

## Papillary Thyroid Carcinoma Metastasis Case in Giant Branchial Cleft Cyst

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## Introduction

Branchial cysts are mostly (90%) originated from the space formed in II. branchial cleft. More rarely (8%), they are developed in connection with the closure failures in I. branchial cleft. The cysts formed by III. And IV. branchial arches are much more rare [1]. Second branchial cleft cysts are the most common cause of the cystic masses seen in the neck lateral of young adults at the rate of 95% [2].

Cystic neck masses in adult patients may cause diagnostic dilemmas for doctors. A single cystic mass in neck lateral is generally considered benign in young adult group patients. The most common cause of such cystic masses is brachial cleft cysts [3]. In addition, benign neck cysts in adult patients may involve carcinoma. This is mostly caused by the result of cervical metastases from squamous cell carcinoma of the Waldeyer's ring. Although it is rare, occult thyroid carcinoma metastases might be seen in solitary cystic lateral neck masses [2, 4]. Papillary cancer is the most common malignancy of the thyroid gland. Related to the primary tumors of the thyroid gland, which are less than 15 mm in diameter and not detectable by classical diagnostic methods, the definition of occult cancer or microcarcinoma is used [5]. It is well known that a metastatic neck mass may be developed as the first finding of thyroid (less than 1.5 cm) occult carcinoma [2].

Occult papillary cancers of the thyroid gland may cause cystic lymph node metastases that can reach large sizes. In some cases, indicated metastases can be seen as the first and only symptom of occult tumor in the thyroid gland [6]. This rare condition can be confused with benign solitary cystic neck masses during the differential diagnosis stage and as a result of the histopathological examination of simple excision-treated cysts, metastasis of thyroid papillary cancer can be detected.

## Case Presentation

A 42-year-old male patient was admitted to our clinic due to increased swelling and dyspnea on the left side of the neck for approximately five years. During the neck examination of the patient; there was a painless massive lesion with soft consistency, which starts from the hyoid bone in left SCM and continues through the SCM in the size of approximately 6x10 cm (Figure 1).

Other physical examination findings were normal. In the neck Usg, a massive cystic lesion with dense content, which is about 64\*91\*19 mm size in the posterior lateral aspect of the scm muscle in the left posterior cervical region, was reported. In the neck CT; a cystic lesion, which peripheric thin wall contains contrast with 9\*3 cm size, which starts from posterior cervical area in the left and continues to infrahyoid level, was reported (Figure 2).

Fine needle aspiration biopsy (FNAB) performed on the cystic mass

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was negative in terms of malignancy consistent with the cyst content of the case.

A simple cyst excision was performed with a preliminary diagnosis of a branchial cleft cyst as a result of supporting findings of US, CT and FNAB for the benign cystic lesion.

Histopathologic examination of the surgical specimen of the patient was reported as thyroid papillary carcinoma metastasis and total thyroidectomy and neck dissection were performed. On the pathologic examination of Specimen, papillary microcarcinoma in an area of 6 mm was detected in the left lobe of the thyroid (Figure 3). Examination of the neck dissection material revealed no metastatic lymph nodes.

## Discussion

Cystic neck masses are lesions that are mostly benign, which are mostly seen in young adults. However, although it is seen rarely, lateral cystic masses may appear as the first

symptoms of occult thyroid carcinomas. In recent years, Gourin and Johnson have observed the pathological results of 121 adult patients, who admitted with lateral cervical cyst diagnosis. Approximately one quarter of such cysts were found to have metastatic squamous cell carcinoma for the patients over 40 years old [7]. Even though it is rare, occult thyroid carcinoma metastases might be seen in solitary cystic lateral neck masses [2]. Therefore, thyroid papillary cancer metastasis in the evaluation of cystic neck masses in young middle age group, is a diagnosis which should not be ignored. In the event that it is ignored, it requires secondary surgery options, which have various difficulties for both the patient and the physician. Therefore, keeping papillary cancer in the mind for the differential diagnosis of cases in which a solitary cystic mass in the neck is detected and knowing the radiological and histopathologic findings of this rare condition will be useful to prevent these confusions. Also in adults, cystic neck masses should also be considered. Metastatic disease may have a cystic variation. Cystic masses located in frontal, lower and middle jugular areas of the neck, should raise the question of metastatic thyroid papillary cancer.

Lymph node metastases in the neck area appear as the first and only finding in approximately 30% of occult thyroid papillary cancers [8]. Different results have been given in relation to the incidence of cystic metastases in papillary cancers. Seven et al. reported that approximately 10% of cases with lateral cervical cysts have papillary cancer metastasis [9]. In a study of 74 cases performed by Wunder Baldinger et al., it was reported that, the first symptom of thyroid papillary cancer in 14.9% of the cases was cystic lymph node metastasis [10]. Therefore, papillary cancer metastasis should be kept in mind in the evaluation of cystic neck masses of the young and middle age group.

As a result; it should be kept in mind that an occult thyroid papillary cancer might be the cystic lymph node metastasis in an adult patient admitted with a solitary cystic neck mass. If there is suspicion as a result of radiological and histopathological examinations, a possible primary tumor should be investigated by examining the thyroid gland.

## References

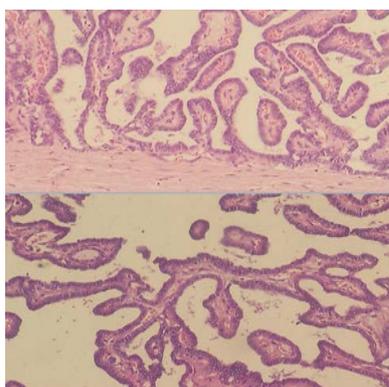
1. Smith CD (1998) Cysts and sinuses of the neck. In: O'Neill JA Jr, Rowe MI, Grosfeld JL, Fonkalsrud EW, Coran AG, eds. *Pediatric Surgery*. 5<sup>th</sup> eds. Mosby-Year Book pp: 757-771.
2. Coleman SC, Smith JC, Burkey BB, Day TA, Page RN, et al. (2000) Long-standing lateral neck mass as the initial manifestation of well-differentiated thyroid carcinoma. *Laryngoscope* 110: 204-209.
3. Sheahan P, O'Leary G, Lee G, Fitzgibbon J (2002) Cystic cervical metastases: incidence and diagnosis using fine needle aspiration biopsy. *Otolaryngol Head Neck Surg* 127: 294-98.
4. Cinberg JZ, Silver CE, Molnar JJ, Vogl SE (1992) Cervical cysts: cancer until proven otherwise. *Laryngoscope* 92: 27-30.
5. Hedinger C, Williams ED, Sobin LH (1989) The WHO histological classification of thyroid tumors: A commentary on the second edition. *Cancer* 163: 908-911.
6. Verge J, Guixa J, Alejo M, Basas C, Quer X, et al. (1999) Cervical cystic lymph node metastasis as first manifestation of occult papillary thyroid carcinoma: Report of seven cases. *Head Neck* 21: 370-374.



**Figure 1:** Image of giant cystic mass in the SCM posterior of left side of neck.



**Figure 2:** Neck BT with axial contrast: 9\*6 cm cystic mass in the left of neck.



**Figure 3:** H and Ex100, papillary carcinomas focus in the thyroid.

7. Gourin CG, Johnson JT (2000) Incidence of unsuspected metastases in lateral cervical cysts. *Laryngoscope* 110: 1637-1641.
8. Hwang CF, Wu CM, Su CY, Cheng L (1992) A long-standing cystic lymph node metastasis from occult thyroid carcinoma-report of a case. *J Laryngol Otol* 106: 932-934.
9. Seven H, Gurkan A, Cinar U, Vural C, Turgut S (2004) Incidence of occult thyroid carcinoma metastasis in lateral cervical cysts. *Am J Otolaryngol* 25: 11-17.
10. Wunderbaldinger P, Harisinghani MG, Hahn PF, Daniels GH, Turetschek K, et al. (2002) Cystic lymph node metastasis in papillary thyroid carcinoma. *AJR Am J Roentgenol* 178: 693-697.