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OLGU BİLDİRİSİ / CASE REPORT

Chondroma of the arytenoid: a case report

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Aritenoid kondromu: Olgu sunumu

52 yaşında erkek hasta yaklaşık 6 aydır gittikçe artan ses kısıklığı ve boğazda takılma hissi şikayetleri ile hastanemize başvurdu. Endoskopik muayenesinde sol aritenoid medial yüzünden subglottik alana uzanan düzgün yüzeyli submukozal kitle gözlendi. Bilgisayarlı tomografisinde sol aritenoidden köken alıp lümene uzanan hipodens kitle saptandı. Postoperatif histopatolojik inceleme sonucu "kondrom" olarak rapor edildi. Larinksin bu nadir tümörünü klinik özellikleri ve tedavi metodlarını literatür ile karşılaştırarak sunmayı amaçladık.

Anahtar Sözcükler: Kondrom, kondrosarkom, laringeal tümörler.

Abstract

A 52-year-old male patient applied to our hospital with the complaints of progressive dysphonia and throat irritation for nearly 6 months. In endoscopic examination, submucosal mass with smooth surface, which extended from medial side of left arytenoid to subglottic region, was observed. Computed tomography revealed a hypodense mass originating from left arytenoid and extending to lumen. Postoperative histopathological examination was reported as "chondroma". We aimed to present the clinical properties of this rare larynx tumor and treatment methods compared with the literature.

Key Words: Chondroma, chondrosarcoma, laryngeal tumors.

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Introduction

Chondroma is a slow growing lesion which is originating from hyaline cartilage.[1] Laryngeal chondroma is rare benign cartilaginous tumor of the larynx. Chronic infection, ossification anomalies of cartilage have a role on etiology. It is more common among men. Although it can be seen in neonates, it is mainly found between the ages of 40 and 60. About seventy-seven percent of these tumors are seen on endolaryngeal surface of posterior lamina of the cricoid cartilage.[2,3]

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Case Report

A 52-year-old male patient applied to our hospital on September 2005, with the complaints of progressive dysphonia and throat irritation for nearly 6 months. He did not have any complaints about dyspnea, dysphagia, and irritative cough. In physical examination of neck no pathology was found. In endoscopic examination, submucosal mass with smooth surface, which extended from medial side of left arytenoid to subglottic region, was observed. The mobility of the vocal cords was normal.

Computed tomography (CT) revealed a hypodense mass originating from left arytenoid and extending to lumen (Figures 1 and 2). In direct laryngoscopy under general anesthesia, it was determined that the mass was hard consistency. A submucosal biopsy was taken from the mass. Histopathological examination of intraoperative frozen section was reported as laryngeal chondroma. Tracheostomy was performed between 2nd and 3rd rings of trachea at the beginning of the operation, and the intubation tube was taken to this area. After midline vertical neck incision soft tissues were dissected and larynx was exposed. From the midline of the thyroid cartilage, vertical incision was applied to perichondrium and in both side perichondrium was elevated approximately 5mm distance. Median thyrotomy was made by oscillating saw and endolaryngeal exposure was provided. The mass was totally excised from cartilage line, which has a normal appearance. Soft tissues were closed according to anatomical layers. In histopathological examination, a tumoral lesion, which included focal dystrophic calcification areas under respiratory mucosa covered with ciliated columnar epithelium and which consisted of mature cartilage cell, was well–circumscribed and showed nodular growing pattern, was observed and it was reported as chondroma (Figure 3). In the postoperative period no complication was seen and tracheostomy tube was removed at postoperative 7th day. In the examination of the patient normal airway had been provided, and no dysphonia was found postoperatively. In the postoperative 9th month no recurrences were observed.

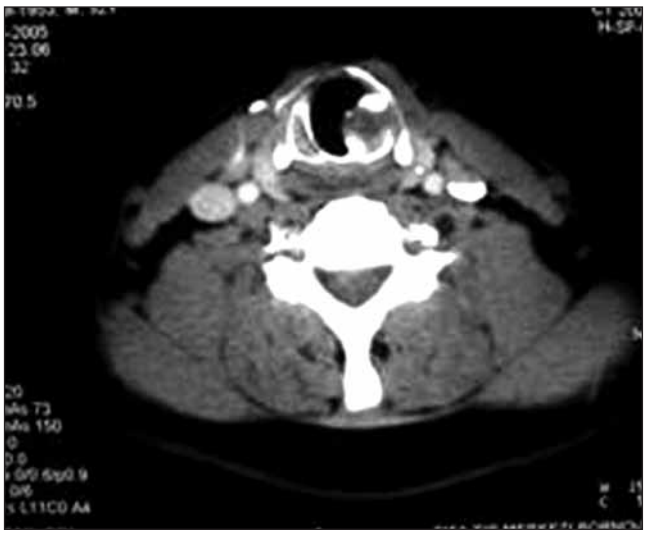

Figure 1. Preoperative axial CT scan of lesion.

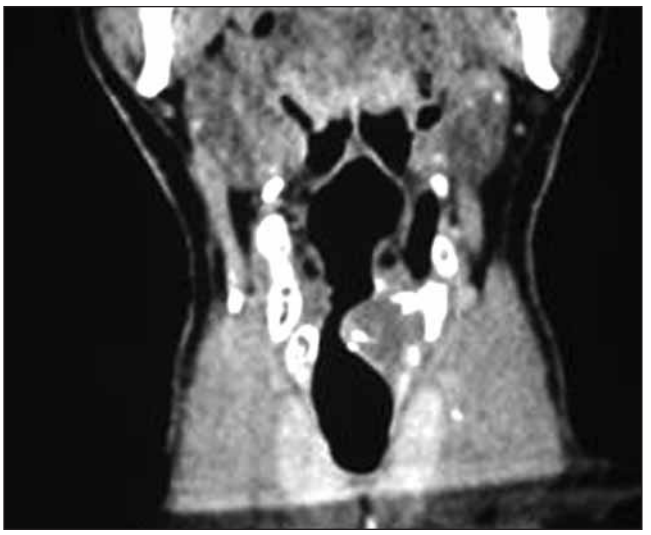

Figure 2. Preoperative coronal CT scan of lesion.

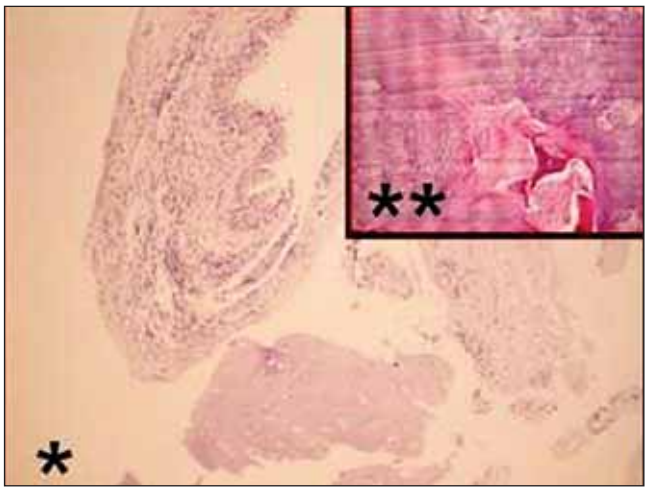

Figure 3. *Mature chondroid tissue under mucosa (**HE x40**). **Tumor including mature hyalen cartilage, calcification and ossification areas (**HE x250**). [Color figure can be viewed in the online issue, which is available at www.turkarchotolaryngol.org]

Discussion

Less than 1% of laryngeal tumors are cartilaginous. Approximately 300 cases have been reported in the literature. In our case macroscopic appearance of lesion had tumoral tissue feature and the existence of focal dystrophic calcification areas was the differential characteristic. From the pathologist's point of view, differential diagnosis between chondromas and other lesions originating in the cartilage, including chondrometaplasia and low grade chondrosarcomas, can be difficult.[4,5] Real chondroma of larynx is very rare. A study of 33 patients by Neel and Unni revealed only 2 chondromas with 31 chondrosarcomas.[6] This study supported the generally accepted higher prevalence of chondrosarcoma. Casiraghi et al. reported 15 chondroma cases and 9 of them were low grade histologically.[7] Most chondrosarcomas are low grade, and therefore can be easily confused with chondroma.

Macroscopically chondrosarcomas are usually larger than other benign cartilagenous lesions. The chondromas are usually less than 2 cm in diameter, while chondrosarcomas usually exceed 3 cm in most of the cases. In our case the largest cross section of the tumor was 1.5 cm. Clinical symptoms depend on localization and diameter of tumor. Symptoms develop very slowly. Main symptoms are dysphonia, dysphagia, dyspnea, and throat irritation.

Indirect, direct laryngoscopy and radiological evaluation helps diagnosis. Plain X-rays are useful, but not diagnostic. In 80% of patients' X-rays scattered calcification foci are found. CT scanning in the axial plane show size and the extent of the tumor and invasion into surrounding structures. On CT examination, these tumors usually present as a hypodense, well-circumscribed mass with regular borders, narrowing airway. MRI is less specific because of its insensitivity to chondroid calcifications, but it can more sensitivity delineate the tumor/soft tissue relations with in the larynx or surrounding structures in the neck.[4,8,9] On direct laryngoscopy, round or nodular fixed and hard consistent mass covered with regular surface mucosa is seen. In direct laryngoscopy by palpation, the mass is hard. Final diagnose is determined by biopsy which is taken submucosally.

Histopathologically, chondromas show a homogenous pattern with a low cellularity. Small, dark nuclei are observed. On low power microscopy, chondrosarcomas have more darkly staining cells and occasional bi-nucleated cells. In addition, it's typical in diagnose to find atypical cell and to see rare mitotic activity in chondrosarcoma. Chondromas commonly exhibit a lobular growth pattern, but this finding does not strictly indicate a benign lesion, because occasionally low grade chondrosarcomas also may have the same pathological feature.[5]

Jones et al. reported that chondroid tumors exhibit slow growth pattern and clinic progres-

sion.[10] Due to its slow growth and low grade metastases, treatment procedures of laryngeal chondromas should include conservative resection and follow-up. Radiotherapy and chemotherapy have no role on treatment.[2,11,12] While small and well-circumscribed lesions can endoscopically excised, extralaryngeal approach is preferred in surgical treatment for larger lesions. Total laryngectomy should only be applied on massive tumors and chondrosarcomas. In our case, we have preferred extralaryngeal approach to provide better exposure on tumor that has subglottic extension.

Conclusion

Because of its location, this rare tumor should especially considered in differential diagnosis of submucosal tumors. Diagnosis of chondroma can be easily made with endoscopy and imaging methods, although its final diagnosis is determined by histopathologic assessment. At postoperative follow-up period careful endoscopic and radiological evaluation must be done due to risk of recurrence.

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Conflict of interest statement:
No conflicts declared.

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