[The role of chronic or transient hypoxia on the retinal nerve fiber layers]

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BACKGROUND
In a clinical study, the role of chronic hypoxia in patients with chronic obstructive pulmonary disease or the role of transient hypoxia in patients with obstructive sleep apnea syndrome were examined for the peripapillary retinal nerve fiber layers.

PATIENTS AND METHODS
10 patients with chronic obstructive pulmonary disease GOLD stages 3 or 4 (4 men and 6 women, age 47 to 71 years, mean 60.6 years) and 10 patients with obstructive sleep apnea syndrome with an apnea-hypopnea index of 15 or more (8 men and 2 women, age 39 to 76 years, mean 60.7 years) were included in the study. The thickness of the retinal nerve fiber layers was measured with an optical coherence tomography.

RESULTS
In the group with chronic obstructive pulmonary disease and in the group with obstructive sleep apnea syndrome, the measurements of the retinal nerve fiber layers were in normal range.

CONCLUSIONS
By using optical coherence tomography, no lesions to the retinal nerve fiber layers were detectable in patients with chronic or transient hypoxia. The findings of the study could be limited by the too short duration of the disease and/or to the too small number of patients.