Primary open-angle glaucoma is associated with sleep apnea syndrome

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INTRODUCTION: The etiology of primary open-angle glaucoma remains unclear. Various risk factors, including vascular abnormalities, have been associated with this disease. Sleep-associated diseases, like sleep apnea syndrome, might also represent a risk factor. Sleep apnea syndrome is characterized by repetitive upper airway obstructions during sleep, inducing hypoxia and sleep disruption with the risk of cardiovascular and neurological sequelae. In this study, we determined the prevalence of sleep apnea syndrome in primary open-angle glaucoma patients.

METHODS: Overnight transcutaneous finger oximetry was performed in 30 consecutive patients having primary open-angle glaucoma. We assessed the oximetry disturbance index during night sleep, a parameter used to diagnose sleep apnea syndrome and to grade its severity.

RESULTS: Sleep apnea syndrome was more prevalent among primary open-angle glaucoma patients compared to normal historic controls of the same age and sex distribution (chi(2) = 9.35, d.f. = 3, p < 0.025). The oximetry disturbance index grade was significantly larger in the primary open-angle glaucoma group compared to normal controls (U = 3352, p = 0.01). According to the oximetry disturbance index, 20% (6/30) of primary open-angle glaucoma patients had sleep apnea syndrome.

CONCLUSION: Primary open-angle glaucoma is associated with sleep apnea syndrome. Early recognition and treatment of sleep apnea syndrome are important to avoid cardiovascular and neurological complications.