CASE REPORT

Oncocytic cyst of the larynx: a rare finding

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SUMMARY

A 75-year-old woman presented with an 18-month history of severe, slowly worsening dysphonia. She was a smoker and known to have multiple benign cystic thyroid lesions. She reported no associated symptoms and other medical and social history was unremarkable. Fibreoptic nasendoscopy revealed a right-sided supraglottic cyst appearing to arise from the right false vocal cord. Further bedside examination was unremarkable. She underwent microlaryngoscopy and biopsy which showed a cyst originating from the right anterior ventricle, successfully removed without rupture using cold steel. Formal histopathology revealed a 14×10×7 mm unilocular, completely excised cyst lined by oncocytic epithelium and composed of columnar cells with darkly stained nuclei and abundant granular, eosinophilic cytoplasm. Three weeks postoperatively the patient's voice had returned to normal. To date, 11 months postoperatively, there is no evidence of recurrence, and she will continue long-term follow-up.

a range of sites including the upper respiratory tract, tongue, pharynx, oesophagus and thyroid.¹ Laryngeal oncocytic cysts are very uncommon with approximately 150 cases described in the literature.¹ The significance of the occurrence of these cells in these various locations is not understood.

CASE PRESENTATION

A 75-year-old woman presented with an 18-month history of severe, slowly worsening dysphonia. She reported no nasal obstruction, dysphagia, odynophagia, stridor, shortness of breath, cough, haemoptysis, or loss of weight or appetite. She was a smoker, around 15 cigarettes per day, and was known to have benign thyroid nodules. Other medical and social history was unremarkable. Fibre-optic nasendoscopy revealed what appeared to be a saccular cyst arising from the right ventricle. It was covered with normal-looking mucosa and obscured the view of around 30% of the anterior glottis. Further bedside examination was unremarkable.

BACKGROUND

Oncocytic cysts are rare, benign slow-growing lesions lined predominantly or exclusively by oncocytes. Oncocytic change refers to metaplasia frequently occurring in epithelial endocrine cells with high metabolic activity. They can occur in

INVESTIGATIONS

The patient underwent microlaryngoscopy and biopsy which revealed a cyst originating from the right anterior ventricle (figure 1A). The cyst was successfully removed without rupture using cold steel (figure 1B). Friable underlying tissue was noted (figure 1C). Formal histopathology revealed a 14×10×7 mm unilocular, completely excised cyst lined by oncocytic epithelium composed of columnar cells with darkly stained nuclei and abundant granular, eosinophilic cytoplasm (figure 2).

OUTCOME AND FOLLOW-UP

Within 3 weeks postoperatively, the patient's voice had returned to normal. To date, 11 months postoperatively, there is no evidence of recurrence and she will continue long-term follow-up.

DISCUSSION

Oncocytic cysts can occur anywhere in the larynx, except the free edge of the true vocal cord as it is devoid of glandular epithelium. They are usually solitary with involvement of an isolated site and their architecture is varied; presenting as a polypoid, sessile, or pedunculated lesion or as a submucosal swelling.² Diffuse involvement with multiple cysts is extremely rare.³ Laryngeal oncocytic cysts are predominantly found in females and those who are elderly, or greater than 70 or 80 years of age with studies showing >80% laryngeal oncocytic cysts occur in patients greater 50 years of age.^{4,5}

Figure 1 (A) Intraoperative endoscopic photograph of the cyst right anterior arising from the right anterior ventricle. (B) Intraoperative photograph of the completely excised cyst measuring 14×10×7 mm. (C) Intraoperative endoscopic photograph showing the residual underlying friable tissue following excision of the cyst.

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Figure 2 Oncocytic cyst with a characteristic cell lining showing uniform cells with uniform dark small nuclei and eosinophilic granular cytoplasm. Opposite side shows transitional epithelium surface lining with focal squamous metaplasia.

Oncocytic cysts of the larynx most commonly present with hoarseness of voice, often for months or years before diagnosis. Pain, stridor or laryngeal obstruction are uncommon symptoms and, in some cases, patients are asymptomatic and the lesion is discovered incidentally. Conservative management with complete local excision is the mainstay of treatment. Endoscopically, this can be achieved by cold steel, as in our reported case, or more recently, with CO₂ laser.⁶

The cause of oncocytic laryngeal lesions and whether they represent true neoplasms or are degenerative in nature remains to be determined. There are no reports of malignant transformation of oncocytic laryngeal cysts but association with squamous cell carcinoma of the larynx has been reported.⁷ It is unclear whether this is coincidental but in this setting partial laryngectomy may be required.⁵ Recurrence is possible, particularly with multiple cysts at presentation.⁴ Complete primary resection with CO₂ laser has been shown to significantly reduce recurrence rates when compared with cold steel and also provides complete clearance with minimal bleeding.⁷ Nevertheless, long-term follow-up

is recommended due to the unclear malignant potential of these lesions. Clinicians should therefore be aware of this differential diagnosis and the uncertainty pertaining to the management of this lesion.

Learning points

- ▶ Laryngeal oncocytic cysts are rare occurring anywhere except the free edge of the true vocal cord as it is devoid of glandular epithelium.
- ▶ Conservative management with local excision is the mainstay of treatment.
- ▶ Long-term follow-up is recommended due to the unclear malignant potential of these lesions.
- ▶ Clinicians should be aware of this differential diagnosis and the uncertainty pertaining to the management of this lesion.

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