Potential benefits of hyperbaric oxygen therapy on atherosclerosis and glycaemic control in patients with diabetic foot.


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Abstract
INTRODUCTION:
The aim of this study was to investigate the effects of hyperbaric oxygen therapy (HBOT) on glycaemic control, atherosclerosis, inflammatory markers, and other clinical and laboratory parameters in patients undergoing systemic HBOT for diabetic foot ulcerations.

MATERIAL AND METHODS:
Twenty-eight patients with Wagner grade 2-4 diabetic foot ulcerations were included. All patients were given 100% oxygen at 2.4 absolute atmosphere (ATA) for about 105 minutes, five times a week for a total of 30 sessions. Fasting blood glucose (FBG), haemoglobin A1c (HbA1c), homeostasis model measurement-insulin resistance (HOMA-IR), high sensitivity C-reactive protein (hs-CRP), uric acid, mean platelet volume (MPV), complete blood count, and lipid profile were tested.

RESULTS:
Upon completion of treatment, a statistically significant improvement was observed in the mean values of all assessed parameters.

CONCLUSIONS:
HBOT was shown to have beneficial effects on atherosclerosis and glycaemic control in diabetic patients. Further large-scale randomized studies are needed to study the systemic effects of HBOT.