High-Pressure Oxygen Therapy in Ophthalmology

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Although the idea of administering extra oxygen under high pressure is quite old (historical surveys even go back as far as Aristotle), its modern development is quite up-to-date, thanks to improved techniques, by means of which it has been possible to learn, by experiment, the dangers of, and indications for, clinical

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administration. Although the administration of extra oxygen has a bad reputation in ophthalmology (consider the clinical picture of retrolental fibroplasia), the fact that one can raise the amount of oxygen dissolved in the serum by this therapy from 0.3 to 6 volumes % (on raising the pressure by 3 atmospheres) is important enough to make one consider the possibilities of this therapy in ophthalmology in certain cases of vascular insufficiency.

This therapy and the possible indications are discussed on the basis of a small group of 8 patients.

Three patients reacted favourably, while in the other five no improvement was observed.

The possible application of high pressure oxygen therapy in ophthalmology is discussed, on the basis of the diseases from which the various patients were suffering and their reaction to the therapy.

(To be published more fully elsewhere.)

Discussion

Van Senus thanks the speaker for pointing out this new potential therapeutic weapon. It may be worth trying out this therapy on patients in whom the vascular origin of the condition is not certain. I am thinking of Leber's disease. In this disease it is not known definitely whether the primary lesion is vascular or not. The operative result—a more rapid recovery of sight in a number of patients—is considered by Verbiest to be due to increase in the circulation during and after the operation.

I should therefore like to know, in the first place, whether serious complications have occurred with this therapy. If not, I should suggest that Leber patients in an early stage of the disease should be given the opportunity of undergoing this therapy.

Veheboer replies: Pathological conditions of the ear, nose or throat are a contra-indication. An E.C.G. should also be made before commencing treatment. Furthermore, some patients are psychologically unable to stand this therapy.