



## CASE REPORT

# Occult Metastatic Follicular Thyroid Carcinoma-A Case of Unremarkable Clinical Neck Examination

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## Introduction

Follicular thyroid carcinoma is prevalent in the age group 40-60 years old and accounts for 10% of the types of thyroid cancers [1]. FTC has the propensity to spread via hematogenous route, mainly to the bones and lungs.

## Case Presentation

A 95 years old man presented to a district hospital with left hip pain after a trivial fall from bed. He is able to walk without any abnormal gait post trauma.

X-ray pelvis was done-showed suspicious lesion over the left superior and inferior pubic rami.

CECT of neck, thorax and abdomen was subsequently done and showed expansile bone lytic lesion of left

superior and inferior pubic rami extending into the obturator internus, obturator externus and pectineus muscle measuring 8 cm, with single peritoneal nodule at the left abdomen with mediastinal lymphadenopathy. A calcified left thyroid nodule measuring 0.7 cm was seen on the scan, with no retrosternal extension. He was then referred to our tertiary hospital under orthopaedics for further management. Orthopaedics team ordered a CT guided biopsy of the pelvic mass and turned out to be a metastatic follicular carcinoma of the thyroid (Immunohistochemistry-thyroglobulin+, CK7+, CK20-, TTF1+). He was then transferred to the General Surgical ward. Clinical examination of the skull and neck is unremarkable. He shows no features of hyperthyroidism nor hypothyroidism. Thyroid function test reveals euthyroidism. TSH: 1.41. He has no previous



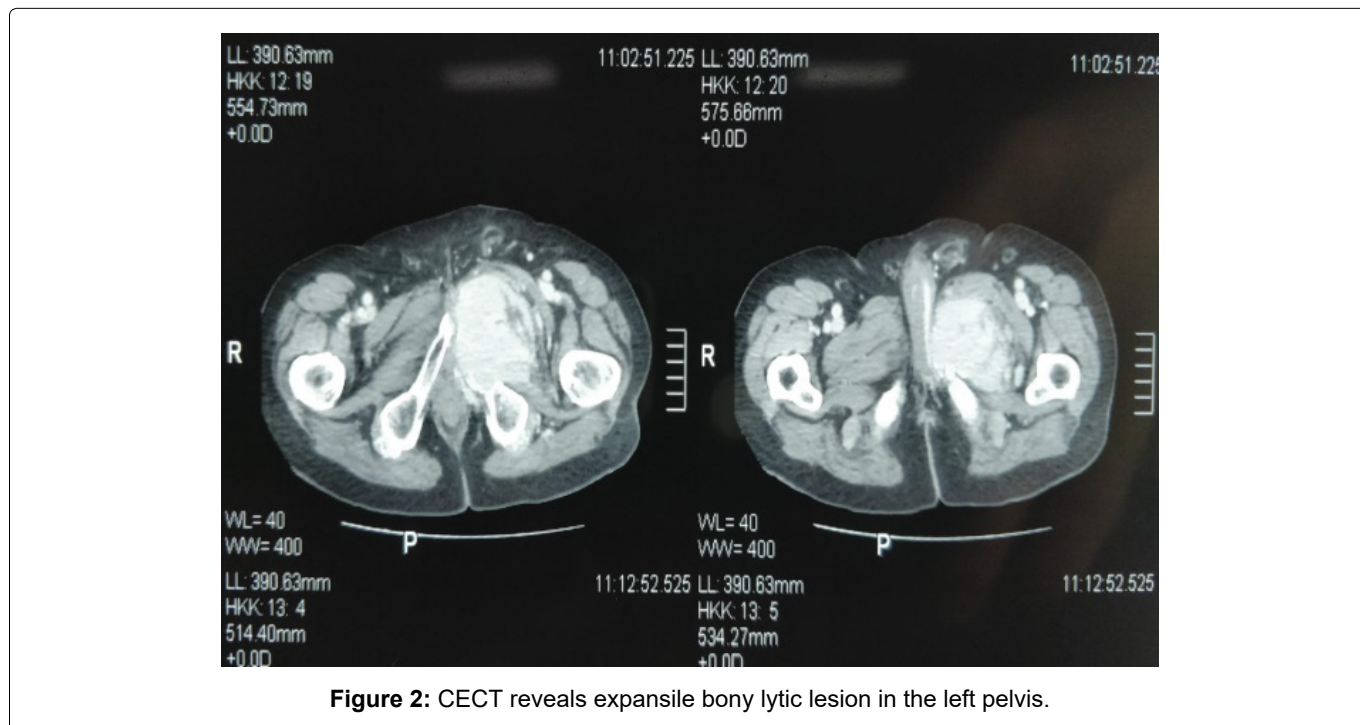
**Figure 1:** The initial x-ray pelvis done at emergency department.

history of neck lumps. Ultrasound of his neck shows left calcified thyroid nodule measuring 0.9 cm by 0.5 cm with bilaterally normal sized thyroid gland, with no lymphadenopathy. We did a PET-CT scan to prepare the patient for suitability of RAI. PET-CT revealed increased uptake of FDG in the left superior and inferior pubic rami as well as the acetabulum with soft tissue component measuring 8.3 cm by 6.6 cm extending into the left

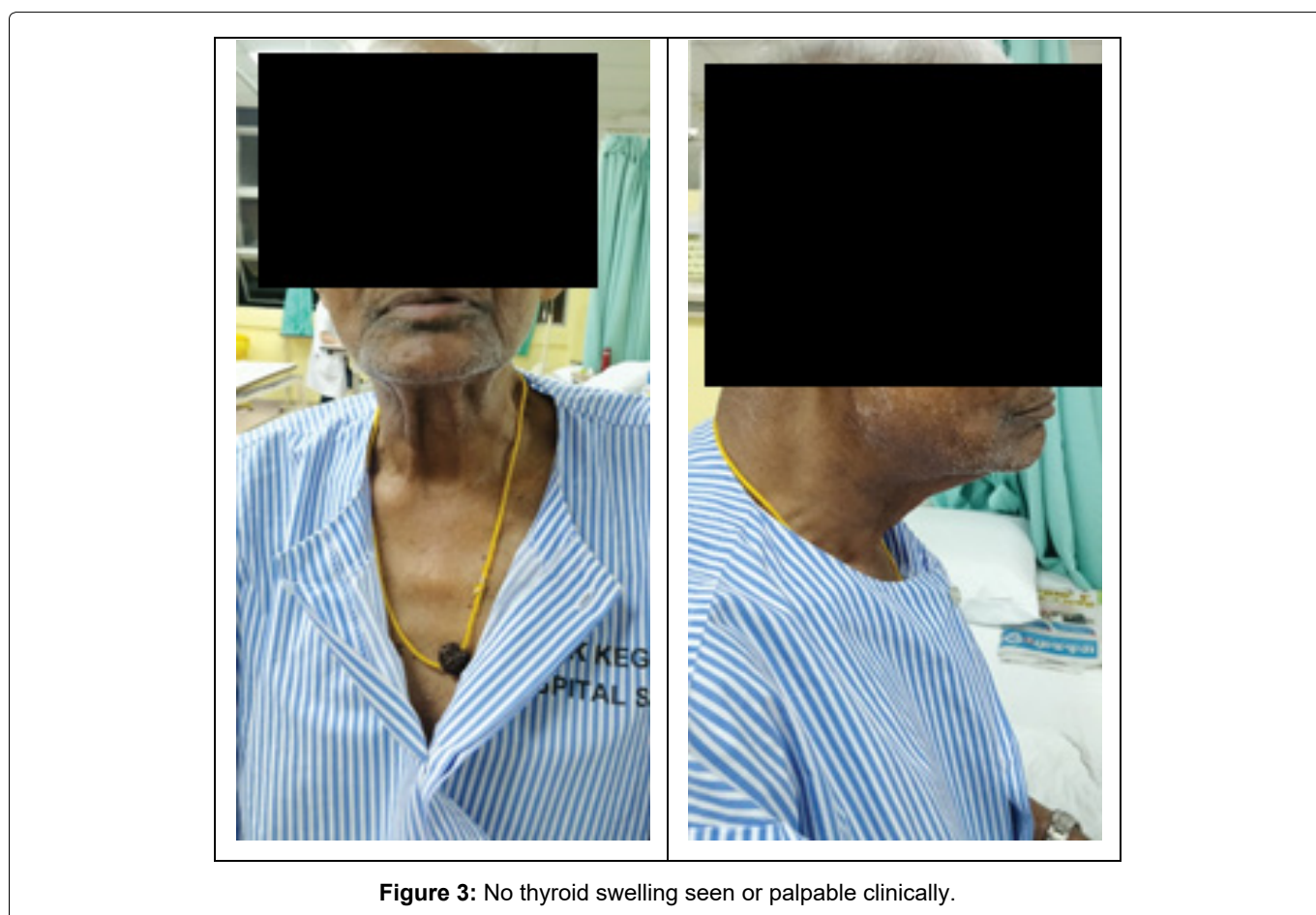
obturator and pectineal muscles. Mild uptake was noted in the calcified nodule in the left thyroid measuring 1.1 cm by 1.7 cm. PET CT did not show increased uptake in the peritoneal nodule as previously seen in the CT (Figure 1, Figure 2, Figure 3 and Figure 4).

## Discussion

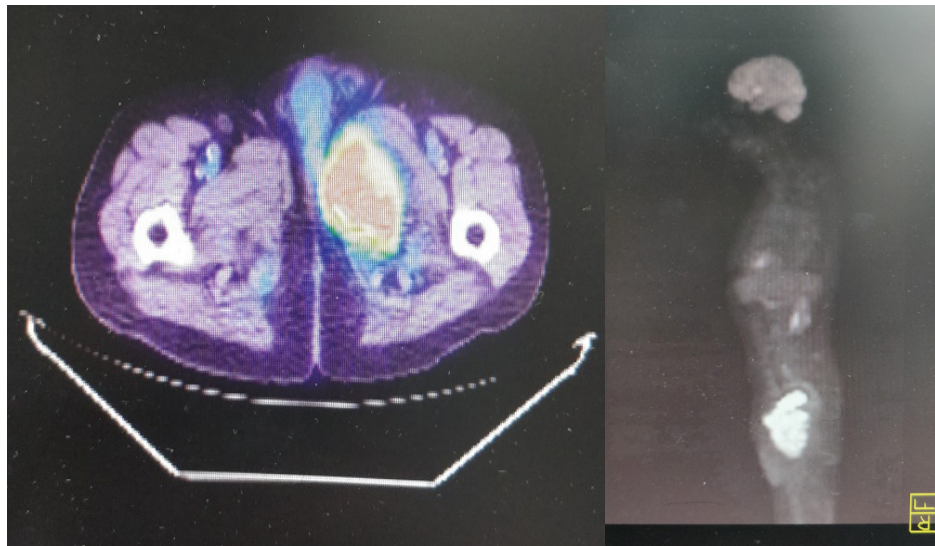
Metastatic thyroid carcinoma usually presents with



**Figure 2:** CECT reveals expansile bony lytic lesion in the left pelvis.



**Figure 3:** No thyroid swelling seen or palpable clinically.



**Figure 4:** a) PET scan showed increase FDG uptake in the pelvic mass; b) PET scan showed increase FDG uptake in the pelvic mass.

a clinically palpable neck lump. Retrospective case reports from Singapore which involved 732 patients of well differentiated thyroid carcinoma showed only 2.6% of the total patients present with metastasis as the sole initial feature. Out of the 2.6%, 10.5% were asymptomatic [2-7]. In this patient, he had no hip pain/compressive symptoms at all until he fell and sustained a pathological fracture.

In any patient presented with lytic bony lesions, the approach should be full body CT scan with concurrent biopsy to look for the primary, which was done in this patient. However the primary remains vague from CT scan-only a calcified 0.7 cm thyroid nodule, mediastinal lymphadenopathy and single peritoneal nodule is seen. A HPE sample was finally obtained via biopsy from the bone metastasis site. HPE is the golden standard for diagnosis of cancer of unknown primary, but due to the time consumption and the invasive nature, CT scan/PET-CT is a valuable tool for clinicians to detect and identify the primary site. But in this case, clearly HPE solved the mystery. The final AJCC classification of this case is T1aN0M1-stage IVc.

### Competing Interest

None.

### Patient Consent

Patient's consent was obtained for case report publication.

### References

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