Large Lipoma of the Larynx: A Case Report

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Abstract- Fewer than 15% of lipomas occur in the head and neck. Lipomas of the larynx are very rare benign laryngeal tumors (0.6%). To date less than 100 case of laryngeal lipoma have been reported in the literature.Clinical manifestation include progressive horseness, dyspnea, and even dysphagia. In the direct exam smooth or pedunculated mass is seen in the larynx and sometimes if tumor is large enough a mass palpated in the neck. In the computed tomography (CT) low attenuation mass is seen. Treatment of laryngeal lipoma consists of endoscopic removal or external surgical approach depending on tumor size. The authors present a case of laryngeal lipoma that involved the true vocal cord. The following is a report of a single case of laryngeal lipoma, Including esteroboscopy, radiologic and intraoperative finding as well as review of the literature.

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Key words: Lipoma, Computed tomography, Esteroboscopy.

Introduction

Lipomas are the most common benign tumors of mesenchymal origin. In the head and neck this tumor is not common (1,5). And less than 15% of the body lipomas occur in the head and neck. They usually occurs in the posterior neck subcutaneous tissue. Other uncommon sites are anterior neck, oral cavity, parotid gland and infratemportal fossa (2,3,5).

In general these benign neoplasms are encapsulated smooth and usually pedunculated. Symptoms are few and uncharacteristic, preoperative diagnosis is difficult.

We report a case of laryngeal lipoma removed through an external approach without any tracheostomy.

Case Report

The patient was a 41 year-old man who referred to Amiraalam Hospital, Theran, Iran. He had a two-years history of voice change and dyspnea on exertion. He had not any complain of dysphagia. He had a long history of drug consumption such as antibiotic and anti esophageal reflux for his problem. He had no history of cigarette smoking and alcohol consumption. He complained from a neck mass four month before admission without any weight loss. His voice was quite supraglottic (hot potato voice). In the physical examination we touch a soft mass in dimension of 3×2 cm that was mobile without tenderness and skin changes. Mirror examination of larynx revealed a large submucosal swelling oblitrating the right side of the supraglottic larynx and obscuring the airway. Mobility of right vocal cord was limited due to mass effect and right vocal cord seems greater than normal. These finding were confirmed in laryngeal steroboscopy (Figure 1). A computed tomography (CT) scan of the neck revealed a well-circumscribed very low density mass highly suggestive of lipoma (Figure 2).

The patient was taken to the operating room and a horizontal incision was made on the left side of the neck at the level of thyroid cartilage in maximum bulging. Sub platisma flap raised, dissection was carried through the strap muscles anterior to the sternocleidomastoid muscle to the posterior border of thyroid cartilage. The lobulated mass in the superior border of thyroid cartilage identified that continue from thyroid membrane to the superior border of false vocal cord. The encapsulated mass was removed intact (Figs 3, 4) and sent for pathological examination.

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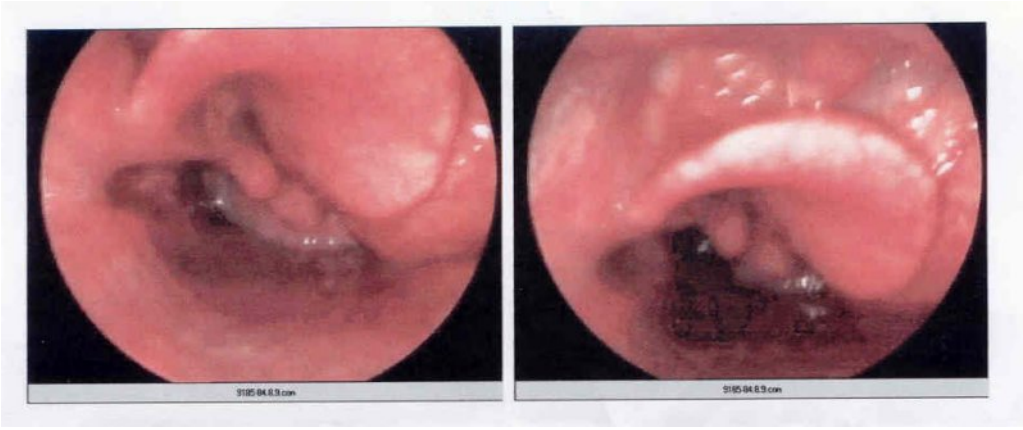

Figure 1. The steroboscopic findings of laryngeal lipoma

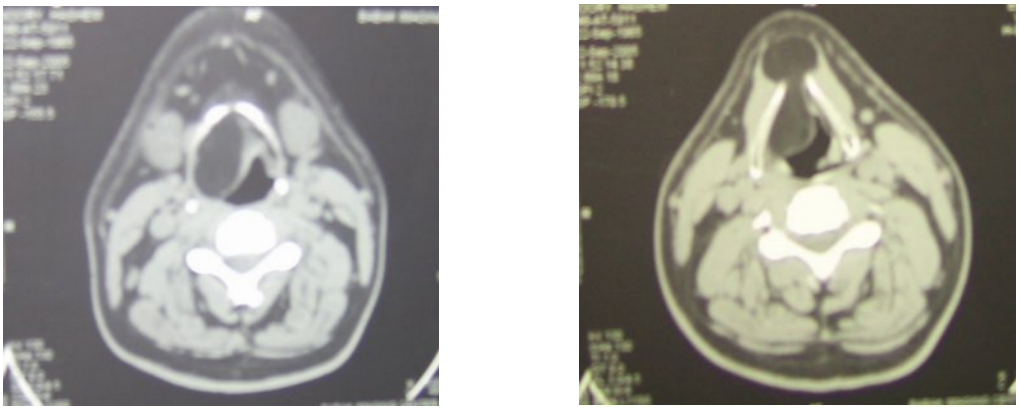

Figure 2. CT scan of the Neck

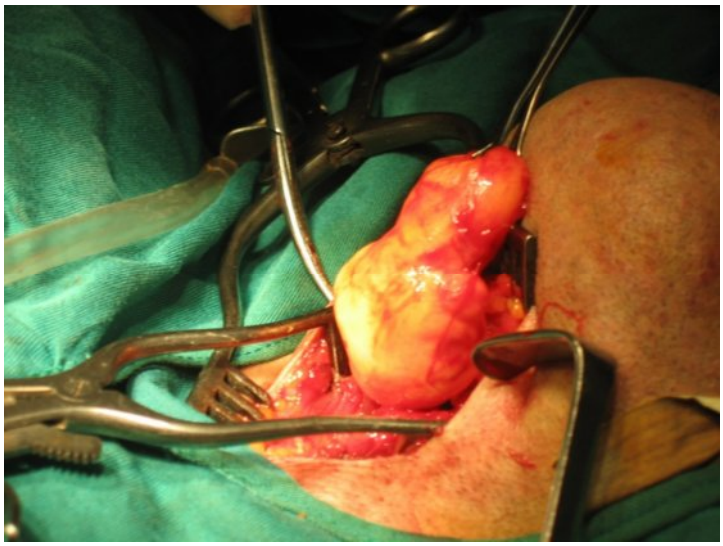

Figure 3. The intraoprative appearance of the tumor

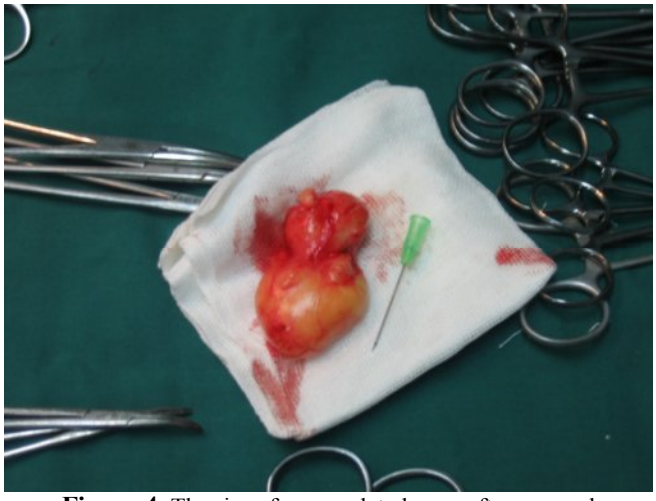

Figure 4. The size of encapsulated mass after removal

Pathology examination revealed a 8cm encapsulated tumor. The mass was found to contain many uniform appearing mature adipocytes. As expected, mocroscopic findings confirm the diagnosis of lipoma

Early after surgery, in recovery room the patient voice was normal. 4 months later control CT scan performed and everything was normal. Currently the patient is doing well with complete resolution of symptom after 1 year of surgery.

Discussion

Although lipomas are common tumors in human, lipoma of the larynx is quite rare. Laryngeal lipomas are 0.6% of all benign tumors of the larynx (1,6,8).

Lipoma have a male-to-female ratio of 5:1 (4) and most often occur in the sixth decade of life (9,11). Today fewer than 100 case of lanyngeal lipoma have been reported with 70 of these having been listed by Zakrzewski in 1965, of 70 cases 54 were designated extrinsic, where as only 16 were classified as true intrinsic laryngeal tumors (8,9). Although sometimes seen among persons with numerous lipoma in others body areas, most laryngeal lipoma were isolated occurrence.

The location and size of tumor determine whether it will be discovered and type of symptoms a patient will be have (small lipoma or even those of moderate size may produce no symptoms and may only be discovered accidentally on routine inspection of the larynx and pharynx) (5).

The common symptom of larygeal lipoma is airway obstruction (4-10). Sensation of throat mass, voice change, snoring and excessive accumulation of salivary secretion may also be noted (6,5,13) dysphagia discomfort and an irritating or paroxysmal cough are the predominant symptoms probably due to temporary displacement of pedunculated lesion (5). Laryngcel lipoma can be intrinsic or extrinsic. The intrinsic form is uncommon, (6,12) and involving the regions such as false vocal cord, epiglottis and aryepiglottic fold, where fat form the subepithelial structures. Among all intrinsic lipoma glolttic form is rarest (8,9).

The true etiology of laryngeal lipoma is not clear. Multipotential fibroblast can differentiate into a fat cell through an unknown mechanism (4). Grossly lipomas are of variable size. They tend to appear smooth or lobulated, often well demarcated or encapsulated, with yellowish color (4). Endoscopic appearance of lipoma is varied ranging from submucosal mass to pedunculated intralumineal projection, so clinical lipoma can be confused with other benign lesions such as retention cyst or laryngoceles (5). Microscopicaly lipomas are composed of mature adipocytes. They vary slightly in size and shape and have a large central vacuole which often displace nucleus peripherally .

Lipoma of the lrynx is suspected on endoscopye،barium swallow or CT and MRI (4). Several studies have shown that utility of CT in diagnosis of lipoma (4,6-8). On CT scan fat tissue shows up as typically homogeneous،with a low attenuation value and a density lower than that of water(<0 hounsfield units) (6,7). A thin-smooth capsule and internal seperation may be seen. On MRI lipoma follow the signal characteristic of fat, which is hyperintense on T1-weighted image and inter mediate on T2-weighted image. When diagnose is in doubt additional fat suppression sequence may be performed (R4-R5-R6-R7). Sagittal images define more accurately the origin of the peduncle if the mass is pedunculated (5).

Treatmeant of laryngeal lipoma is contraversial. Some authors recommended endoscope removal of lesion (11-13). This approach is useful in pedunculated tumors.Where as submucosal tumors should be removed via an external approach (6,9,11). Large non pedunculated tumors require an external approach using thyrotomy, transhyoid or lateral pharyngotmy for good exposure (5,9,11). Recurrence may be indicative of low grade sarcoma and should be subjected to further investigation (4). In conclusion, benign tumors of the larynx and such as lipomas are rare and differential diagnosis is difficult for choosing an appropriate therapeutic strategy‹imaging technique are necessary particullary if the size of lesion is large.

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