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PRIMARY PAPILLARY CARCINOMA IN A THYROGLOSSAL CYST:A CASE REPORT

Pathology

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ABSTRACT

Thyroglossaal cyst associated carcinoma is a rare and comprise 1% of all thyroid carcinoma.(1) We in this report present a case of primary papillary carcinoma arise in a thyroglossal duct cyst. A 36 year old male presented with cystic mass in front of neck,ultrasound scanning was suggestive of a complex cystic lesion and normal thyroid,FNAC showed Thyroglossal cyst with inflammation.The Sistrunk procedure was performed and histopathology confirmed the diagnosis of Papillary carcinoma thyroid in thyroglossal cyst.

KEYWORDS

Papillary carcinoma,Thyroglossal cyst,Sistrunk operation

INTRODUCTION

Thyroglossal cyst is a commonest congenital anomaly occurs during thyroid development.(2)The most common primary thyroglossal duct cyst carcinoma is papillary carcinoma(75-85%),but other cancers also have been reported(3,4).Thyroglossal cyst duct carcinomas are occurs commonly during 3rd to 4th decade of life(7,8).These tumors exhibit a similar biological behavior to their primary gland counter parts.The thyroglossal duct cyst carcinoma present as a asymptomatic mid line mass in the neck.Few cases reported arising from lateral location(5).Dysphagia,dysphonia,progressive weight loss with rapid growth in size of mass are signs of malignancy(8).

Case Report

A 36 year old man presented with complaints of painless cystic mass in front of neck gradually increase in size for the past one year. USG neck showed a single well defined thin walled cystic lesiom measuring 4.4x2x2cm noted in mid line of neck at hyoid level,deep to subcutaneous tissue of neck.Free floating internal echoes and non dependant echogenic areas noted within the cyst.No internal vascularity,No deeper extension .Both lobes of thyroid appears to be normal.Aspiration cytology was suggestive of Thyroglossal cyst with inflammation.Patient underwent sistrunk operation removed thyroglossal cyst with hyoid bone.

Macroscopy

We received a nodular mass and a bony fragment.Nodular tissue measuring 4.5x2.5x2cm.Cut section of nodular mass identified both solid and cystic area.Solid area cut section is grey white to brownish Cystic area filled with grey white granular material.Bony fragment measuring 1.5x1x0.3cm-which was decalcified and processed .

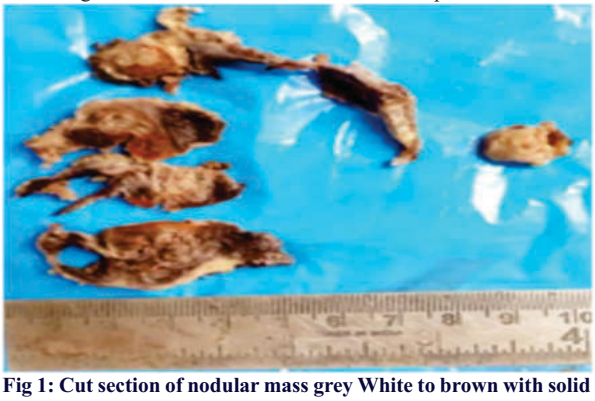

Fig 1: Cut section of nodular mass grey White to brown with solid and cystic area

Microscopy

Showed a cyst walled lined partly by pseudostratified ciliated columnar epithelium**(Fig:2)** and partly by stratified squamous epithelium **(Fig:3)**with focal normal thyroid tissue**(Fig4)** and an invasive neoplasm composed of cells arranged in papillary pattern,individual cells are cuboidal to columnar with moderate eosinophilic cytoplasm ,ovoid nuclei with nuclear clearing (orphan annie like) grooving ,overlapping and crowding noted**(Fig5,6,7)**.No invasion noted in bony fragment.

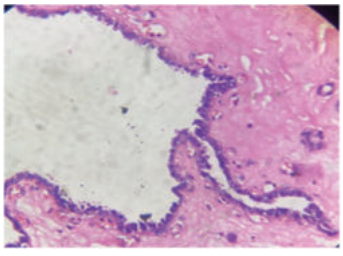

Fig 2: cyst lined by pseudostratified ciliated columnar(10X:H&E)

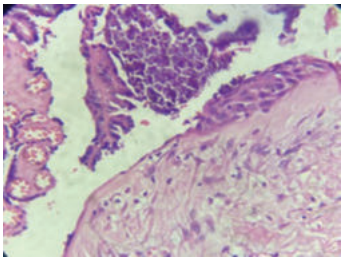

Fig 3:Cyst lined by stratified squamous epithelium(10x:H&E)

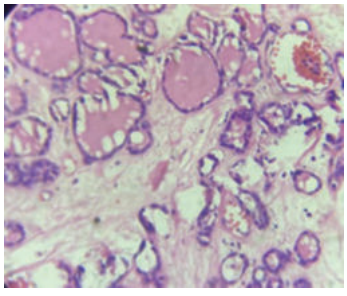

Fig 4:Normal thyroid tissue(10X:H&E)

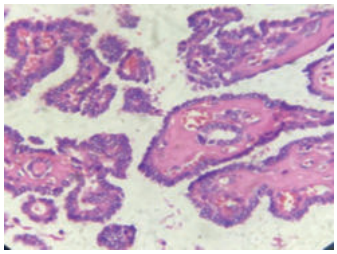

Fig 5:Papillae lined by cuboidal cells with elongated nuclei with nuclear clearing(40X:H&E)

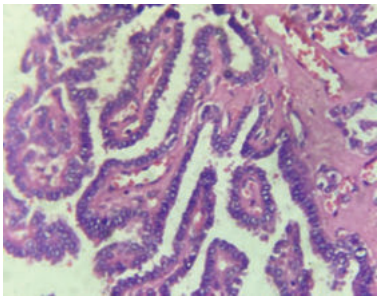

Fig6:Papillary carcinpoma with nuclear clearing(40X:H&E)

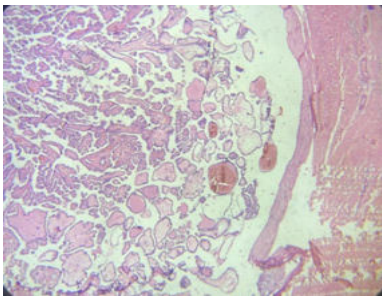

Fig7:Thyroglossal cyst wall with heamorrhage and papillary carcinoma(5X:H&E)

DISCUSSION

In case of thyroglossal cyst Sistrunk operation regarded as the commonest surgical procedure for treatment modality.Further management of patients who are incidentally diagnosed as carcinoma after surgery depends on spread of tumour.Primary thyroglossal duct tumors without spread managed by regular monitoring,while more aggressive once are managed by total thyroidectomy and rdioablation. (6,7). In our case patient underwent post surgical scanning and found out that his both lobe of thyroid were normal,hence he is under follow up only.7.7% to 12.9% of primary papillary carcinoma in thyroglossal duct cyst shows lymphnode metastasis and it is rare to find distant metastases (9). A definitive diagnosis of most cases are based on post surgical histopathology examination,Aspiration cytology only yields correct diagnosis in 55-66% cases ,hence pre-planned surgical procedure for a carcinoma is very difficult in this case(10).

CONCLUSION

Papillary carcinoma in thyroglossal cyst is mostly a histology finding after surgical removal of thyroglossal cyst,hence pathologist always take a caution in reporting thyroglossal cyst as a benign one.Whole embedding of specimen and serial section evaluations can be done to rule out microfocus of papillary carcinoma or other carcinomas arising from thyroglossal cyst.

REFERENCES

(1) Dedivitis RA, Guimarães AV. Papillary thyroid carcinoma in thyroglossal duct cyst. *Int Surg.* 2000;85:198–201. [PubMed] [Google Scholar]

(2) Wexler MJ. Surgical management of thyroglossal duct carcinoma: is an aggressive approach justified? *Can J Surg.* 1996;39:263–264. [PMC free article] [PubMed] [Google Scholar

(3) Buchino JJ, Fallat ME, Montgomery VL. Pathological case of the month: papillary carcinoma of the thyroid in a thyroglossal duct remnant. *Arch Pediatr Adolesc Med.* 1999;153:999–1000. [PubMed] [Google Scholar]

(4) Kim WJ, Souillard R, Brandwein MS, et al. Follicular adenoma in a juxtathyroidal thyroglossal duct cyst with papillary carcinoma in the adjacent thyroid gland. Am J Otolaryngol. 2005;26:348–350

(5) Choi YM, Kim TY, Song DE, Hong SJ, Jang EK, et al. (2013) Papillary thyroid carcinoma arising from a thyroglossal duct cyst: A single institution experience. Endocr J 60: 665-670. Link: https://goo.gl/7AZ4II

(6) A. Chala, A. Alvarez, A. Sanabria, A. Gaitan Primary papillary carcinoma in thyroglossal cysts. case reports and literature review Acta Otorrinolaringol. Esp., 67 (2) (2016), pp. 102-106

(7) N. Patel, K. Sheykholeslami Papillary carcinoma in thyroglossal duct cyst: two case reports and review of the literature Ear Nose Throat J., 95 (2016), pp. E36-E38

(8) Gebbia V, Di Gregorio C, Attard M. Thyroglossal duct cyst carcinoma with concurrent thyroid carcinoma: A case report. *J Med Case Rep.* 2008;2:132. [PMC free article] [PubMed] [Google Scholar]

(9) Cardoso F, Alves A, Caldas I, et al.: Papillary carcinoma of the thyroglossal duct cyst - case report and literature review. Rev Port Cir. 2019, 45:25-30.

(10) Sobri FB, Ramli M, Sari UN, Umar M, Mudrick DK: Papillary carcinoma occurrence in a thyroglossal duct cyst with synchronous papillary thyroid carcinoma without cervical lymph node metastasis: two-cases report. Case Rep Surg. 2015, 2015:872054. 10.1155/2015/872054