

PAPILLARY THYROID CARCINOMA PRESENTING AS METASTATIC CYSTIC LATERAL NECK SWELLING: A DIAGNOSTIC CHALLENGE.

Histopathology

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ABSTRACT

We report a case of a papillary carcinoma of thyroid presenting as lateral cervical cystic swelling as an only initial complaint. This presentation without any thyroid swelling is very rare. Also Cystic lesion of Neck presents diagnostic challenges because distinction between benign and malignant lesions requires multiple imaging and diagnostic tests. Histopathology examination is crucial in cases of metastatic cystic papillary carcinomas.

KEYWORDS

CASE REPORT:

A 72-year-old man presented to the ENT surgical department with a left side neck swelling for 2 years. The swelling had increased in size over the last few weeks without signs of compression or thyroid dysfunction. He had mild difficulty in neck movements towards the left side. He had no history of pain, fever, weight loss, and change in voice and difficulty in swallowing and breathing. He is a hypertensive on treatment and chronic smoker. On examination swelling was located in Anterior and Posterior triangle of neck and superiorly extending into the supraclavicular fossa measuring approximately 6.5×6×5 cm in size. Swelling was non tender, firm, non mobile and not moving with deglutition and tongue protrusion. However no neck nodes were palpable.

Ultrasonography (USG) showed a big thick walled cystic mass lesion of size 61×60×51mm in the left posterolateral region of the left thyroid lobe with echogenic content and few calcified specks within.

Contrast enhanced CT scan of neck showed well defined predominantly cystic lesion with small nodular enhancing component and thin septa in the posterior triangle of neck on the left side.

Clinical provisional diagnosis was of branchial cyst. Patient was sent for fine needle aspiration cytology (FNAC) of the swelling. On aspiration approximately 70 ml brownish colored fluid aspirated and the swelling collapsed. smear prepared and stained with Giemsa and pap stain. Microscopy of fluid showed numerous cystic macrophages in the background of lymphocytes and RBCs. FNAC was in favor of benign cystic disease.

Patient underwent surgical resection of cystic mass and specimen sent to histopathology department. Gross examination showed a cyst measuring 6.5×6×5 cm in size. Cut section showed watery brownish fluid and a thin cyst wall. Cyst wall is thickened at single place with small papillary-like growth. Microscopy showed cyst with fibrocollagenous wall and scanty lymphoid tissue in the surrounding. Thickened area showed papillary structures and colloid filled follicles. Cells were columnar to cuboidal. Nuclei were clear with crowding and grooving seen at places. Areas of calcification noted. Histopathology favoured the diagnosis of metastatic Papillary thyroid carcinoma. With IHC studies of TTF and Thyroglobulin it was conclusive.

Introduction:

We report a case of a papillary carcinoma of thyroid having a cervical cystic swelling as an only initial presenting symptom. This presentation without any thyroid swelling is very rare. Cystic lesion of Neck presents diagnostic challenges because distinction between benign and malignant lesions requires multiple imaging and diagnostic tests. However, histopathology is essential for accurate diagnosis.

Metastasis of Malignant tumors can be cystic due to necrosis.

Metastases of Papillary thyroid carcinoma are cystic in approximately 40% of cases.¹ Some studies have reported 11% of thyroid malignancy in patients with a diagnosis of lateral cervical cyst.²

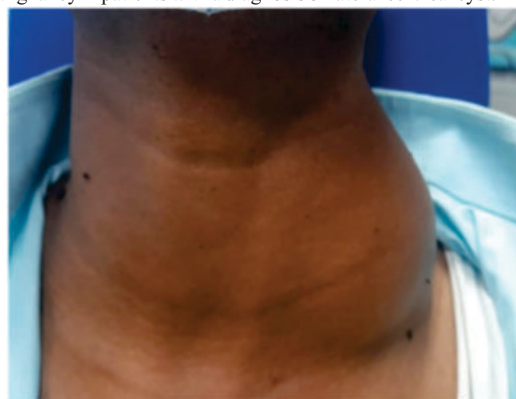


Fig 1:



Fig 2 (a & b):

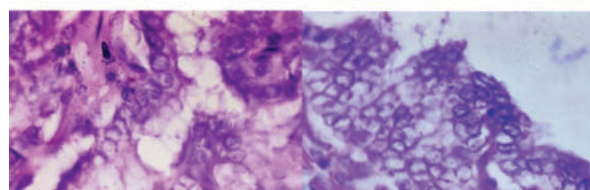
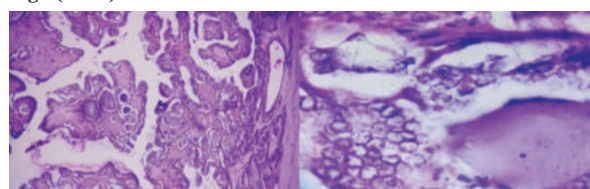


Fig 3 (a, b & c): Intranuclear Inclusion, Nuclear Crowding And Grooving

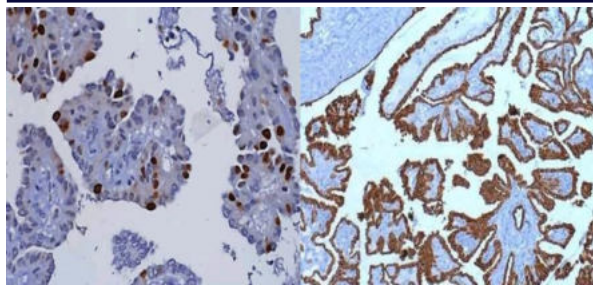


Fig 4 (a & b): TTF-1 & Thyroglobulin positivity (nuclear and membranous respectively) in metastatic papillary thyroid carcinoma

DISCUSSION :

The most common lateral neck swelling are Enlarged Lymph nodes , which can be caused by Viral , Bacterial , Malignancy or other rare causes .

Differential Diagnosis of lateral Neck swelling are Developmental cyst like Branchial cyst, Cyst deformed lymph node caused by Granulomatous infection with TB, Haemangioma, laryngocele , Sebaceous cysts, Lipoma , Lymphadenopathy due to infective causes and Neoplasms, Warthin's Tumor, Carotid sheath Aneurysm, Carotid Body Tumour , sialadenitis & Sjogren's Syndrome³.

Reactive Lymphadenitis is the Most common cause of Lateral Neck swelling in children . In adults above 40 years of age Squamous cell carcinoma is the most common cause of lateral Neck Swelling⁴.

Cervical lymph node metastasis if present in level 1 to 3 – it is usually presumed to be SCC in mucosa of Respiratory and upper GI Tract , if present in level 4 and 5b – it is usually due to proximal esophageal and Thyroid Carcinoma , if present in level 2b and 5a – it could be due to Nasopharyngeal cancer⁵.

Malignant lateral cervical cysts are less frequent and can be caused by primary brachiogenic carcinoma or metastatic tumors arising mainly from the oro-nasopharyngeal area, the salivary glands and the thyroid gland.

FNAC of Neck swellings are Helpful in diagnosis and can differentiate between Benign and Neoplastic lesions . However FNAB has been associated with false-negative results in cases of malignant diseases when aspiration histology of cystic fluid was free of tumor cells. Therefore some studies do not recommend FNAB when diagnosing cystic neck lesions⁶.

Imaging is required to confirm the clinical diagnosis and assess the anatomical extent of the lesion before treatment. Ultrasound scan is the imaging method of choice and in most of the cases a definite diagnosis is possible , Particularly if the lesion is cystic . Computed Tomography (CT) is superior as it is usually done in patients who are Acutely ill with infections , to assess whether an abscess is present . MRI is usually done to determine whether the lesion had infiltrated into deep spaces⁷.

Some studies recommend an algorithm including pan-endoscopy, evaluation of the intraoperative frozen section of the cystic mass and possible neck dissection in order to avoid invasive neck surgery before definitive surgical neck therapy and treatment delays⁸.

The differentiation between a branchial cleft cyst and a malignancy is not possible based on history, clinical examination and radiological imaging including FNAB . Histological examination is absolutely required for final diagnosis⁹.

Majority of the Papillary thyroid carcinomas are positive for TTF-1 and Thyroglobulin . Staining for TTF-1 was always nuclear and usually strongly positive¹⁰.

CONCLUSION:

Histopathology examination is crucial in cases of metastatic cystic papillary carcinomas. Patient age may be an independent Predictive Factor for Malignancy. Differential diagnosis of metastatic malignancy should always be considered in cystic and necrotic lymph nodes. Diagnosis can be missed on CT scan, FNAC and hence meticulous microscopic examination is a must.

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