

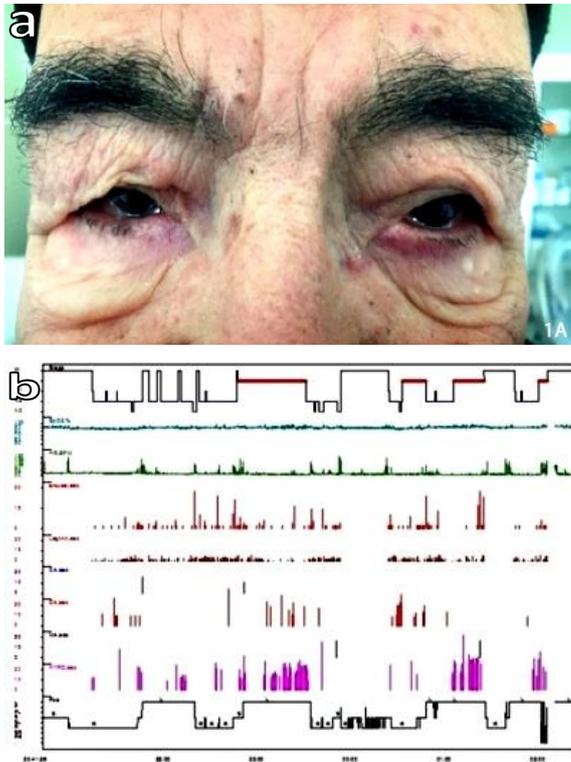


## Relation of Floppy Eyelid Syndrome with Obstructive Sleep Apnea

### *Gevşek Gözkapağı Sendromu ile Obstrüktif Uyku Apnesi İlişkisi*

To The Editor,

A 76-year-old man was referred to the department of chest diseases due to floppy eyelid syndrome (FES) by an ophthalmologist (Figure 1A). The patient had snoring and daytime fatigue without any comorbidity. His physical examination revealed Class 2 Mallampati with an Epworth scale score of 8. His body mass index was 30.1 kg/m<sup>2</sup> and the patient underwent the polysomnography test (Figure 1B). The apnea-hypopnea index (AHI) was 33.8/h throughout the nighttime. The patient was diagnosed with severe obstructive sleep apnea syndrome (OSAS) and his symptoms improved with automatic continuous positive airway pressure (CPAP) treatment at 9 cmH<sub>2</sub>O pressure.



**Figure 1a and b:** A 76-year-old men with floppy eyelid syndrome (a), the hypnogram of the case (b)

Floppy eyelid syndrome is a clinical entity which has already been extensively investigated in terms of clinical characteristics, local and systemic associations, and treatment since its first description (1). Recent studies have suggested a relationship between OSAS and FES (2). The prevalence of OSAS in patients with FES has been reported to range from 96% to 100% in two retrospective case series performed by McNab (3,4). These studies evaluating the prevalence of FES in patients with OSAS demonstrated a relatively low prevalence, ranging from 4.5% to 5.0% (3,5). Also, Acar et al. (6) reported high rates and stages of FES in patients with advanced AHI scores in 280 patients in a sleep clinic, and explained the mechanism of tissue mechanic by hypoxemia.

In general, patients with FES presents with non-specific irritation, foreign body sensation, mucous discharge, dryness, redness, photosensitivity, eyelid swelling, and vision impairment (7). Although it has not been clearly understood yet, it has been reported to be associated with some systemic and ophthalmic diseases such as obesity, OSAS, ischemic heart disease, skin disorders, connective tissue disorders, corneal and eyelids abnormalities, glaucoma, and hypertension (8). A genetically predisposition, such as genetic abnormalities in collagen, elastin, or both, associated with age and sleeping patterns, have been also postulated. Connective tissue disorder may explain the coexistence of FES and OSAS. Redundancy of tissue in the tarsal plate of lateral canthal tendons may contribute to the development of FES. Similarly, the excess of oropharyngeal tissues results in the upper airway obstruction during sleeping in particular (9).

Irrespective of the underlying mechanism of the disease pathogenesis, the main characteristic of the OSAS remains the increased laxity of the eyelid, and the evaluation can be useful in terms of early diagnosis as in our case. Many OSAS cases are not

diagnosed in time, and a full ophthalmologic assessment consisting of a careful lid laxity evaluation can contribute to the early diagnosis.

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## CONFLICTS OF INTEREST

None declared.

## AUTHOR CONTRIBUTIONS

Concept - A.C.P., Y.G., M.A.A.; Planning and Design - A.C.P., Y.G., M.A.A.; Supervision - M.A.A., A.C.P., Y.G.; Funding - A.C.P., Y.G., M.A.A.; Materials - Y.G.; Data Collection and/or Processing - A.C.P., M.A.A.; Analysis and/or Interpretation - A.C.P., M.A.A.; Literature Review - Y.G., M.A.A.; Writing - A.C.P.; Critical Review - A.C.P., M.A.A.

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