

## Lipoma in fossa of Rosenmüller

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### Abstract

We report the first case of a lipoma originating in the fossa of Rosenmüller. Although lipomas are a common benign tumour in the body, lipomas of the nasopharynx are rare.

**Key words:** Nasopharyngeal neoplasms; Lipoma

### Introduction

Lipoma is the most common neoplasm of mesenchymal origin. Thirty per cent of them arise in the head and neck and most of them occur subcutaneously in the posterior neck.<sup>1</sup> Rarely, they develop in the anterior neck, infra-temporal fossa and in or around the oral cavity, pharynx, larynx and parotid glands.<sup>1</sup> The solitary lipoma, which is composed of mature fat has evoked relatively little interest in the literature as most grow insidiously and cause few symptoms other than the effects of a localised mass.<sup>2</sup>

A two-year-old infant was described as having lipomatous nasal polyps,<sup>3</sup> and a 12-year-old girl was found to have a lipoma situated on a stalk inferior to the left eustachian tube orifice.<sup>4</sup> Another report describes an asymptomatic 49-year old woman who underwent excision of a pedunculated lipoma arising from the roof of the nasopharynx<sup>5</sup> and Puri *et al.*<sup>6</sup> reported a 30-year-old woman who had lipoma arising from the upper surface of the soft palate and hanging into the pharynx. This is the first case report of a lipoma arising from the fossa of Rosenmüller causing the symptoms of partial upper airway obstruction.

### Case report

A 40-year-old man presented with symptoms of snoring and the sensation of something stuck in the back of his nose for 18 months. He had undergone a septoplasty operation about 10 years ago for symptoms of nasal obstruction. On endoscopic examination of the nose and post-nasal space, a bluish well-circumscribed swelling was seen to arise from the left fossa of Rosenmüller about 2 cm in diameter and completely overhanging the eustachian tube opening. The rest of the examination was untoward and the neck was free of any disease. A computed tomography (CT) scan of the post-nasal space showed an irregular soft-tissue mass in the posterior wall of the nasopharynx of approximately 2 cm maximum diameter. No evidence of bony erosions was seen. Margins of the mass were however poorly defined. On magnetic resonance imaging (MRI) a fairly well circumscribed, approximately 2 × 1 cm lesion was seen to arise in the left fossa of Rosenmüller (Figure 1) with high intensity signals on both T1 and T2 weighted sequences. There was no enhancement after contrast. The signal changes were very suggestive of a benign fatty tumour such as lipoma. An

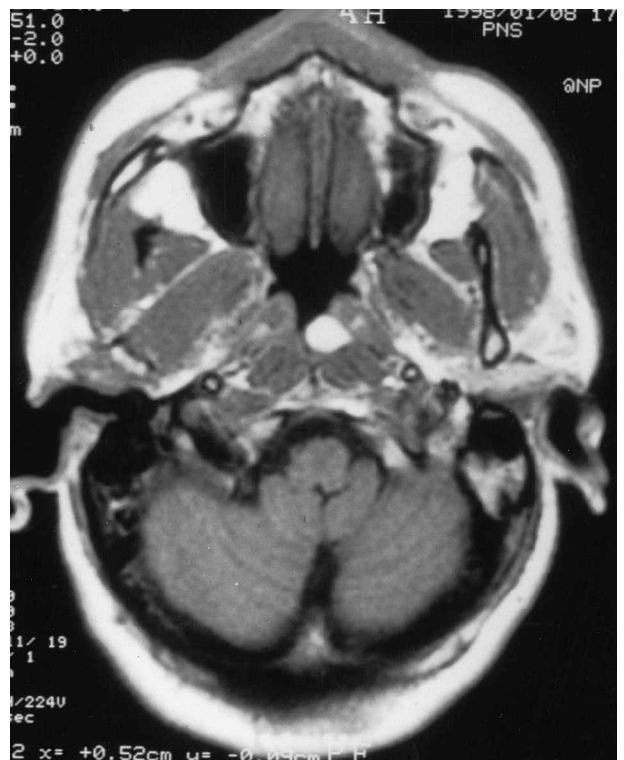


FIG. 1  
MRI Scan T1 weighted, demarcating the lipoma in the nasopharynx.

excisional biopsy of the mass was performed and histological diagnosis of lipoma confirmed. Post-operatively the patient noticed cessation of snoring and a year later he remains free of symptoms.

### Discussion

Lipomas are defined as slow growing, submucous, subcutaneous, encapsulated benign tumours, composed of adipose tissue. Some sources include congenital and acquired lipomatous masses that do not satisfy the

definition of a neoplasm.<sup>1</sup> Their growth is due to proliferation of cells similar to fibroblasts that lie sparsely around the blood vessels; with the passage of time, these cells fill with fat. Lipomas may contain areas of fibrous, myxomatous or capillary angiomatous tissue, these being denominated fibrolipoma, myxolipoma or angiolipoma respectively. Lipomas consist of mature fat cells, are single or lobulated and may be soft, firm or cystic.<sup>5</sup>

Given their slow growth, they are usually asymptomatic. Symptoms are derived from compression of adjacent structures.<sup>1</sup> Although their incidence in the human body is relatively high, in the ENT sphere their presentation is infrequent. Lipomas in the head and neck occur relatively rarely, making up to one to 2.2 per cent of all benign neoplasms of the oral cavity. In more than half of these cases localization is established in the tongue, floor of the mouth and lips, being followed in frequency by the lower pole of the tonsil, hypopharyngeal wall, aryepiglottic fold and retropharyngeal space.<sup>1</sup>

Lipomas are rare in the first two decades of life, usually developing in the fifth and sixth decades when fat begins to accumulate in inactive under-exercised individuals. In general, the tumour is more common in obese people and can increase in size during the period of rapid weight gain. However, after the initial growth period most lipomas increase little in size. Conversely, in cachectic patients or periods of starvation, the size of a lipoma is rarely affected, which suggest that the fat in these regions is largely unavailable for general metabolism.<sup>2,7</sup>

Below the clavicles lipomas are more common in obese female patients over 40 years old, but in the head and neck region, males in their seventh decade are most often affected.<sup>2</sup> The development of lipomas in patients on corticosteroid therapy or with Cushing's disease or at the site of insulin injections, suggest an endocrine relationship that is often reversible.<sup>8,9</sup>

Most nasopharyngeal lipomas arise from adipose tissue in the sub-mucosa and are attached by sessile stalk or pedicle. Clinical manifestations associated with a nasopharyngeal mass may be varied. In addition to rhinorrhoea, post nasal drip, nasal obstruction, foul nasal odour, halitosis, palatal or retropharyngeal mass, foreign body sensation, dysphagia, cervical adenopathy, voice change, cranial nerve involvement and meningitis.<sup>6</sup> In our case the major clinical findings were a smooth mass arising from the left fossa of Rosenmüller in addition to snoring caused by partial airway obstruction and a sensation of foreign body in the postnasal space.

The use of CT scanning and MRI proves invaluable in the diagnosis, evaluation of extent of disease and the management of nasopharyngeal lipomas. CT scanning combined with angiography proves useful in demonstrating the pathologic anatomy of infiltrating angiolipomas.<sup>10</sup>

Treatment for nasopharyngeal lipomas has been surgical excision of the tumour, this treatment being curative.<sup>1</sup> However lesions that recur are either deeply placed and less accessible to the surgeon or infiltrating lipomas that have microscopically invaded adjacent structures that are not resected at the time of the initial surgery.<sup>11</sup> These patients will require further surgical excision<sup>12</sup> although some authors have recommended post-operative radiotherapy in cases of recurrence of lipomas or sub-total resections.<sup>13</sup>

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