Chondrometaplasia of the vocal cord in an adult male

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A B S T R A C T

INTRODUCTION: (Chondrometaplasia of the larynx is a rare disease. We report a case that presented at the otolaryngology department in our institute in 2015.)

PRESENTATION OF CASE: A 62 year old man without any history of trauma presented with progressive dysphonia, dyspnoea, without any dysphagia. A fibreoptic laryngoscopic examination revealed nodular mass arising at the junction of anterior 1/3rd and posterior 2/3rd of left vocal cord.

DISCUSSION: A computed tomography scan of the neck region showed a rounded and circumscribed mass without infiltration of the surrounding tissues. Histological investigation of the lesion revealed the presence of fibroelastic cartilaginous tissue, surrounded by a thin rim of fibrous tissue, with rare hypercellular areas, occasional binucleated cells, slight hyperchromasia, and an irregular nuclear profile. Mitotic activity was absent.

CONCLUSION: The patient didn’t have history of laryngeal trauma. Subacute and progressive onset of clinical symptoms and histological and radiological findings helps to distinguish the chondrometaplastic nature from true laryngeal cartilaginous tumours, such as chondroma and low grade chondrosarcoma.

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1. Introduction

Chondrometaplasia of larynx is a rare entity with an unknown etiopathogenesis [1,2]. The lesion remains asymptomatic unless it reaches a large size and a history of trauma is usually elicited. It is a known pitfall in diagnostic evaluation and a clinically significant differential considered in evaluation of cartilaginous tumours of the larynx [4,5].

Nodular chondrometaplasia can arise in laryngeal tissues, but very rarely becomes clinically relevant [6]. A patient’s history of laryngeal trauma has been reported in literature Histopathology and Computed Tomography and MRI helps to differentiate chondrometaplasia from true cartilaginous tumours, such as chondroma and low grade chondrosarcoma [7]. The patient was first evaluated using an endoscopy (Figs. 1 and 2).

The work has been reported in line with SCARE criteria [8].

2. Pathology

Histologically, chondrometaplasia is typically characterised by a peripheral fibroelastic rim, with a transition to mature chondrocytes of the fibroelastic cartilage towards the centre of the nodule. Chondrometaplasia also shows a fibroelastic proliferation with stromal myxoid changes and the appearance of lacunae, simulating the hyaline cartilage typical of true cartilaginous tumours. “Elastophilia” of collagen bundles in the centre of cartilaginous nodules is uncommon [3] (Figs. 3 and 4).

3. Discussion and review of literature

There are only a few reports on laryngeal chondrometaplasia in the literature, although a postmortem study revealed that microscopic foci of metaplastic cartilage may be found in about 1–2% of all examined larynges. This discrepancy derives from the fact that such lesions are usually small (usually less than 1 cm in diameter) and asymptomatic, so that surgical treatment is rarely needed. Laryngeal chondrometaplasia shows a predilection for the posterior and midportions of the glottis, and for the ventricular bands. The recognition of nodular chondrometaplasia is important because of its occasionally troublesome differential diagnosis from true cartilaginous neoplasms of the larynx, such as chondroma and low grade chondrosarcoma. The imaging appearance of this uncommon disease is even more rarely described. There are only two case reports describing its appearance in computed tomography (CT) and magnetic resonance imaging (MRI). Ultrasound (US) features have not been reported so far. The clinical presentation of laryngeal chondrometaplasia is similar to the other laryngeal tumours. The symptoms include hoarseness, dyspnea, dysphagia or vocal fold palsy. It is postulated that previous laryngeal trauma or laryngo–tracheitis predisposes to the development of metaplasia in the larynx. It is also suggested that the presence of these predisposing factors with progressive onset of symptoms may help

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in recognizing the chondrometaplastic nature of the lesion and distinguishing it from true laryngeal cartilaginous tumours which usually have no triggering factors. Microscopic Laryngeal Examination (MLS) and Local excision of the lesion under G/A is all that is needed and patient should be Instructed properly against post op. voice abuse and if facilities are available a must post op. voice therapist consultation should be sought and long term follow up is also must in order to rule out any recurrence.

4. Conclusion

“The recognition of chondrometaplasia is important because of its occasionally troublesome differential diagnosis from true cartilaginous neoplasms of the larynx, such as chondroma and low grade chondrosarcoma”.

Conflicts of interest

No conflict of interest to declare by any of the authors.

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Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institution.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available and can be provided whenever needed.

Author contribution

Dr Abdulmohsen; data collection, writing the paper.
Dr Hamoud; data analysis and contribution.
Dr Imtiyaz: data collection, writing paper, study concept.
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Guarantor

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