

Isolated solitary recurrent skull metastasis in papillary thyroid carcinoma

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DESCRIPTION

A 38-year-old woman presented with history of painless expansible swelling in the right frontoparietal region since 2 years and rapidly increasing in size since the last 6 months. She was initially evaluated in another centre and was diagnosed as a meningioma. She had a history of total thyroidectomy and radioiodine ablation for a non-metastatic papillary carcinoma thyroid (PCT) in the year 2008. She was on a regular follow-up between 2009 and 2012 and during that period her serum thyroglobulin and whole-body iodine scan was normal. However, she was lost to follow-up but she had continued her suppressive doses of thyroxine.

Her T1-weighted MRI showed a lobulated expansile, intensely heterogeneously enhancing lesion arising from the right frontoparietal region (size 77×52×88 cm) (figure 1). The fluorodeoxyglucose-positron emission tomography (PET) CT scan showed a metabolically active expansile soft tissue lesion (standard uptake values, 64) with lytic area and bony spicules (figure 2). There is no uptake in the thyroid bed or any other region, thereby suggesting solitary skeletal metastases. Her serum thyroglobulin level was 2260 ng/mL, hence a final diagnosis of PCT with isolated solitary skeletal metastasis was considered. She was advised I-131 whole body scan (total body scan)

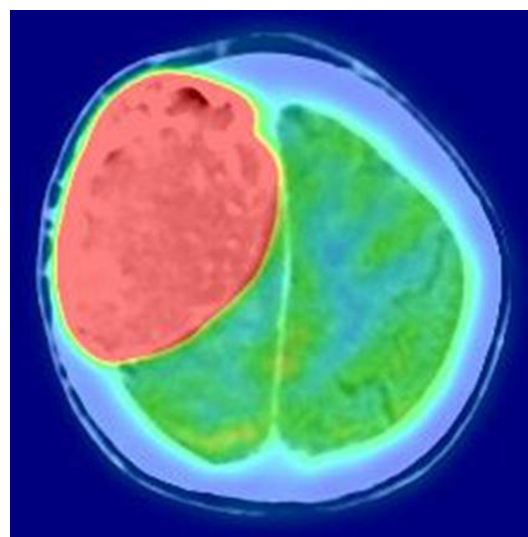


Figure 2 The fluorodeoxyglucose-positron emission tomography (FDG-PET) CT scan showing a metabolically active expansile soft tissue lesion (standard uptake values (SUV), 64) with lytic area and bony spicules.

4 weeks after stopping thyroxine; however, she did not come back for follow-up.

Skeletal metastasis is seen in 1%–7% of patients with PCT at diagnosis.¹ Isolated solitary metastatic skull recurrence is rare in post-treatment cases of PCT. PET scan or an I-131 whole body scan is helpful in detecting the extent of bone metastasis in differentiated thyroid carcinoma.² Excision of a metastatic skull lesion followed by I-131 radioiodine and thyroxine replacement is the ideal line of treatment.³

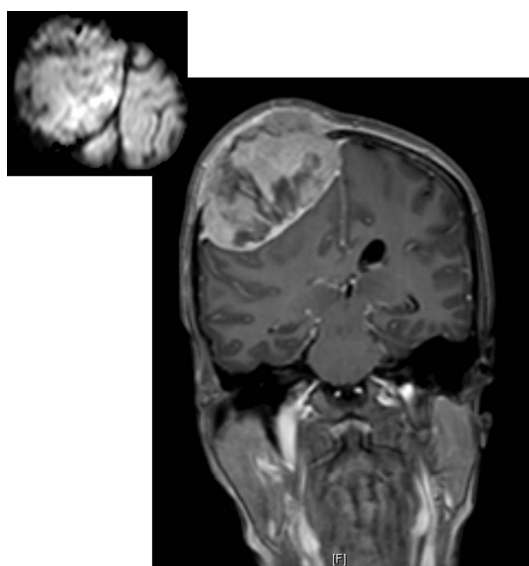


Figure 1 T1-weighted MRI with contrast showing a lobulated expansile, intensely heterogeneously enhancing lesion arising from the right frontoparietal region (size 77×52×88 cm).

Learning points

- ▶ Metastatic lesions should be considered in the differential diagnosis of an expansile solitary skull lesion in patients with a history of thyroid carcinoma.
- ▶ The delay in presentation is common among patients with differentiated thyroid carcinoma because of the asymptomatic nature of the metastatic lesion.
- ▶ Early diagnosis of a metastatic lesion has a significant impact on a decision-making in treatment and prognosis in patients with differentiated thyroid carcinoma.

Contributors DN and FKJ prepared the manuscript. KP was involved in the management of the patient. DN, FKJ, KP and NT edited and finalised the manuscript.



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