

# Anomalous Behaviour of FVPTC A Rare Presentation

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## Case Report

**Abstract:** Encapsulated Follicular Variant of Papillary Thyroid Carcinoma (EnFVPTC) is still controversial pathological presentation in PTC which has long been diagnosed based on its unique nuclear features. Equivocal PTC– N can occur in both invasive and non invasive EnFVPTC and benign and malignant controversies often create serious problems in modulating patient's management. In our case of EnFVPTC there had been a considerable delay in diagnosis by the local private practitioner for want of discrete pathological diagnosis of PTC. Multiple FNAC of thyroid in our case has proved futile. In our case lymph nodal secondaries in all the whole cervical chain on the ipsilateral side and recurrence of lymph nodal swellings after ablation of radioactive iodine therapy and subsequent disappearance of lymph nodal mass on suppressive doses of thyroxine has evoked interest in the anomalous behaviour of Encapsulated Follicular Variant of Papillary Thyroid Carcinoma. Hence excised lymph nodal specimen histopathology alone revealed the correct diagnosis and hence the presentation of this case we opine will interest our readers about the anomalous behavior of EnFVPTC.

**Key words:** Papillary carcinoma thyroid, Follicular variant, Lymph nodal secondaries.

## Introduction

Papillary carcinoma thyroid is the most common form of thyroid cancer commonly occurring in young females with the mean age of presentation around 30 to 40 years. Here I am reporting a case of encapsulated form of follicular variant of papillary carcinoma thyroid in a 16 yr old girl with lymph node metastasis, a rare occurrence.

## Case Report

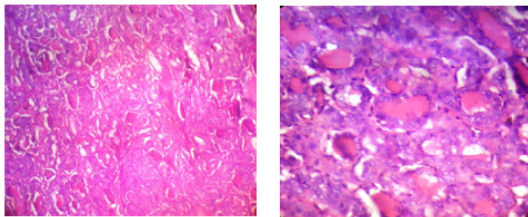
A 16 yr old female patient was admitted in our hospital with the presenting complaints of swelling in the front aspect of neck for 5 months. The patient also complained of difficulty in swallowing especially for solid foods. There was no history of hoarseness of voice or difficulty in breathing or loss of weight and appetite. There was no history suggestive of hypo or hyperthyroidism. The patient was not a known diabetic or hypertensive. There was no history of contact with tuberculosis patients or history of chronic drug intake. Her menstrual cycles were regular. Family and personal histories were not contributive. The patient was being treated as a case of non toxic and non malignant

multinodular goiter for a period of 1 year in a private hospital where the FNAC done was reported as colloid goiter. On clinical examination, the patient was thin built and moderately nourished. The patient was clinically not anaemic or icteric. Pulse was 82/min and BP 120/70mm Hg. The thyroid gland was unevenly enlarged with left lobe more enlarged than the right. The gland moved up with deglutition and lower border was seen. Trachea was in midline. There were multiple enlarged mobile and discrete nodes in the left lateral compartment in level III. USG examination of the neck confirmed the clinical findings. Repeat USG guided FNAC of the gland showed no evidence of malignancy. FNAC of the enlarged nodes were also inconclusive. Since the clinical suspicion of malignancy was high, excision biopsy of the level III node was done. HPE of the node showed metastatic deposits from the thyroid. The patient was posted for surgery. A total thyroidectomy with central compartment neck dissection and left sided modified radical neck dissection type III was done. Post operative period was uneventful and the patient recovered well. HPE showed follicular variant of papillary carcinoma thyroid with lymph node deposits. Post operative thyroglobulin level was 5.9ng/ml. Since the patient was not affordable for radio iodine uptake study, the patient was kept on suppressive dose (300µg) of Eltroxin. One month later the patient came back with lymph node swelling in the left side level III. The patient was referred for radio iodine ( $I^{131}$ ) uptake study. The uptake study was done 2 months later when TSH level raised to 68.61µIU/ml. The study showed nodular uptake in the thyroid bed and the lateral neck nodal region. Patient was treated with radio iodine ( $I^{131}$ ) ablation and was continued on suppressive dose of Eltroxin. The node swelling subsided completely. The patient was lost on follow up and never reported to the hospital outpatient department. 5 months later the patient came back with recurrent neck node swelling. Thyroglobulin level was 25ng/ml and TSH was 5.47µIU/ml and the patient was continued on suppressive dose of Eltroxin.

## Discussion

Papillary carcinoma thyroid is a form of differentiated thyroid cancers, one of the least malignant and curable malignancies when diagnosed early. It commonly occurs in young females and lymph node spread is the most common form of metastasis. Follicular variant is the second commonest variant after the most common classical variety. Pathologically the most important criteria for diagnosis of FVPTC are cytoplasmic invaginations into the nucleus, abundant nuclear grooves, ground glass nuclei, psammoma bodies, enlarged overlapping and irregularly shaped nuclei. FVPTC can be either encapsulated or non-encapsulated. Encapsulated FVPTC are solitary, well circumscribed with uneven hypoechoic halo and demonstrate homogenous echo pattern. Non-encapsulated FVPTC demonstrate irregular borders with blurred margins with absent peripheral halo and inhomogenous echo pattern. After review by pathologists, ours is a case of papillary carcinoma thyroid with predominant follicular variant and encapsulated. The gender distribution, age of presentation and tumour size does not differ between patients with encapsulated and non encapsulated FVPTC. Patients who had encapsulated FVPTC had a significantly lower rate of marked intra tumour fibrosis, extra thyroid extension and positive margins compared with patients who had nonencapsulated tumours. The lymph node metastatic rate was significantly higher in patients who had non encapsulated tumours. In addition, lymph node metastasis were not detected in any noninvasive, encapsulated FVPTCs. Recurrence was rare excepting one case which occurred in an FVPTC that had numerous invasive foci. none of the patients with noninvasive, encapsulated FVPTCs developed recurrences. Lymph node spread is uncommon in follicular variant. Clinical suspicion of papillary carcinoma should be high when a multinodular goiter patient presents with lymph node enlargement.

## Histopathology Slides of this Case



**Figure 1 A/B:** Showing Follicular variant of papillary carcinoma thyroid. Neoplastic cells are arranged in follicles. Large, crowded, overlapping and empty – looking (Orphan Annie) nuclei are characteristic features ( H & E stain )

## Conclusion

FVPTC falls under the heterogeneous disease variety with two sub classifications :

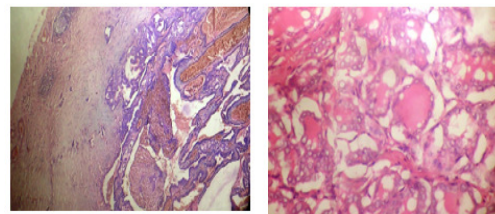
Nonencapsulated diffuse infiltrative sub variant behaving like classic papillary carcinoma with its lymph node metastasis and invasive nature.

Encapsulated form which behaves more like follicular thyroid adenoma / carcinoma.

Current findings in our case being an encapsulated FVPTC having developed lymph nodal secondaries and recurrence of lymph nodal swellings after ablatative radiotherapy, which has subsided on continuing suppressive doses of eltroxin has evoked considerable controversies in the behavior of FVPTC and awaits further follow up in this case to narrow down our conclusions precisely regarding FVPTC.

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**Figure 2 C/D:** Section from left lobe showing metastatic deposits with papillary structures lined by follicular cells surrounded by an intact capsule. The cells show nuclear over-crowding, ground glass appearance and grooving.