Prelarengeal Thyroglossal Duct Cyst

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ABSTRACT

Thyroglossal duct cyst is the most commonly seen midline congenital neck masses found in children but are not uncommon in adults. The extension of the thyroglossal duct cyst into the larynx is very uncommon. Prelaryngeal thyroglossal duct cyst in a 60 year old man is described in this report. A laryngeal malignancy was suspected because of that cystic mass eroded the thyroid cartilage. The diagnosis was confirmed by fine needle aspiration biopsy. Thyroglossal duct cyst can mimic laryngeal malignancy at old ages patients with laryngeal cystic lesion. Therefore, it should be considered that it is likely to be thyroglossal duct cyst in cystic lesions extended into the larynx.

Key words: *Prelaryngeal thyroglossal duct cyst, neck mass, Sistrunk operation*

Prelaringial Tiroglossal Duktus Kisti

Tiroglossal duktus kisti yaygın olarak çocuklarda orta hat konjenital boyun kitlesi olarak bulunmakl birlikte, erişkinlerde nadiren görülmektedir. Tiroglossal duktus kistin larinks içine genişlemesi nadirdir. Bu olgu sunumunda 60 yaşında bir prelaringial troglossal duktus kisti bildirilmiştir. Kistik lezyonu troidal kartilajı erode ettiğinden dolayı laringial maligniteden şüphe edilmiştir. tanı ince iğne aspirasyonu ile konulmuştur. Tiroglossal duktus kisti yaşlı hastalarda laringial maligniteye benzeyebilir. Bundan dolayı larinks içine büyümüş kistik lezyonlarda tiroglossal duktus kisti düşünülmeli.

Anahtar kelimeler: *Prelaringial troglossal duktus kisti, boyunda kitle, Sistrunk operasyonu*

INTRODUCTION

Thyroglossal duct cyst forms the 40% of the primary neck masses, and 70% of the congenital neck masses (1). The thyroid gland develops from

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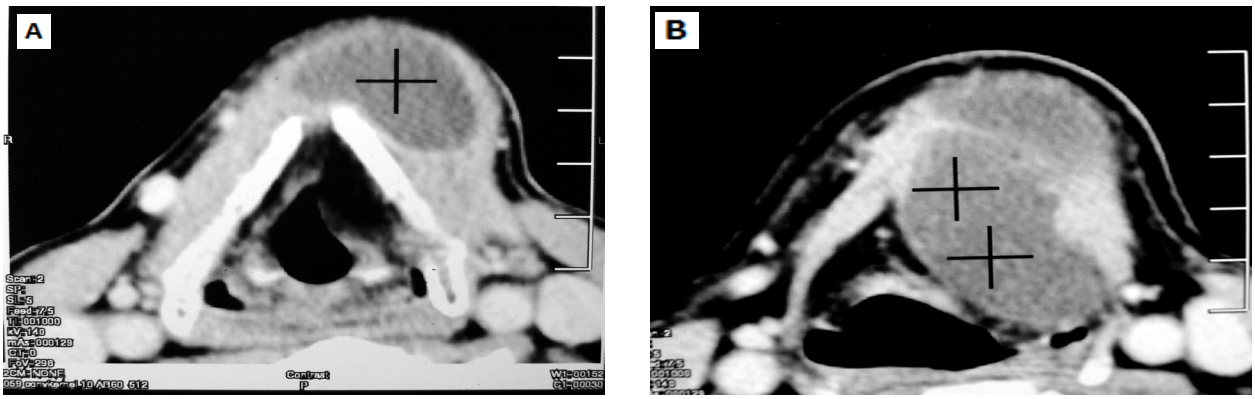

***Figure 1**. Axial plan of neck CT scans. A. The upper margin of cyst is seen just at the level of hyoid bone. B. The cyst is seen eroding the thyroid cartilage and extending into left pyriform sinus and pre-epiglottis space.*

the lower portion of the thyroglossal duct, which begins at the foramen caecum at the base of the tongue. If a portion of this duct remains patent it can form a cyst - a thyroglossal cyst. They occur at any age but the majorities are seen in patients between 15 and 30 years of age. Presentation is usually, as a painless, smooth, cystic, midline swelling in the region of the hyoid bone (2). A thyroglossal duct cyst may become symptomatic if it becomes inflamed; resulting in pain and swelling. The cysts are usually found between the isthmus of the thyroid gland and the hyoid bone, or just above the hyoid bone (1, 2). Its extension to the intra-laryngeal space and erosion of the thyroid cartilage are rarely seen (3). Therefore, it can mimic malign laryngeal malignancy. Computed tomography (CT) clearly demonstrated the nature of the cyst and its encroachment into the larynx (2, 4). Diagnosis made on the basis of fine needle aspiration biopsy (FNAB) (5). The treatment is surgical excision (Sistrunk operation) (3).

CASE

A 60 year-old man patient applied to our clinic with the complaint of slowly enlarging, painless mass in the midline of the neck. In physical examination showed a 3x4 cm firm mass with mobile, nontender in the midline of the neck. Indirect laryngoscope revealed fullness on pre-epiglottis space and left pyriform sinus. The arytenoids were mobile. A CT scan revealed the mass to be a thin-walled, lobulated cystic lesion, 51x30 mm sizes involved strap muscles that had eroded through thyroid cartilage and extended to pre-epiglottic space and left

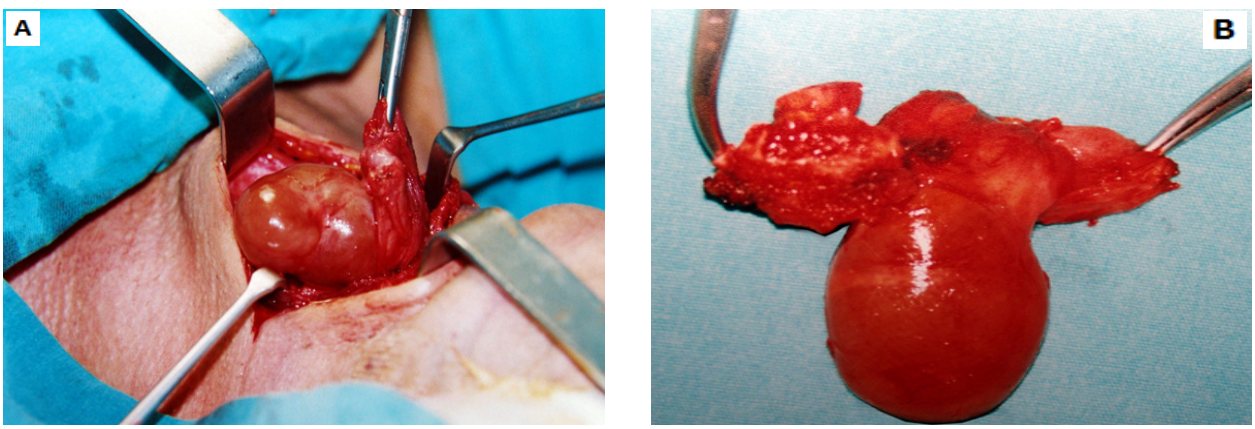

***Figure 2**. A. The cyst is seen removing by Sistrunk procedure. B. The cyst removed*

pyriform sinus, narrowing the air way from antrolateral in supragloctic level and in infrahyoid region (Figure 1). A magnetic resonance imaging (MRI) revealed on the left of midline mass lobulated cystic lesion with 47x25x20 mm sizes, starting from infrahyoid level extending towards the caudal. Thyroid gland evaluated by ultrasonography and scintigraphy. The size of troid gland and thyroid function were found as normal. The findings of the CT and MRI were evaluated as it may be thyroglossal duct cyst or external laryngocele. Therefore, FNAB was performed from the mass. Pathology result was confirmed thyroglossal duct cyst. The cyst was removed using the Sistrunk operation (Figure 2). The cyst in infrahyoid region showed extension up to the front larynx wall and there was not required laryngeal reconstruction. After 12 months of follow-up, the patient has remained without complication or recurrence.

DISCUSSION

Thryroglossal duct cyst is the most commonly seen midline congenital neck masses found in children but are not uncommon in adults (1). It is lined with secretors epithelium. This cyst usually presents as anterior neck mass that can be midline or of midline (2). Twenty percent of the thyroglossal duct cysts are suprahyoid, %15 are at the level of the hyoid bone, and %65 are infrahyoid, 20% (2). It has been seen that when the literature is reviewed thyroglossal duct cysts extended into larynx is very rare (1-7). If there is not eroded the cartilage in intra-laryngeal thyroglossal duct cysts it can mimic larynx benign mucosal masses, if it is eroded the cartilage in further ages, it can mimic a laryngeal malignancy. The patient was determined cystic neck mass that eroded the thyroid cartilage and encroached on the pre-epiglottic space and left pyriform sinus. Because of reason, the coincidence of a long-standing tyroglossal duct cyst lying near the thyroid cartilage and thyrohyoid membrane remains the most plausible explanation for the passive erosion of the laryngeal cartilage.

Thyroglossal duct cysts caused only neck midline swelling in some of the cases whereas it caused stridor and hoarseness in some of the cases (1-3, 6). In the patient existed complaint of painless mass in the midline of the neck and in indirect laryngoscopic examination, only fullness existed on pre-epiglottic space and left pyriform sinus.

Thyroglossal duct cyst is important to differentiate ectopic thyroid from a cyst. Although only 10% of ectopic thyroid is found in the neck, it may described the only thyroid tissue in 75% of patients (8, 9). If ectopic thyroid tissue can excise, hormon replecmant could be nececssary for the remainder of the patient's life. However, in the literature, it was reported that thyroid tissue is found in surgical specimens in up to 45% of cases (10) . In the present case, thryglossal duct cyst was differentiated from ectopic thyroid by thyroid ultrasound and scintigraphy. Thyroid tissue not found in surgical speicmen.

On a contrast-enhanced CT scan, a thyroglossal duct cyst appears as a low-density mass with a uniformly thin peripheral rim enhancement (2). Septations are occasionally seen (4). It generally embedded in strap muscles adjacent to the outer margin of the thyroid cartilage. It must be differentiated from other lesions in the same localization, such as necrotic lenf nodes, laryngocele, lipomas, abscess, bronchial cyst, cystic hygromas, dermoid cysts and lymphangiomas (2). Thyroglossal duct cysts with extension to the prelaryngeal space and erosion of the thyroid cartilage must be differentiated from laryngeal neoplasm. CT scan and MRI can be useful for different diagnosis. Certain diagnosis is made on the basis of FNAB and pathology (5). The treatment is surgery and Sistrunk procedure is the most effective method. The middle bone is resected in an effort to remove any remnant and the tract is followed up the tongue base as well (7).

Thyroglossal duct cyst may be encountered at old ages as prelaryngeal mass. It can mimic laryngeal malignancy thyroglossal duct cyst eroded through the thyroid cartilage. It should be considered that it is likely to be thyroglossal duct cyst in cystic lesions extended into the larynx.

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