INCIDENTAL PAPILLARY CARCINOMA OF THYROGLOSSAL CYST - A RARE CASE

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Abstract:
Thyroglossal duct cysts are most common congenital neck masses, usually presenting in childhood. Uncommonly the cysts present clinically in adult life as an asymptomatic neck swelling. On rare occasions it presents with more sinister symptoms like dysphagia and dyspnoea. CT scan adequately delineated the extent of the thyroglossal duct cyst and could differentiate it from other median-paramedian neck masses. Incidental papillary carcinoma in a case of thyroglossal cyst is a rare occurrence with only 213 cases being reported till now in literature. Here with we are reporting a case incidental papillary carcinoma in thyroglossal cyst.

Keyword: Thyroglossal cyst, Papillary carcinoma

CASE REPORT:
A 35-years old male patient came with history swelling in front of neck for past 5 years. It was insidious in onset gradually progressive in size. No history suggestive of hypo/hyper thyroidism. No history of dysphagia, dyspnoea and hoarseness of voice. No history of loss of weight and appetite, no history fever, pain, trauma. No history of similar complaints in the past. Not a known case of diabetes mellitus, hypertension, tuberculosis, bronchial asthma. On examination a single cystic swelling in the midline of neck, at the level of upper border of thyroid cartilage, measuring 4x3 cm, mobile along transverse plane, restricted in the vertical axis, moves with deglutition and protrusion of the tongue, transillumination was negative. No nodules palpable in the thyroid. No cervical lymphadenopathy, B/L carotid pulses normally felt, trachea in midline.

INVESTIGATIONS
CBC, RFT were normal, THYROID FUNCTION TEST was normal, X RAY NECK-no calcification IDL-b/l vocal cords normal, SERUM CALCIUM-9.2g/dL USG NECK-3.5x2.8 CM CYSTIC LESION BELOW THE LEVEL OF HYOID BONE.

NO NODULES IN THYROID, NO CERVICAL LYMPHADENOPATHY FNAC OF SWELLING-features suggestive of thyroglossal cyst CT NECK: -suggestive of thyroglossal cyst. Thyroid normal. No neck nodes

We proceeded with Sistrunk operation Intra-operative findings: A cystic swelling 1 cm above the level of the isthmus of thyroid gland measuring 3x3 cm. Tract from the cyst extending through the hyoid bone, an apparently normal thyroid gland. No enlarged cervical lymph nodes and the specimen were sent for histopathological study. Post operative period was uneventful. Histopathological study:

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Macroscopically a 3x2x1cm cystic mass with 0.5cm nodule filled with colloid

Microscopically-papillary carcinoma of thyroid within in a thyroglossal cyst, surrounded by chronic non specific inflammation, no capsular invasion present.
Since there was no capsular invasion and tumour size < 1cm total thyroidectomy was deferred. Follow up: Patient was educated about his condition and was asked to come for regular follow up. Patient came for follow up thrice after surgery. USG neck was done all the three times which was normal.

**DISCUSSION:**
Thyroglossal duct cysts are the most common congenital anomalies in thyroid development, but Thyroglossal duct carcinomas are extremely rare. Only 1% of thyroid carcinomas arise from a Thyroglossal duct cyst. Papillary type comprises 94%, and less than 5% are of squamous cell origin. Squamous cell carcinoma is believed to be the only true carcinoma of the Thyroglossal duct, since the other malignancies actually develop in ectopic thyroid tissue. More than 66 % of the cases are diagnosed postoperatively with the full histological specimen. Only 213 cases of Carcinoma of the thyroglossal duct cyst have been reported so far in literature. – Generally, there are two theories to explain the thyrogenic origin of Thyroglossal Duct adenocarcinomas. The de novo theory states that in 62% of cases, ectopic thyroid tissue can be identified histopathologically, as evidenced by the absence of a medullary carcinoma in the Thyroglossal Duct . v The metastatic theory which suggests that thyroglossal duct carcinoma is metastatic from an occult primary thyroid gland, as papillary carcinoma is multifocal in naure, with the Thyroglossal Duct acting as a natural conduit for the spread of thyroid carcinoma. Sistrunk procedure is sufficient for pure thyroglossal cyst carcinoma of squamous cell origin. For papillary carcinoma in a thyroglossal cyst, total thyroidectomy is indicated, when v Large tumors >1 cm v Invasion through the duct cyst wall v Suspicious foci in the thyroid gland. The prognosis for papillary thyroglossal cyst carcinoma is excellent, with occurrence of metastatic lesions in less than 2% of cases. Follow-up procedures consist of physical examinations, ultrasound of the surgical region and thyroid, and a total body scintigraphy. Squamous cell carcinoma, being very rare and having a poor prognosis with mortality rate of 30–40%.

**CONCLUSIONS:**
The diagnosis of thyroglossal cyst carcinoma can be missed due to its rarity, occurring in approximately 1% of all Thyroglossal duct cyst cases. For rapidly growing midline neck masses, relevant investigations involving imaging of the neck and fine-needle aspiration cytology are required. The Sistrunk operation alone is sufficient for squamous carcinoma, but total thyroidectomy is recommended for differentiated carcinoma of the thyroglossal cyst with special considerations.

**References**
