Laryngeal leiomyoma: A case report and review of the literature

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ABSTRACT
Leiomyoma is a benign tumour of the smooth muscle that is most typically located in the feminine genitourinary tract. Laryngeal localisation is very uncommon; only 43 cases have been reported in the world literature yet. Surgical resection is the main treatment and recurrences are extremely infrequent. We hereby present a case of laryngeal leiomyoma, its treatment and literature review.
Keywords: leiomyoma; larynx.

INTRODUCTION

Leiomyoma is a benign tumor derived from the smooth muscle, which usually occurs in the female genitourinary tract. Laryngeal localization is exceptional. Up to date, there have been described forty-three cases of laryngeal involvement in the medical literature[1]. Its definite diagnosis is histological, since clinical presentation is similar to other laryngeal neoplasms. Surgical resection is the current treatment, and recurrence is exceptional. In this paper, we present a case and we review the literature.

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CASE REPORT

A 75-year-old man, whose past medical history includes high blood pressure, chronic bronchitis, alcohol abuse and smoker, presented to the clinic with intermittent stridor and hoarseness. In one of these episodes, he was referred to the adult emergency department. Examination with the flexible endoscope revealed a normal supraglottis, with an almost completely blocked glottis by a rounded lesion. The rest of the examination was unremarkable. The patient has an urgent tracheostomy during admission. A CT scan showed a round lesion, well defined, slightly hypodense in the centre with an enhancement of its margins, implanted on the right ventricular band. A few days later, endolaryngeal microsurgery performed and the tumour was removed endoscopically. Pathologic examination disclosed an ulcerated leiomyoma with keratosis mucosa, no evidence of dysplasia. Histoenzymatic techniques were positive for vimentin and smooth muscle actin, and negative for CKpan, BCL-2, ADL, CD-34, EMA, S-100, Ki-67 and desmin.

The patient was successfully treated, the tracheostomy decannulated and discharged into the community. Then, he was followed up in the otolaryngology out patient department. There was no evidence of recurrence in the two following years, until he died of an oesophageal squamous cell carcinoma.

DISCUSSION

Laryngeal mesenchymal tumours represent less tan 1% of laryngeal tumours[2]. Leiomyoma is a benign tumour derived from smooth muscle, which typically affects the female genitourinary tract[3]. Other less frequent localization is the gastrointestinal tract, skin and subcutaneous tissue[3]. Laryngeal localization is exceptional. In the medical literature, there are not many papers about this entity, most of which are clinical case, with few publications with bring together a small number of cases[4]. To our knowledge, this is the 44th case of laryngeal smooth muscle tumour to be reported in the world literature. The last case corresponds to a 64-year-old woman[1]; in this case, a surgical resection via an external approach along with laser resection of a small glotitc component was needed.

Leiomyoma was included in the World Health

Organisation classification of tumour of soft tissue of 2002, within the group of tumours arising from smooth muscle. This classification distinguishes three histological groups: the angiomyoma, which is the most frequent (74% of cases), solid leiomyoma (25% of cases) and the exceptional leiomyoblastoma (1% of cases)

FIGURA 1
CT scan: a round lesion, well defined, implanted on the right ventricular band

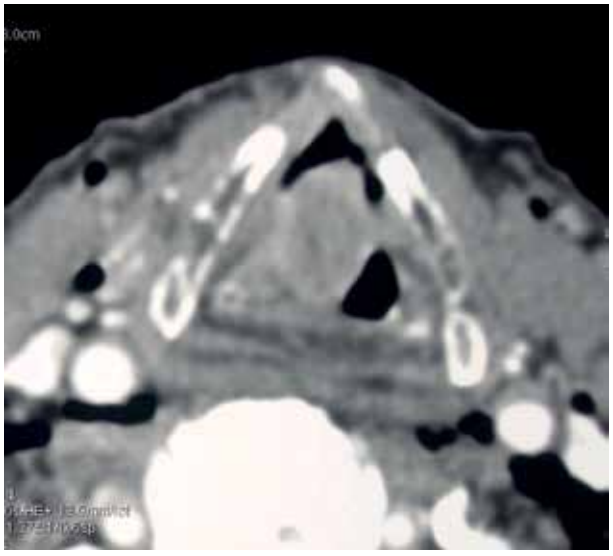
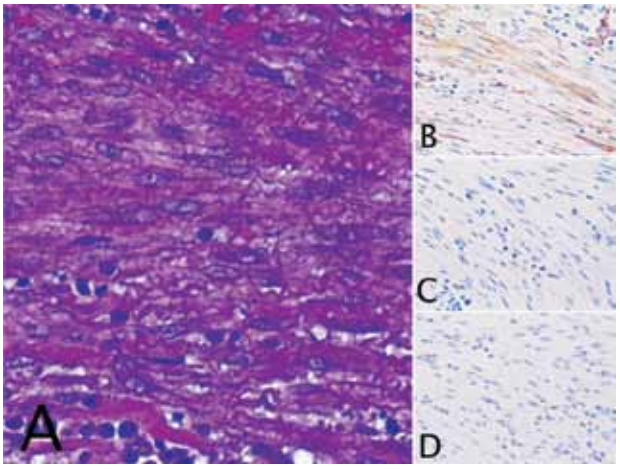


FIGURA 2
Histological image: haematoxylin / eosin (A) shows cell proliferation with formation of elastic fibers and discrete inflammatory infiltrate. Immunohistochemistry shows expression of smooth muscle actin (B), low expression of Ki67 in cell nucleus (C) and no expression of ADL (D).



(3,5). Our case report suffered from a solid leiomyoma. The main symptom of laryngeal leiomyoma is hoarseness, when it reaches a considerable size, dyspnoea may occur. However, it is difficult to make a differential diagnosis with other mesenchymal tumours by its clinical presentation[5]. Indeed, the postoperative diagnosis is by histopathology and immunohistochemistry tests. Both external appearance and imaging tests can be misleading. A positive alpha-actin confirms the origin from mesenchymal cell differentiation leiomiocitaria[3,6]. The differential diagnosis with leiomyosarcoma of low-grade malignancy may be complicated, and this differentiation is through the mitotic rate of less than 5/10 high magnification fields and the absence of atypia[2,7].

Treatment consists of surgical excision. Surgical approach, open or endoscopic, will depend on tumour size, blood loss expected and comorbidities. When a completed excision is achieved, recurrence is rare[1].

Our patient underwent surgery in April 2007 and had no recurrence in the next two years, until he died of oesophageal carcinoma.

CONCLUSION

The main symptom of laryngeal leiomyoma is hoarseness and dyspnoea may also occur. Definitive diagnosis requests histopathology and imnunohistochemitry tests. Treatment consists of surgical excision.

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