

A Rare Case Report of Papillary Carcinoma of Thyroid Arising in Asymptomatic Thyroglossal Duct Cyst



Medical Science

KEYWORDS :

Tejeswararaobendi

Assistant professor of surgery, Andhra medical college, visakhapatnam

Krishna prasadpadagala

Assistant professor of pathology, Maharaja institute of medical sciences, Nellimarla.

Priyajiseepana

Civil assistant surgeon, ESI Hospital, Gandhigram, Visakhapatnam.

Ramesh uppada

Assistant professor of pathology, Rangarayamedicalcollege, Kakinada.

ABSTRACT

Thyroglossal duct cyst is a most common anomaly in the development of thyroid gland.[1] Only 1% of Thyroid carcinomas may arise in a thyroglossal duct cyst[2] most being Papillary carcinoma arising. We present a case report of Papillary carcinoma of thyroid arising in thyroglossal duct cyst in a 21 year old female. She presented with asymptomatic swelling in the upper midline of the neck. She was clinically diagnosed as thyroglossal cyst and was supported by FNAC. Sistrunk's procedure was done and the cyst was sent for histopathological examination. Biopsy showed papillary carcinoma arising in the cyst wall. After six weeks Technicium radionuclide study was done which showed no residual disease. Patient is on followup for one year.

INTRODUCTION:

Case report: A 21 year old female presented with asymptomatic cystic swelling of 3 x 2 x 2cm in the upper midline of the neck of one year duration attended surgical OPD. A clinical diagnosis of thyroglossal cyst was made and was sent for FNAC. FNAC showed features of a benign thyroglossal cyst. Sistrunk's procedure was done and the excised cyst was sent for histopathological examination.

Pathological findings –

on gross examination, the lesion is a cystic mass of 3 x 2 x 2 cm. The wall is of variable thickness with a focal solid graywhite area of 0.75cm.(IMAGE-1) Rest of the cyst is filled with mucoid material was showed papillary carcinoma arising in the cyst wall.

Histopathological examination

revealed a cyst lined flattened epithelium and the wall madeup of fibrocollagenous tissue and adjacent skeletal muscle bundles. Sections from the solid gray-white area show tumor madeup of thyroid tissue exhibiting true papillary formations with typical nuclear features of papillary carcinoma of thyroid and the wall showing skeletal muscle bundles.(IMAGE-3,4) Adjacent thyroid follicles are also seen in the representative sections from the tumor.(IMAGE-2).

DISCUSSION:

The papillary adenocarcinoma accounts for 75–85% of all the malignant tumors of the thyroglossal cyst. Cancer on thyroglossal cyst does not have its own symptoms in 70% of the cases. Seldom, it can be revealed by dysphagia, snores or loss of weight.[4] The average age

of discovery is 40 years; the sex ratio female/male is 3:2.[3] At the clinical examination, this lesion has the form of a median cervical nodule or a sinus opening with intermittent serous secretion in the area ranging between the hyoid bone and the cricoid cartilage.[5] Papillary carcinoma is the most frequent type (85%), insular or associated with follicular forms (mixed-variant). Epidermoid cancers are rare (7%) and it is exceptional to find carcinoma with Hurthle's cells, anaplastic carcinoma and association between papillary and epidermoid carcinoma.[3,5] The three diagnostic criteria of papillary carcinoma on thyroglossal duct cyst are [6]: histological identification of the thyroglossal cyst (presence of thyroid follicles in the wall of the cyst), the existence of normal thyroid tissue adjacent to the tu-

mor and the absence of primary carcinoma in the thyroid

body. The origin of primary papillary carcinoma of the thyroglossal cyst [7] would be the presence of small islands of thyroid tissue adjacent to the cyst.

These carcinomas have a variable ultrasonographic aspect [5]: anechoic lesions, homogeneous or heterogeneously hypoechoic complex. The CT-scan and the MRI can be useful for the diagnosis: the presence of hypodense masses, calcifications (markers of papillary carcinoma [8]

which can be found on a simple cervical profile X-ray. The fine needle aspiration cytology can point out to malignancy, but the rate of true-positive is only 53%. [9] The excision of the cyst, without thyroidectomy, remains valid only for the microscopic carcinomatous foci without invasion of the wall of the cyst. Total thyroidectomy, in the same operative time, if it is possible, followed by radiotherapy by radioactive iodine, is recommended by the majority of the authors. [11,12] Kennedy TL *et al.* [11] point out that the patients treated for carcinoma of thyroglossal cyst should receive hormonal suppression therapy to prevent the thyroid tissue stimulation, tumoral or normal, by L-thyroxin. In case of adenopathy discovered during the complementary

examinations or in preoperative, a lymphatic dissection of jugular carotid lymphatic chain is indicated. [13,14] The prognostic of the papillary carcinoma of thyroglossal cyst is identical to that of papillary carcinoma of thyroid, with a rate of curability of 95%. [9] In the cases where the thyroidectomy was not carried out, monitoring in the very long term is necessary to detect latent thyroid cancer. [12]

CONCLUSION:

Papillary carcinoma on thyroglossal cyst is rare and the diagnosis is often histological, but ultrasonography of the neck is recommended in first line. In the case of histological confirmation, a CT scan is recommended. The treatment of carcinoma of the thyroglossal duct is well codified today and allows an excellent prognosis. In our case, Sistrunk's procedure was done to remove thyroglossal cyst. The presence of focus of papillary carcinoma arising in the wall of thyroglossal cyst was revealed in histopathology which was missed by fine needle aspiration cytology. After six weeks Technicium radionuclide study was done which showed no residual disease. Patient is on followup for one year.

IMAGES

IMAGE-1 -



IMAGE-2 -

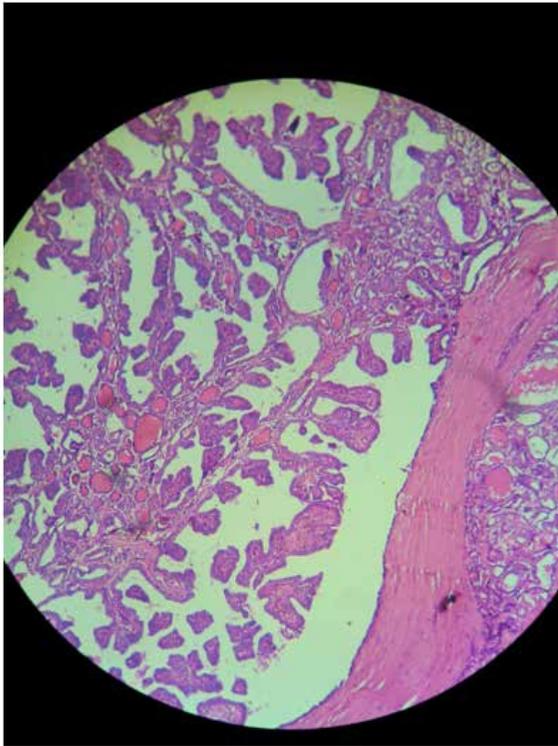


IMAGE-3

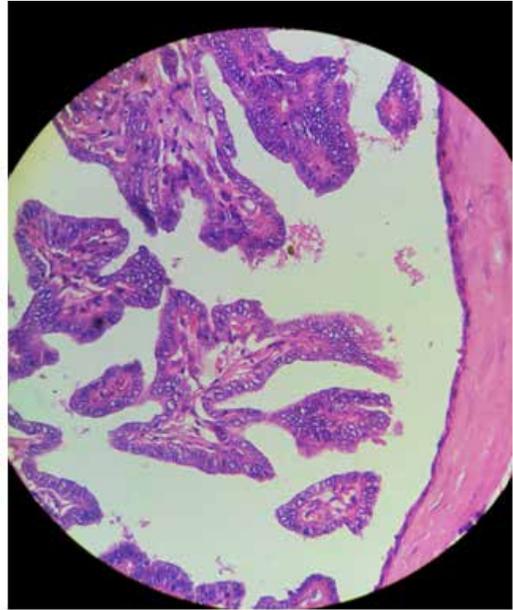
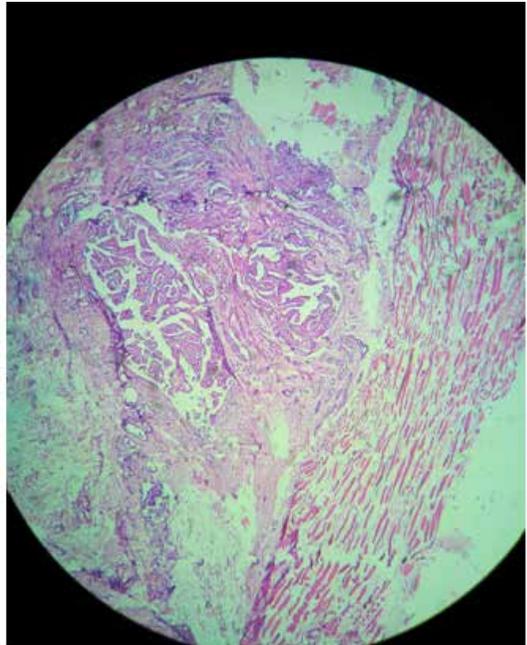


IMAGE-4



REFERENCE

1. Vera-Sempere F, Tur J, Jaen J, Perolada JM, Morera C: Papillary thyroid carcinoma arising in the wall of a thyroglossal duct cyst. *Acta Otorhinolaryngol Belg* 1998;52:4-54. ||
2. Dedititis RA, Guimaraes AV: Papillary thyroid carcinoma in thyroglossal duct cyst. *Int Surg* 2000; 85:198-201. ||
3. MOTAMED M, MCGLASHAN JA, Thyroglossal duct carcinoma, *Curr Opin Otolaryngol Head Neck Surg*, 2004, 12(2):106-109. ||
4. BARRIGA SANCHEZ R, MARTIN PÉREZ E, LARAÑAGABARRERA E, ESCORIAL ERNANDEZ V, Papillary carcinoma within a thyroglossal duct cyst, *Endocrinol Nutr*, 2003,50(2):76-80. ||
5. DEDIVITIS RA, CAMARGO DL, PEIXOTO GL, WEISSMAN L, GUIMARÃES AV, Thyroglossal duct: a review of 55 cases, *J Am Coll Surg*, 2002, 194(3):274-277. ||
6. WINDSTRÖM A, MAGNUSSON P, HALLBERG O, HELLQVIST H, RIIBER H, Adenocarcinoma originating in the thyroglossal duct, *Ann Otol Rhinol Laryngol*, 1976, 85(2 Pt 1):286-290. ||
7. LIVOLSI VA, PERZIN KH, SAVETSKY L, Carcinoma arising in median ectopic thyroid (including thyroglossal duct tissue), *Cancer*, 1974, 34(4):1303-1315. ||
8. GLASTONBURY CM, DAVIDSON HC, HALLER JR, HARNSEBERGER HR, The CT and MR imaging features of carcinoma arising in thyroglossal duct remnant, *AJNR Am J Neuroradiol*, 2000, 21(4):770-774. ||
9. YANG YL, HAGHIR S, WANAMAKER JR, POWERS CN, Diagnosis of papillary carcinoma in a thyroglossal duct cyst by fine needle aspiration biopsy, *Arch Pathol Lab Med*, 2000, 124(1):139-142. ||
10. KERMANI W, BELCADHI M, ABDELKÉFI M, BOUZOUITA K, Papillary carcinoma arising in a thyroglossal duct cyst: case report and discussion of management modalities, *Eur Arch Otorhinolaryngol*, 2008, 265(2):233-236. ||
11. KENNEDY TL, WHITAKER M, WADH G, Thyroglossal duct carcinoma: a rational approach to management, *Laryngoscope*, 1998, 108(8 Pt 1):1154-1158. ||
12. BELNOUE AL, POUPART M, PIGNAT JC, Intérêt de la thyroïdectomie dans la prise en charge des kystes du tractus thyroïdés dégénérés, *Ann Chir*, 2004, 129(9):523-525. ||
13. KANDOGAN T, ERKAN N, VARDAR E, Papillary carcinoma arising in a thyroglossal duct cyst with associated microcarcinoma of the thyroid and without cervical lymph node metastasis: a case report, *J Med Case Reports*, 2008, 2:42. ||
14. FALVO L, GIACOMELLI L, VANNI B, MARZOLLO A, GUERRIERO G, DE ANTONI E, Papillary thyroid carcinoma in thyroglossal duct cyst: case reports and literature review, *Int Surg*, 2006, 91(3):141-146.