MEDLINE]