
CASE REPORT

FOLLICULAR THYROID CARCINOMA PRESENTING INITIALLY WITH SKULL METASTASIS

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ABSTRACT

Follicular thyroid carcinoma very rarely present initially with metastasis to skull. This report describes an otherwise asymptomatic 52 years old female patient with follicular thyroid carcinoma, who initially presented with soft mass in right occipito-parietal region and a multinodular goiter. Radiology showed an osteolytic lesion with overlying soft tissue component. Histopathology revealed metastasis from a well differentiated follicular carcinoma of thyroid gland.

Key words: Goiter, Follicular thyroid carcinoma, skull metastasis

INTRODUCTION

Follicular carcinoma is the second most frequent malignancy of the thyroid gland after papillary carcinoma. These are slow growing tumors and show high propensity for blood borne metastasis. Distant spread may occur to bone, lung, brain, skin and adrenal glands. The reported incidence of distant metastasis is between 11% and 25%,^{1,2} but the initial presentation with distant metastasis is uncommon. Skull metastases are often from lung, breast and prostate malignancies but are rare from thyroid carcinomas accounting for only 2.5% to 5.8% of cases of thyroid cancers.³ Initial presentation with distant metastasis (especially skull metastasis) is very rare event. According to literature, skull metastases usually occur long after the initial presentation of thyroid cancer.⁴ In this paper we describe a patient with follicular thyroid carcinoma (FTC) who initially presented with skull metastasis.

CASE REPORT

A 52 years old female patient presented with the main complaint of a mass in the right occipito-parietal region of skull. She also gave a 15 year long history of goiter but she was not bothered about that and she only wanted treatment of the skull mass. On local examination a 5x5 cm soft, immobile, hemispherical, non-tender mass was found in the right occipito-parietal area with well circumscribed margins and intact skin over it. It appeared 15 months back and has rapidly increased in size over the last 2 months. Neurological examination was unremarkable. Neck exami-

nation revealed a multinodular goiter with a dominant nodule in right lobe of thyroid gland. Clinically she was euthyroid.

Thyroid function tests were within normal limits. X-ray skull showed large osteolytic lesion in occipito-parietal region destroying both outer and inner tables with large soft tissue component over it. Computed tomography (CT) showed a solid mass with contrast enhancement causing bone destruction in right occipito-parietal region.

Fine Needle Aspiration Cytology (FNAC) of the dominant nodule of thyroid gland revealed suspicion of follicular neoplasm mandating thyroidectomy to get tissue specimen to find out capsular or vascular invasion to be sure of follicular thyroid carcinoma. An incisional biopsy from skull mass was taken. Histopathological examination showed follicles of various sizes, with monolined cuboidal cells and were full of colloid. There was evidence of vascular invasion. Immunohistochemical staining showed positive staining for thyroglobulin. This picture gave the diagnosis of skull metastasis from a well differentiated follicular thyroid carcinoma.

Patient was planned for total thyroidectomy and later referral to higher center for radio active iodine ablation therapy and excision of skull metastasis and cranioplasty because of non-availability of radiotherapy and neurosurgeons at our hospital. But patient refused any further intervention and did not return for follow up.



Fig.1: Fifty-two years old female patient with skull mass and goiter.



Fig.2: X-ray skull (lateral view) showing an osteolytic lesion in the right occipito-parietal region with overlying soft tissue component.

DISCUSSION

Thyroid cancer account for 0.5% of all cancers in male and 1.5% of all cancers in female.⁵ Majority present with neck swelling or enlarging

goiter.⁶ Thyroid tumors are more prevalent in female with female to male ratio of 2.6:1. Among subtypes follicular thyroid carcinoma (FTC) is the second most frequent malignancy of thyroid gland after papillary carcinoma.⁷ Follicular thyroid carcinomas occur in older age group than papillary i.e. 40 to 60 years of age.⁷

FTC are slow growing tumors. Unlike papillary, FTC metastasizes to lymph nodes later with only 5% to 10% of patients having nodal metastasis at the time of diagnosis. Hematogenous spread is however much more common in FTC with 20% or so of patients having distant hematogenous metastasis at presentation.¹ Although lung and bones are commonly involved sites by metastasis, the brain, skin, liver, adrenal gland and mediastinum are the other involved organ sites.^{8,9} Among bones skull is a rare site for metastasis. Skull metastases are usually soft, hemispheric tumors resting on the skull. These tumors are rich in vascularity with osteolytic changes in the skull.³ Cranial nerve dysfunction, focal brain symptoms or symptoms due to increased intracranial pressure are rare.⁴ Important problem is bone defect which require bone resection and cranioplasty. Histologically these lesions show well differentiated follicular adenocarcinoma.³

Prognosis of FTC is not as favorable as papillary, but better than anaplastic variety. Prognosis depends on the presence and extent of distant metastatic disease. In local disease 90% 10 year survival can be expected, where as with distant disease that figure drops to below 50%. Thus aggressiveness of FTC varies widely and metastatic disease is the primary cause of death.¹⁰ One series showed mean survival of 4.5 years for patient with skull metastasis.³

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