Case Report / Olgu Sunumu

Rare cases of benign tumors of the head and neck: lipoma of larynx and sternocleidomastoid muscle

Baş ve boynun nadir selim tümör olguları: Larenks ve sternokleidomastoid kasın lipoması

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ABSTRACT

In this article, we report two rare cases of lipoma in the head and neck region. Thirty-four-year-old case 1 presented with hoarseness and sensation of foreign body in throat. While 54-year-old case 2 presented with complaint of a mass in left side of neck. The imaging methods showed the masses in false vocal fold and the sternocleidomastoid muscle. Diagnosis and treatment of the masses were discussed in light of the literature.

Keywords: Computed tomography; larynx; lipoma; muscle.

ÖZ

Bu yazıda, baş ve boyun bölgesine ait iki nadir lipoma olgusu sunuldu. Otuz dört yaşındaki birinci olgu ses kısıklığı ve boğazda yabancı cisim hissi ile başvurdu. Elli dört yaşında ikinci olgu ise sol boyunda kütle yakınması ile başvurdu. Görüntüleme yöntemlerinde yalancı vokal kortta ve sternokleidomastoid kasta kitleler görüldü. Kitlelerin tanı ve tedavileri literatür eşliğinde tartışıldı.

Anahtar Sözcükler: Bilgisayarlı tomografi; larenks; lipoma; kas.

Lipomas, which are benign mesenchymal tumors originating from fat tissue, occur often in the head and neck.[1] Some 13% of all lipomas arise in the head and neck, especially in the posterior neck subcutaneous tissue, however they comprise only 0.1% of all benign laryngeal tumors and intramuscular lipomas (IMLs) comprise 1.9% all of the lipomas.[2-4] They can appear in patients of any age, but most cases commonly occur in the fourth decade or later.[5,6] They are usually asymptomatic except for cosmetic effect or may cause non-specific symptoms such as dysphagia and dyspnea. We present two cases of lipomatous lesions of the larynx and the sternocleidomastoid (SCM) muscle and review the English literature.

CASE REPORT

Case 1- Lipoma of the false vocal fold

A 34-year-old man was referred to our department with a one-month history of progressive hoarseness and globus sensation. He denied dyspnea, odynophagia, dysphagia, and weight loss. His medical history was unremarkable and

Available online at
www.kbbihtisas.org
doi: 10.5606/kbbihtisas.2016.92155
QR (Quick Response) Code

Received / *Geliş tarihi:* June 01, 2015 Accepted / *Kabul tarihi:* November 17, 2015

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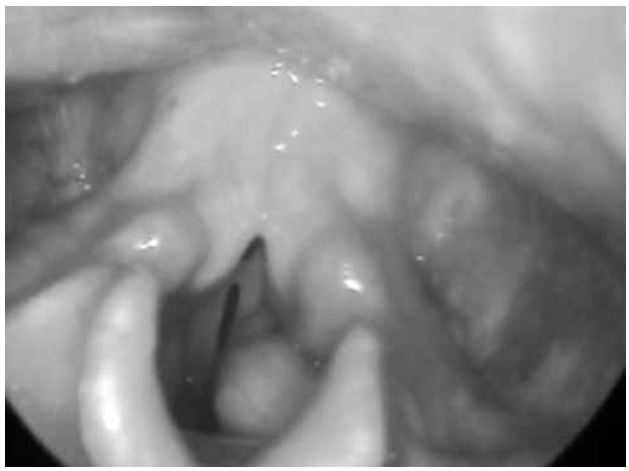

Figure 1. *Preoperative view. Flexible laryngoscopy showing the left false vocal fold swollen by the submucosal lipoma.*

he was a nonsmoker. Flexible laryngoscopy revealed a smooth, submucosal, rounded mass arising from the left false vocal fold (Figure 1). Motility of the true vocal folds and arytenoids was normal. Computed tomography (CT) demonstrated a 2x1.5x1.5 cm mass with regular, well-defined margins located on the left false vocal fold (Figure 2). Magnetic resonance imaging (MRI) was not obtained due to the cardiovascular implanted electronic device of the patient.

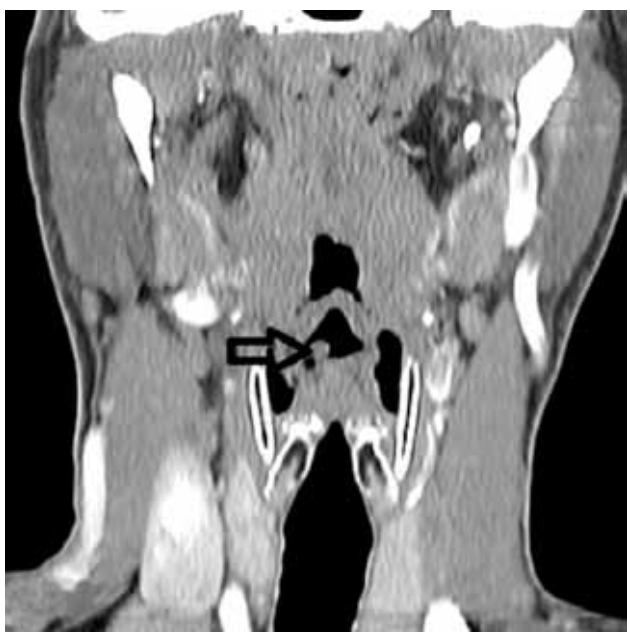

Figure 2. *Coronal computed tomography showing a small mass involving the left false vocal fold (arrow).*

The patient was taken to the operating room to undergo suspension microlaryngoscopy and was placed in the standard supine position. The mass was excised endoscopically with a radiofrequency laryngeal probe (Ellman Intl. Inc, New York, USA). He was extubated after surgery without incident and resumed a regular diet. Microscopic examination showed a circumscribed mass with organoid-seromucous glands surrounded by numerous mature adipocytes, separated from the parenchyma and fatty tissue by fibrous tissue (Figure 3). Postoperatively, no breathing difficulties were seen. He was discharged on the second postoperative day. All symptoms disappeared after surgery and he remained free of recurrence at one year of follow-up.

Case 2- Intramuscular lipoma of the sternocleidomastoid muscle

A 54-year-old male patient was admitted to our clinic with a slowly - growing left sided neck mass that had been present for two years. The patient did not smoke or drink alcohol. Physical examination revealed a 5x4 cm, soft, non-tender, non-pulsatile massive swelling on the left side of the SCM. Axial CT showed a well-defined, fat density mass with septations inside the left SCM muscle (Figure 4). A MRI reported a 3x2x7 cm, predominantly fatty tissue mass located within the SCM muscle (Figure 4). A written informed consent was obtained from the both patients.

The patient underwent resection of the mass under general anesthesia. The procedure started with a 3 cm lateral skin incision. The SCM muscle was dissected and retracted laterally to

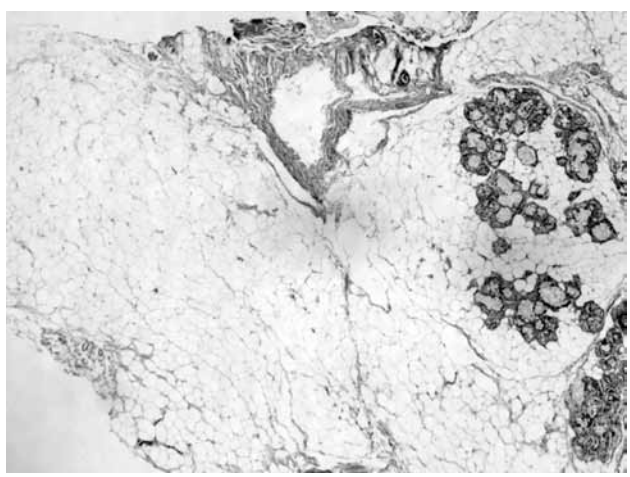

Figure 3. *Seromucous glands surrounded by numerous mature adipocytes in the laryngeal lipoma (H-E x 100).*

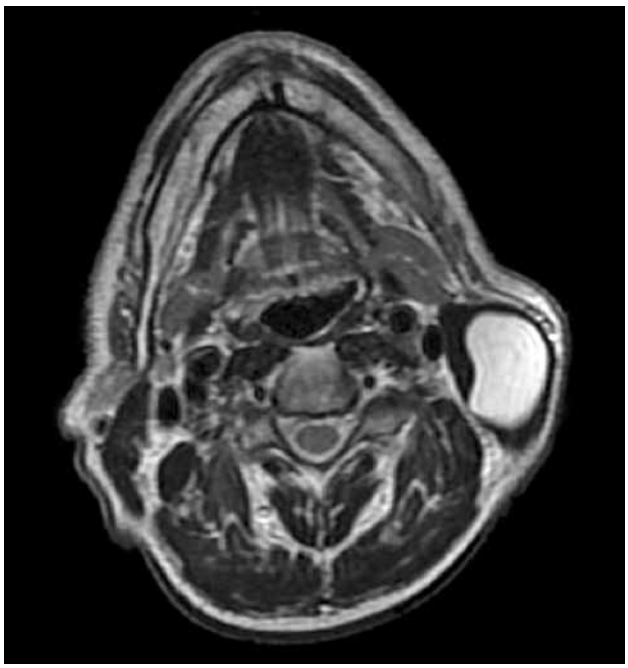

Figure 4. *Axial fat-suppressed T_2-weighted magnetic resonance imaging demonstrated a high density mass in the sternocleidomastoid muscle.*

expose the mass (Figure 5). No direct invasion into adjacent tissue was apparent, and the mass was easily dissected from the SCM muscle and removed completely with its fibrous capsule.

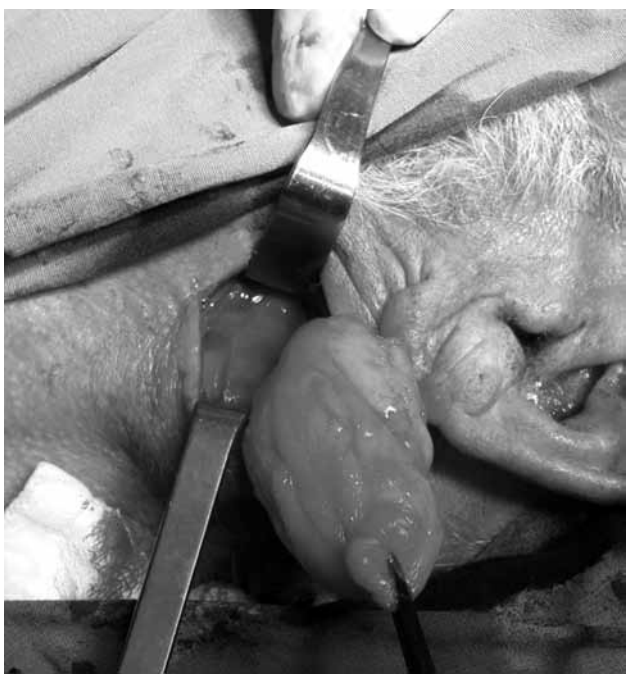

Figure 5. *Intraoperative view of intramuscular lipoma of sternocleidomastoid muscle.*

The excised specimen was a well - encapsulated, yellow colored tumor with a soft consistency measuring 6x3.5x2.5 cm on cut section, it had a typical lobulated lipomatous appearance. Histopathological examination showed uniformly rounded cells with peripheral sheets of mature adipocytes containing large clear cytoplasm and eccentric nuclei with conspicuous vascularity and no evidence of cellular atypia (Figure 6). Based on the histopathological features, the diagnosis of lipoma was made. The patient is free of disease at five months follow-up.

DISCUSSION

Lipomas are usually solitary, slow growing tumors, which represent 4-5% of all benign tumors in the body.[7] The etiology of lipomas is unknown. According to one hypothesis, multipotential fibroblasts may differentiate into fat cells and create a lipoma. An alternative explanation is that lipomas can arise from lipomatous tissue.[8] These lipomas usually occur in obese people and may increase in dimension due to excessive weight gain. On the other hand, during periods of weight loss their sizes are rarely affected. This has shown that the fat in this lesion is most likely unavailable to the general metabolism.[9]

Lipomas can present typically as a single event, but some are associated with different inherited disorders, including Madelung disease and Gardner syndrome.[9] Benign systemic lipomatosis is symmetric diffuse lipomatosis of the neck, which is a systemic form of a

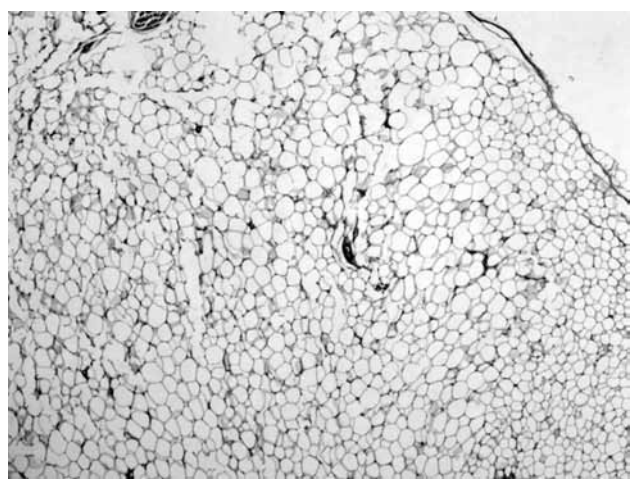

Figure 6. *The lesion showing mature adipocytes with conspicuous vascularity and thin fibrous capsule (H-E x 40).*

Madelung disease. Most patients with Madelung disease have a history of alcoholism, but there is no direct link between the use of alcohol and the development of lipomas.[10] Lipomatosis may also be associated with Gardner syndrome, which is also known as familial colorectal polyposis. This syndrome is an autosomal dominant form of polyposis and includes cysts, osteomas and intestinal polyposis.[9]

Laryngeal lipoma may be intrinsic or extrinsic. The intrinsic form is uncommon.[11] These tumors usually affect the epiglottis, aryepiglottic folds and false vocal folds containing a high proportion of subepithelial fat tissue.[3] These types of tumors show up symptoms like hoarseness, dyspnea, dysphagia, sensation of a foreign body in the throat.

Intramuscular lipoma occurs most commonly on the extremities, but is rare in the head and neck area.[6] In 1988, intramuscular lipomas were divided into well-circumscribed and infiltrative types by Flecther and Martin-Bates.[4] Whereas the infiltrative type is defined by margins that invade the surrounding muscle, the well-circumscribed type has no fatty infiltration of adjacent muscle tissue.[12] The masses to be differentiated are hematoma, cystic hygroma, liposarcoma and fibrous myositis.[6] To our knowledge, our case is the second report of well-circumscribed lipoma of the SCM muscle in the English literature.

On both CT scan and MRI, lipomas are typically well-circumscribed with a homogeneous structure. Appearances on CT are characteristic, demonstrating low attenuation and few septations.[9] An MRI is preferred over CT since it provides better definition of lipoma margins and better examination of soft tissues. Lipomas are hyperintense on T_1-weighted and fat suppressed T_2-weighted imagines as in our case imagings.[3]

Lipomas must be removed for definitive pathologic diagnosis to exclude a liposarcoma, since diagnostic tools cannot differentiate a lipoma from a liposarcoma. Another problem with lipomas is the possibility of their recurrence. Therefore, surgical removal of lipomas must be complete in order to prevent recurrence.[3] Endoscopic removal is preferred over an external cervical approach including lateral pharyngotomy or laryngofissure, as treatment for small lesions of the larynx.[13] However, transoral robotic surgery can be feasible for large lipomatous lesions of the larynx and hypopharynx.[14] In the first case, since the lesion was small enough and the endoscopic approach presented adequate and good exposure of the lesion, endoscopic removal was chosen. In the second case, the mass was removed completely through a lateral approach. However, it should also be kept in mind that recurrence can appear even after a long-time period. Therefore, long-term follow-up of these lesions is mandatory.

In conclusion, although lipomas in the head and neck region are very rare, these cases emphasize the need of complete excision and long-term follow-up to avoid recurrence and for a definite diagnosis.

Declaration of conflicting interests

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The authors received no financial support for the research and/or authorship of this article.

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