Case Report
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Chondrosarcoma of the Larynx: Case Report

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Abstract

Larynx cancers are one of the most common cancers on head and neck region but the sarcomas such as chondrosarcomas on larynx skeleton are rare. Due to its rarely an ENT surgeon might see one or two cases on his whole career. Most common site of this tumor is cricoid cartilage and the other caritilages such as aritenoid is also rare. Patients presented with symptoms such as hoarseness, disphagia and dispnea due mass effect of the tumor. Diagnosis is generally challenging and causes wasting time. The only treatment modality is surgical excision of the primary tumor. Due to its slow growing pattern partial surgical methods such as partial laryngectomy is suitable for treatment. The key point is to excise the tumor with clear marigns completely. Here we represent chondrosarcoma of the right aritenoid cartilage which is treated with partial laryngectomy successfully.

Keywords: Larynx cancer; Chondrosarcoma; Partial laryngectomy; T-tube

Introduction

Chondrosarcoma is rare cancer of the larynx that is related with the laryngeal skeleton rather than common mucosal related cancers such as squamous cell carcinoma and adenocarcinoma. Chodrosarcoma tends to grow slowly and has a low grade property. Because of this feature, most of the cases are misdiagnosed with benign tumors such as chondrome in the past [1]. The exact incidance of the tumors is not known but estimated as 0,02% to 0,07% [2]. Most common signs are dispnea, hoarseness and disphagia due to its mass effect [3-5]. The only treatment modality is the surgical excision of the tumor [6]. Here we present a chondrosarcoma of the larynx that is treated with partial laryngectomy successfully.

Case Presentation

Fifty years old male patient admitted to our outpatient clinic with a progressing complaint of hoarseness and dyspnea over the past 5 months. According to his past medical history, he has hypertension and hyperthyroidism which were controlled with beta blokers and antithyroid medications. Indirect laryngoscopy examination reveal right sided mass located on the right aritenoid region (Figure 1a).

No mass was observed at the glottic level. The right vocal cord functions are paralyzed but left vocal cord functions was preserved (Figure 1b).

Computer tomography examination showed the right sided mass lesion on the aritenoid region. The mass has clear margin and obstructed the airway column in subglottic level (Figure 2a).

Magnetic resonance investigation also confirmed the right sided mass lesion with clear margin. The lesion has hyperintense property in T2 view (Figure 2b).

We perform direct laryngoscopy and biopsy to reach a diagnosis but biopsy is non diagnostic. When we follow the patient, the patient has an increased respiratory insuffiency so we have performed urgent tracheotomy and rebiopsy. The diagnosis is low grade chodrosarcoma of the mostly cricoid and less aritenoid cartilage (Figure 3).

Then we performed partial laringectomy and montgomery t tube insertion operation. T tube is inserted to prevent laryngeal stenosis (Figure 4).

During follow up the patients' t tube is taken out without any complication and the laryngeal function preserved. On the 3 month examination there was not observed dispnea and dysphagea.

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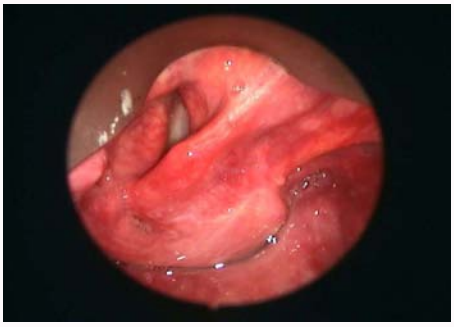

Figure 1a: Indirect laryngoscopy examination reveal right sided mass located on the right aritenoid region.

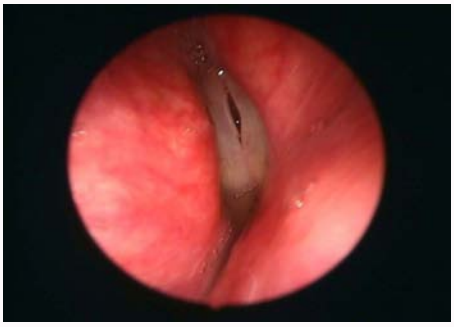

Figure 1b: No mass was observed at the glottic level. The right vocal cord functions are paralyzed but left vocal cord functions was preserved.

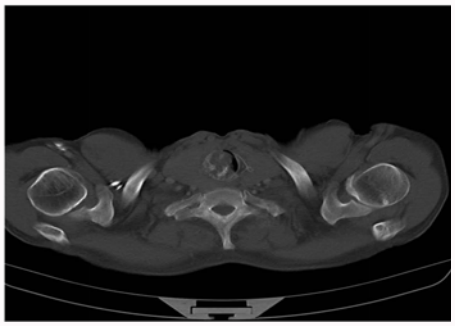

Figure 2a: Computer tomography investigation showed the right sided mass lesion with areas of calcification and multifocality.

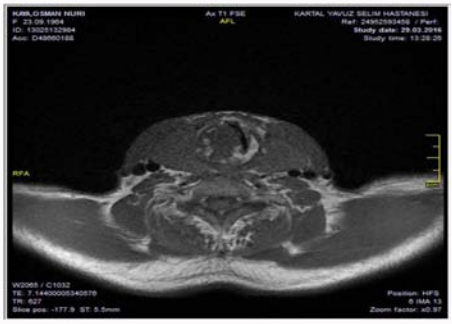

Figure 2b: Magnetic resonance investigation of the patient showed the right sided mass lesion.

Discussion

Larynx cancer is one of the most common malignancy on the head and neck region. Most common cancer of this region due to its important site related with exogen irritants and infections are epithelial cancers. Because of this reason epithelial cancers such as squamous cell carcinoma and adenocarcinoma are the most common cancer types on this location. The cancers originated from larynx skeleton is rare on the larynx. Chondrosarcoma which is the most common sarcoma of the larynx, is oppositely one of the rare cancer in neck region [7]. In the literature less than 300 cases reported [8]. Most common seen larngeal cartilages is posterolateral part of the cricoid cartilage followed by inferior lateral part of the thyroid cartilage and aritenoid cartilage [1,9]. Chonsrosarcomas mostly diagnosed between 50 and 80 years old and 1,7-4:1 male predominance is detected [10]. In our case aritenoid cartilage is involved in the right side of the larynx.

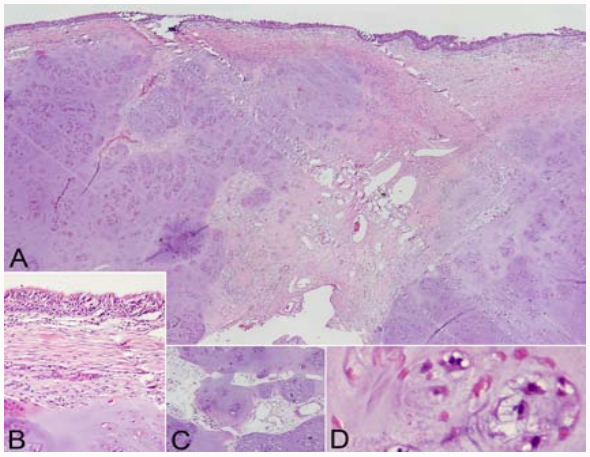

Figure 3: Microscopic view of the chondrosarcoma.

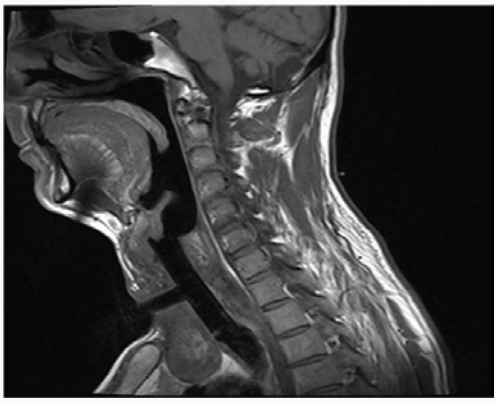

Figure 4: T-tube can be seen on the CT examination.

Most common symptoms are dysphonia, dyspnea, dysphagia, cough and respiratory obstruction. All this symptoms related with the mass effect and compressive effect and location of the lesion [4,8].

Computer tomography (CT) investigation showed us the mass lesion but has limited data for definite diagnosis. But, CT investigation gives better information about areas of calcification and multifocality and surgical excision plan than magnetic resonance investigation (MRI) [11,12]. MRI also has similar features in our patient. We have performed both CT and MRI investigation which confirm the mass lesion on the right side of the larynx.

At the past most of the cases of the chondrosarcoma misdiagnosed with chondrome due to its slow growing pattern. Also pathologic diagnosis has some difficulties related with insufficient biopsy

material. We have also confronted diagnostic difficulties we can diagnose the malignity on the second attempt of biopsy. The decision of chondrosarcomas depend on the number of mitoses, atypia of the form and size of the nuclei and cells, and the presence of mono- or multinucleated giant cartilaginous cells [13,14].

The treatment modality of the chondrosarcoma is surgical excision [8,15-17]. In the past it is believed that total laryngectomy was the definite treatment modality. The location of the tumor is important entity to modify this treatment choice. Nowadays larynx preserving surgical methods may be used in suitable cases. CO_2 laser, trans-robotic surgical methods can be used in larynx presenting procedures. Partial laryngectomy is another way of laryngeal preserving surgery. If the lesion is suitable to excise completely, partial laryngectomy is successful way of this tumor. The tumor recurrence rate is high but it it believed that recurrence is related with incomplete surgical removal. The tumor is both radioresistant and chemoresistant so both therapies are unsuitable in the treatment [18]. In our case, we performed partial laryngectomy and after surgery patient is without any symptom.

Conclusion

The nondiagnostic bulky sized laryngeal tumor after biopsy might be a cartilagenous type of tumor such as chondrosarcoma. I am an 22 years old experienced surgeon on head and neck cancers but up to now this is the first case of cartilage related malign cancer that I have seen. We keep in mind this diagnosis and perform rebiopsy deeper into mucosa and if needed curatage the cartilage mass. The only treatment modality is the excise the tumor completely to protect recurrence. Partial laryngectomy might be the successful surgical modality in suitable cases.

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