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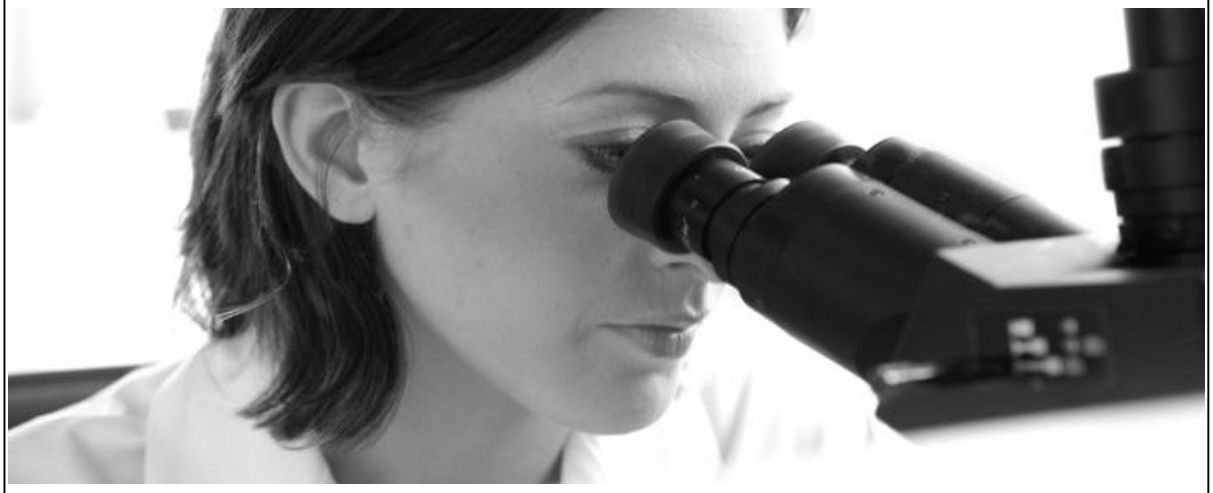

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RESEARCH ARTICLE

FOLLICULAR CARCINOMA OF THYROID PRESENTING AS BRAIN METASTASIS

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ABSTRACT

Metastatic brain tumors are a major cause of mortality in cancer patients. The primary tumor is most commonly seen the lung, breast colon and kidney and very rarely thyroid. We discuss a case of 61 year old lady presenting with loss of vision. Histopathogical examination revealed metastatic deposits from follicular carcinoma of thyroid which was confirmed by immunohisto chemistry.

INTRODUCTION

Brain masses are mostly metastatic in origin accounting for more than 50% of hospital admissions for brain tumor. The most common primary sites are tumor of the lung, breast colon, and kidney [(2)]. Follicular carcinoma of thyroid which metastases to bone, lungs, and rarely to the brain, skin and adrenals [(1).] Most CNS tumors are symptomatic at the time of diagnosis. We report a case of 61yrs old female who presented to the neurosurgery OPD with loss of vision and was diagnosed as Chordoma.

Case History

A 61 year old lady presented to the neurosurgery OPD with loss of vision in the left eye since one month. A CT scan of brain revealed highly enhancing lesion arising from clivus sphenoid bone. USG neck revealed multiple enlarged heteroechoic nodules bilaterally largest measuring 1.8 x1.0 cms on right side and 1.5 x 1.5 cms on left side, clinically no palpable swelling was noted. Clinically patient was diagnosed as Chordoma of brain. As during surgery patient was bleeding profusely, no tumor was excised. The left over tissue after frozen section was processed for routine histopathology and the diagnosis was given as Metastatic Follicular Carcinoma of thyroid and was further confirmed by immunohistochemistry markers (TTF and Thyroglobulin). USG guided FNAC of thyroid was done and it turned out to be Follicular neoplasm. Patient was lost to follow up.

Aim of publishing this case

1. Clinically diagnosed case of Chordoma.
2. Metastasis of clinically non palpable swelling of thyroid to the brain.

Histopathology

H&E Stained section studied show multiple tiny fragments showing highly malignant epithelial cells arranged in cords, sheets and acini. Few acini show presence of pink homogeneous material possibly colloid.

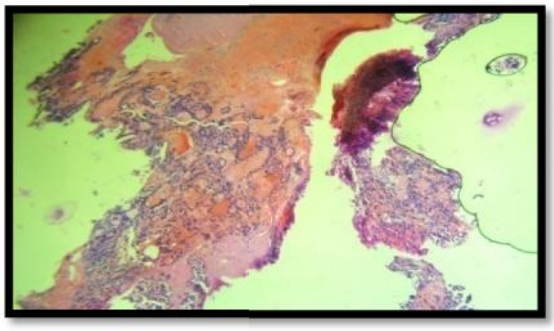

Figure 1 4X

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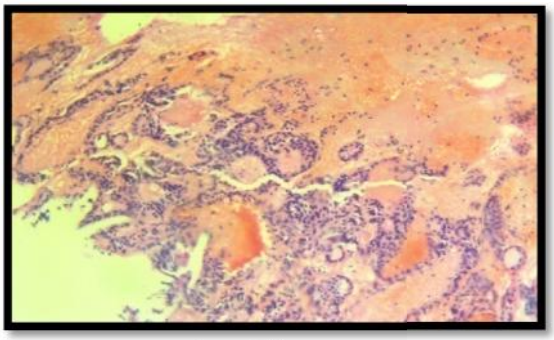

Figure 2 10 X

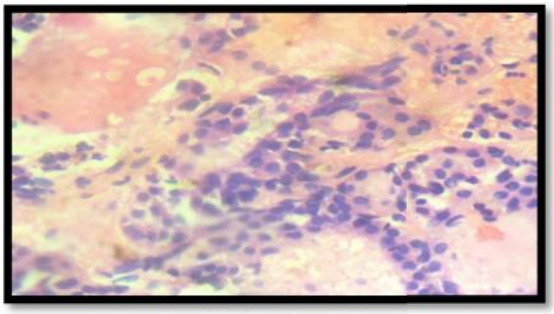

Figure 3 40X Shows thyroid follicular cells showing malignant features surrounded by stroma

Immunohistochemistry

TTF and thyroglobulin both were strongly positive

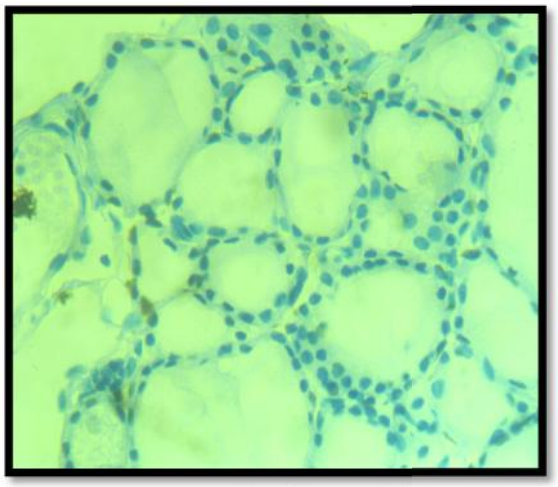

Figure 4 40x TTF(Thyroid Transcription Factor)

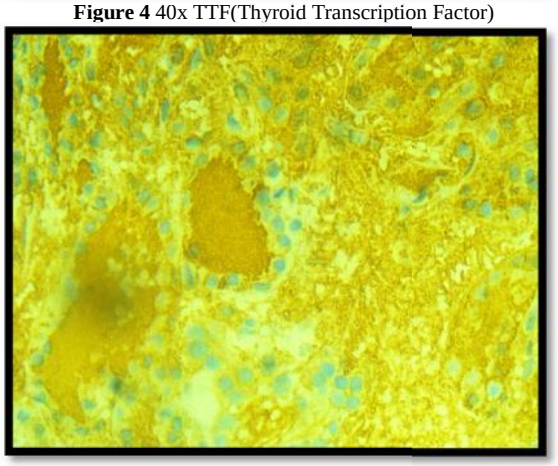

Figure 5 40X Thyroglobulin

FNAC

FNAC from the thyroid swelling show cellular aspirates comprising of thyroid follicular cells arranged predominantly in microfollicular pattern, sheets and singly scattered. The individual cells are large, polygonal, pleomorphic with oval to round nucleus placed centrally as well as eccentrically with abundant cytoplasm. Few of the cells are showing indistinct nucleoli on a hemorrhagic background. Also seen are cyst macrophages and scanty colloid.

Impression: Cytomorphological Features Suggesive of Follicular Neoplasm

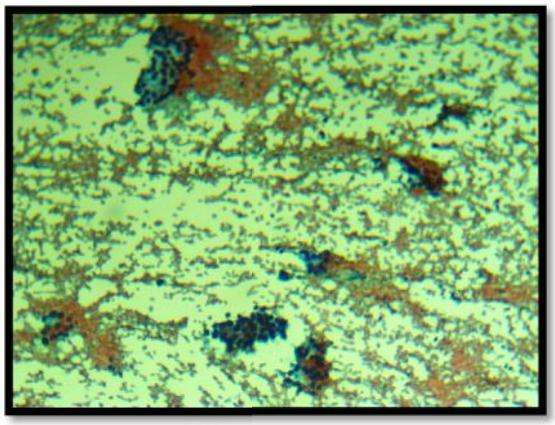

Figure 6 10x Neoplastic Thyroid follicular cells arranged in microfollicular pattern

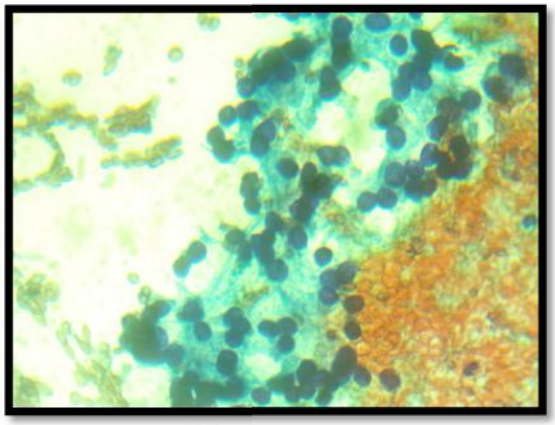

Figure 7 40x Neoplastic Thyroid follicular cells arranged in microfollicular pattern showing marked nuclear atypia

DISCUSSION

Brain Metastasis is seen in 16-18%of cancer patients and in about 9% cases it represents the only site of cancer. The intracranial compartment is of particular interest as most of the foci are symptomatic with highly lethal manifestation if left untreated.[5] Hematogenous spread is commonest route of spread. The acute angle of the branching pulmonary vessels makes the corticomedullary gray white junction, the commonest site of metastasis within the brain parenchyma.[3] Metastasis from the thyroid carcinoma is rare and accounts for 0.1-5% of cases in the reported series.

Thyroid carcinoma is divided into 4 types papillary, follicular, anaplastic and medullary carcinoma. The metastasic potential is a function of tumor size, capsular and vascular invasion.[5]

disseminated metastasis as an initial presentation is very rare of follicular carcinoma of thyroid.[2] Brain metastasis has been reported from adenematous nodules.[4] Distance metastasis from follicular thyroid carcinoma to lumbar vertebra, skull bone and meninges have been documented[3] William *et al* published the largest series of metastatic thyroid carcinoma to the brain with16 patients, out of which only 2 of them were diagnosed as follicular carcinoma of thyroid which speaks of its rarity. thus we report this case because of its rare occurrence.

CONCLUSION

Follicular carcinoma of thyroid is a rare tumor that presents with cerebral metastasis .In cases where primary tumors not identified the clinical presentation is due to the metastatic lesion in the brain, a thorough examination, imaging and guided FNAC of the thyroid gland should be done particularly in case of nonpalpable thyroid swelling.

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