Retropharyngeal lipoma causing obstructive sleep apnoea

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Abstract
We present the case of a middle-aged man whose obstructive sleep apnoea (OSA) was caused by a retropharyngeal lipoma, with complete resolution after transoral excision. Lipomas causing OSA are rare, and this represents the seventh reported case in the literature.

Introduction
It is well recognized that space-occupying upper airway lesions can reduce cross-sectional airway size, causing airway obstruction.

A reduction in the mobile-walled component of the pharyngeal airway, coupled with the loss of pharyngeal tone of sleep, can cause intermittent inspiratory airway compromise and obstructive sleep apnoea (OSA) [1].

We describe a 53-year-old male whose OSA was caused by a space-occupying retropharyngeal lipoma, with cure by transoral excision.

Case Report
A 53-year-old male was referred for snoring, tiredness, and left-sided throat discomfort. He was otherwise well, on no medications. He had a diagnosis of OSA and had been reviewed by two sleep physicians and another surgeon. He had trialled continuous positive airway pressure unsuccessfully due to poor tolerance.

On examination, his body mass index was 27.6 kg/m². Oral examination was problematic due to vigorous gag reflex and tongue relaxation difficulty. There was slight, non-palpable asymmetry in the left parapharyngeal region.

Flexible nasal endoscopy revealed a subtle reduction of lateral pharyngeal wall concavity.

Polysomnography confirmed moderate OSA, with an overall apnoea–hypopnea (AHI) index of 26 events/h, which became severe during Rapid Eye Movement (REM) sleep with an AHI of 55 events/h.

Given pharyngeal symptoms and subtle parapharyngeal distortion, magnetic resonance imaging was performed demonstrating a retropharyngeal lesion with high T1 and T2 signals with attenuation on fat suppression consistent with a lipoma (Figure 1).

The patient underwent transoral excision of the lipoma under general anaesthetic, with an oral endotracheal tube. Access was achieved by a Boyle–Davis gag, with the patient supine, neck extended over a shoulder roll. The pharyngeal wall was incised vertically to the left of the midline, and the lipoma exposed. The soft fatty tumour was incised vertically to the left of the midline, and the lipoma exposed. The soft fatty tumour was surrounded by a thin fibrous multi-septated capsule, and enucleated by dissection beyond the incision confines. This allowed access laterally into the parapharyngeal space onto the carotid sheath. The lipoma was removed intact, haemostasis obtained with diathermy, and the pharyngeal wall sutured.

Histopathology confirmed a lipoma. The post-operative course was complicated by seroma formation after
approximately a week with mild pain and dysphagia, readily resolved by percutaneous drainage. The specimen is shown in Figure 2.

Polysomnography five months post-surgery demonstrated cure with residual AHI 2.2. This was despite more supine sleep seen in the follow-up study (2 min preoperative, 202 min post-operative). The patient’s weight was unchanged. At six months, the patient remained well, without snoring.

Discussion

Lipomas are benign mesenchymal tumours consisting of mature adipocytes. In the head and neck, they tend to occur in the posterior neck space, with only rare anterior space occupation [2]. Owing to their slow growth rate, they often reach considerable size before being detected. Retropharyngeal lipomas are rarely reported to cause OSA, with only six published cases [1].

This case highlights the importance of clinical examination and diagnostic suspicion. The most consistent risk factors for OSA include obesity, male gender, and poorer oropharyngeal anatomy [3]. The assessment of patients with suspected OSA should be tailored to risk factors and in this case, male gender and obesity were present; however, suspicion for a tumour was raised on the history of neck discomfort and physical examination, previously overlooked. Computed tomography may suggest the diagnosis; however, magnetic resonance imaging is the modality of choice, with 100% specificity for simple lipomas [4], and entails no radiation exposure.

The preferred surgical approach is transoral, and the use of a suction drain at surgery might have helped obliterate the post-operative dead-space, avoiding the post-operative problem of a seroma.

Disclosure Statements

No conflict of interest declared.
Appropriate written informed consent was obtained for publication of this case report and accompanying images.

References

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