Papillary Carcinoma Thyroid Presenting as Huge Scalp Metastases

Sir,

Papillary thyroid carcinoma (PTC) is the most common subtype of thyroid carcinoma that predominantly occurs in females of any age group. It is an indolent tumor with excellent overall outcome, except in cases with distant metastasis, and shows a propensity for local infiltration and metastasis to locoregional lymph nodes (40%). Distant metastasis occurs in ~9–14% of the cases. Common sites for metastases are lung (49%), bone (25%), and brain (12%). Vertebral metastases are the favored site for bone metastases.[1] It seldom metastasizes to skull. We present a case of PTC in a male patient in whom metastasis developed in the frontal bone with frontal lobe infiltration within a period of 5 years.

A 51-year-old male presented with a rapidly growing anterior neck and scalp swellings. Neck swelling measuring 15 × 13 × 12 cm started 5 years back with recent rapid growth along with a scalp swelling measuring 13 × 12 × 8 cm [Figure 1a] since 5 months. He was having bilateral cervical lymphadenopathy. Computed tomography (CT) of the head showed an expansile lytic destructive lesion arising from the frontal bone with both intracranial and extracranial extension [Figure 1b]. CT chest and abdomen did not reveal metastasis to lung and other abdominal organs. Fine needle aspiration cytology of the neck and scalp swelling and LN showed papillary clusters of cells with nuclear overlapping, moderate anisonucleosis, prominent intranuclear pseudoinclusions, nuclear grooves, and abundant cytoplasm consistent with features of PTC [Figure 1c]. Immunocytochemistry showed diffuse positivity thyroid transcription factor-1 [Figure 1d]. A diagnosis of PTC with metastases to skull, and bilateral level II, III neck lymph nodes was made. The patient succumbed to death before receiving any treatment.

Metastatic tumors to skull are infrequent and arise mostly from the lung, breast, prostate, and renal cell carcinoma. The incidence of skull metastasis from thyroid carcinoma is 1.8–5.8%, predominantly from follicular carcinoma of thyroid.[2] After extensive search on PubMed database, we found 16 cases of PTC in English literature that metastasized to the skull, except two cases in females. In only two of these cases, simultaneous brain infiltration was noted. In one case, neurosurgery was performed to excise metastatic tumor, but the patient died after 17 months.[3] The follow-up of the other patient is not known.[4] Outcome of patients with skull metastasis due to PTC are poor with a mean survival time of 4.5 years, ranging from 5 months to 17 years in a series of 12 patients with thyroid carcinoma including both papillary and follicular subtypes.[5] Our patient developed a rapidly progressive swelling in the scalp within 5 months and died after 4 months.

Though PTC has an indolent course, our case is an exception, where the patient developed skull metastases with brain infiltration within a short span of time and died. Hence, skull
metastasis appears to be the clinical parameter with poor outcome which requires prompt management decision. A close follow-up of the thyroidectomy patient should be done to detect these metastatic spots at an early phase because metastectomy provide better survival in these patients.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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How to cite this article: Barwad A, Ramteke PP, Gamanagatti S. Papillary carcinoma thyroid presenting as huge scalp metastases. J Cytol 2018;35:126-7.
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Quick Response Code
Website: www.jcytol.org
DOI: 10.4103/JOC.JOC_133_17