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Transcutaneous oxygen pressure (TcPO₂) and ulcer outcome in diabetic patients: Is there any correlation?

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Abstract

BACKGROUND: Due to poor blood circulation, the prevalence of foot ulcer is extensively reported among diabetic patients. Diabetic neuropathy is the critical factor of diabetes that can affect the nerves. **OBJECTIVE:** To examine the outcomes and correlation between TcPO₂ and ulcer outcomes among diabetic patients. **MATERIAL AND METHODS:** A prospective cohort design has been employed to compare and correlate TcPO₂ group with ulcer outcomes. A total of 192 patients were enrolled, who underwent diagnosis for ulcer outcome. Descriptive analysis and Pearson Correlation were used for data analysis via SPSS version 20. **RESULTS:** The prevalence of minor amputation among diabetic patients in 25-40 mmHg 75 (85.22%) and >40 mmHg 73 (84.88%) group is reported for ulcer outcome. Mostly diabetic patients were healed with intact skin (male = 36, female = 73), and improved ulcer healing (male = 23, female = 43). Correlation between ulcer size (p = .016), ABI (p = .044), TBI (p = .000), Adiponectin (p = .009), HbA1c (p = .033), and S. creatinine (p = .025) was significant with TcPO₂ group. **CONCLUSIONS:** The study concluded that there is a positive and significant correlation between TcPO₂ group and ulcer outcome. There is a positive association between TcPO₂ baseline and degree of ulcer healing with intact skin.

KEYWORDS: Amputation rate; Correlation; Diabetic patients; TcPO₂; Ulcer outcomes
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