# The effects of hyperbaric oxygen therapy on diabetic retinopathy: A preliminary studyLes effets de l'oxygénothérapie hyperbare (OHB) sur la rétinopathie diabétique : une étude préliminaire

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## Summary

### Purpose

The objective of this study was to prospectively assess the effect of hyperbaric oxygen therapy (HBOT) on diabetic retinopathy lesions and macular edema in patients undergoing the treatment for diabetic foot ulcers.

### Methods

We compared two groups: a first group including 25 patients with non-proliferative diabetic retinopathy treated by HBOT for foot ulcers, and a second group (control group) composed of 25 patients with diabetic retinopathy who did not receive HBOT. The HBOT protocol performed for the patients in the first group was: 30 sessions of 90 minutes each at 2.5 ATA with a mean frequency of five sessions per week. All patients had an ophthalmological exam at baseline (visual acuity, intraocular pressure, fundus exam), fundus photography and an OCT exam. A follow-up exam was performed at the conclusion of the HBOT.

### Results

Compared to the control group, patients treated with HBOT showed a regression or stabilization of diabetic retinopathy lesions and a decrease in central macular thickness (CMT).

## Conclusion

Hyperbaric oxygen therapy may improve diabetic retinopathy and diabetic macular edema. This therapy may serve as an adjunctive treatment in the management of retinal ischemia and capillary hyperpermeability in diabetic retinopathy.