EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 5
Issue: 5
891-893
Year: 2018

SCALP METASTASES FROM FOLLICULAR THYROID CARCINOMA DIAGNOSED ON FINE NEEDLE ASPIRATION CYTOLOGY AT THE INITIAL PRESENTATION: A CASE REPORT

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Article Received on 13/03/2018 **Article Revised on 03/04/2018** **Article Accepted on 23/04/2018**

ABSTRACT
Follicular thyroid carcinoma (FTC) is the second most common type of thyroid carcinoma after papillary thyroid carcinoma. It accounts for 5-15% of primary thyroid cancers & is more commonly found in older patients, mostly females. They present as slowly, enlarging painless nodules and through haematogenous dissemination metastasises to bone, lungs, liver & elsewhere. Since it is a slowly growing tumour, some patients present with metastasis at the initial presentation. Metastasis to scalp is an extremely rare presentation and usually denotes advanced disease. We report a case of a 54 year old lady who presented to the surgery OPD with a large scalp swelling over the right parieto-occipital swelling and a small thyroid swelling both of which were painless. Fine needle aspiration cytology from both the swellings showed many microfollicles & clusters of follicular epithelial cells. The case was therefore diagnosed as scalp metastasis from FTC on FNAC.

KEYWORDS: Follicular thyroid carcinoma, scalp metastasis, fine needle aspiration cytology.

INTRODUCTION
Follicular thyroid carcinoma is the second most common type of thyroid carcinoma after papillary thyroid carcinoma. It accounts for 5-15% of primary thyroid cancers. They are more common in women (3: 1) & present more often in older patients than do papillary carcinomas; the peak incidence is between 40 & 60 years of age. They present as slowly enlarging painless nodules. Because follicular carcinomas have little propensity for invading lymphatics, regional lymph nodes are rarely involved, but vascular (haematogenous) dissemination is common, with metastases to bone, lungs, liver & elsewhere.[1] Metastatic tumour to the scalp are usually observed in elderly patients & most often from lung, breast, prostate malignancies, & rarely from thyroid cancers.[2] The incidence of scalp metastasis of FTC is reported to be 2.5 – 5.8% cases. In most reported cases, metastasis occurs after the diagnosis & treatment of primary tumour, but in a few cases, scalp metastasis was the first presentation.[3]

CASE REPORT
A 54 year old lady presented to the surgery OPD with a large scalp swelling over the right parieto-occipital region (Fig 1). On examination, a smaller thyroid swelling was also detected (Fig 2). The scalp swelling was present since 8 months and had gradually increased in size. Both the swellings were painless.

On examination, the scalp swelling was found to be 9 X 7.5 cm & the thyroid swelling to be 3x2 cm. The scalp swelling was soft in consistency & the thyroid swelling was firm with no other palpable neck nodes. Systemic examination was otherwise normal. She was advised all the routine blood tests, free T3, T4 & TSH, FNAC of the swellings along with CT scan brain. Her CT scan showed a hyper dense lesion arising from the intra-diploic space of right posterior bone with serrated edges & few internal areas of calcification. The lesion showed enhancement in post contrast studies. The lesion was seen extending extra axially compressing the right parietal lobe (Fig 3). A fine needle aspiration cytology of the thyroid swelling showed many clusters of follicular epithelial cells with prominent micro-follicular pattern as well as syncytial groups & trabeculae (Fig 4). Some clusters showed abundant basement membrane material & traversing vessels. The fine needle aspiration study from the scalp swelling also showed thyroid follicular epithelial cells forming follicles giving the picture of metastatic deposit from FTC (Fig 5).

Fig. 1: Large scalp swelling in the right parieto-occipital region.

Fig. 2: Showing thyroid swelling.

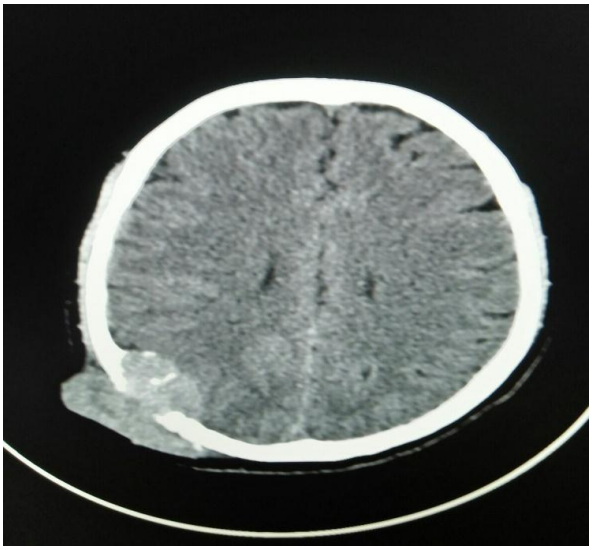

Fig. 3: CECT Brain showing a hyperdense lesion possibly arising from intradiploic space of right posterior parietal bone with few internal areas of calcification; lesion also shows enhancement along with few non enhancing areas.

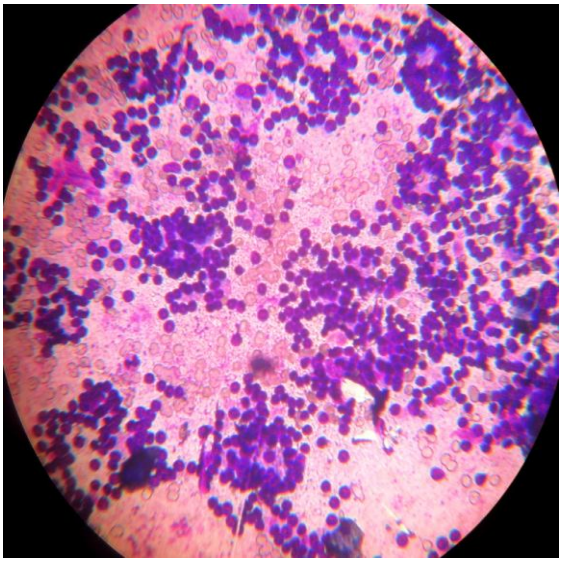

Fig. 4: Showing FNA cytology of follicular carcinoma thyroid (MGG,10X).

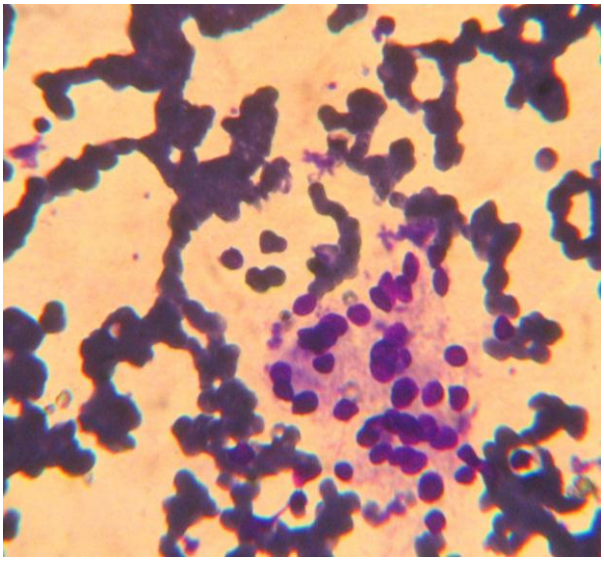

Fig. 5: Showing smear from scalp swelling.

DISCUSSION

Follicular thyroid carcinoma is a subtype of thyroid cancer, which is slow growing and is associated with good prognosis. However, in the presence of distant metastasis the prognosis is often poor.[4] The sites of distant metastasis commonly are lung and bone. Bone metastases from follicular thyroid carcinoma tend to be multiple & more often to the ribs, vertebrae, & sternum.[5] Scalp is a rare site for metastasis and presents mostly as a painless swelling of soft consistency. The rich dermal capillary network of the scalp, face & chest wall as well as choroids may initially trap the tumor cell emboli from the circulation and provide the environment for successful formation of metastatic deposit.[6] Scalp lesions are mostly lytic.

In scalp metastasis, the treatment includes a total thyroidectomy, excision of scalp nodule, administration

of radio-iodine ttherapy as well as TSH suppression therapy.[7]

CONCLUSION

Till date, very few cases of follicular thyroid carcinoma presenting with a scalp swelling in the initial presentation diagnosed by FNAC have been reported. Therefore, whenever a patient presents with a large scalp swelling, the possibility of a metastatic deposit need to be considered. FNA along with a thorough physical examination of the patient can play a pivotal role in correct diagnosis.

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