ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 9| Issue: 12| December 2023|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2023: 8.224 || ISI Value: 1.188

SACRAL BONE METASTASES AS A PRESENTATION OF PAPILLARY THYROID MICROCARCINOMA: A RARE CASE REPORT

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ABSTRACT

Thyroid carcinoma usually presents as a diffuse or nodular neck lump and it comprises 1% of all malignancies . Distant metastasis in Papillary carcinoma is uncommon like follicular thyroid carcinoma .We present a case of papillary thyroid microcarcinoma presenting as a pelvic bone metastasis. A 65-year old female was found on computerized tomography to have an finding of 6cm soft tissue mass in the left side of sacrum bone. Biopsy from the lesion confirmed metastatic follicular variant thyroid carcinoma. Head and neck examination was normal and there was no history of a neck swelling. Further imaging confirmed nodule in the left lower lobe of thyroid measuring 1x0.8cm. Ultrasound guided fine needle aspiration from thyroid nodule confirmed papillary carcinoma thyroid. And immunohistochemistry done on biopsy confirmed metastatic papillary carcinoma thyroid. The Papillary microcarcinoma is usually non-invasive. But this case report emphasised clinically significant bone metastasis can arise from papillary microcarcinoma (PMC).

KEY-WORDS: ***Thyroid, Papillary, Bone, Metastasis***

INTRODUCTION

Papillary carcinoma is the most common thyroid malignancy. It comprises 80% of thyroid malignancies. It occurs in all age groups, but most common in 3rd to 5th decade.

Papillary thyroid micro carcinoma is defined as less than 10 mm in size, and not detectable on clinical examination. They commonly detected on routine investigation such as ultrasonography or CT scan/ autopsy. It usually remains intra thyroidal and Metastatic risk is extremely low and generally affects pulmonary parenchyma.

Bone metastasis from Papillary thyroid microcarcinoma is extremely rare, and few reports concerning this entity. Here we present a case of sacral bone metastasis from Papillary thyroid microcarcinoma.

CASE REPORT

A 65-year-old female presented with chronic lower back pain for past six months. On clinical examination there was a diffuse swelling over left sacroiliac region. CT scan of abdomen and pelvis showed lytic lesion of the sacrum. CT scan revealing large destructive left sacral mass of 4.5 × 3.5 × 6 cm in size involving S1, S2, and S3 vertebra expanding into presacral space with soft tissue component, expands upto D11 vertebra. (Figure 1).

CT guided Sacral biopsy showed metastatic carcinoma with morphology of thyroid gland primary tumor (Figure 2). And Immunophenotype suggestive of positive thyroglobulin and positive CK7 (Figure 3, 4).On thyroid examination both lobes appears normal. USG neck reveals small left lobe thyroid nodule measuring 1 x 0.8cm. Ultrasound guided Fine needle aspiration cytology from thyroid showed Papillary carcinoma thyroid (Figure 5). Patient was referred to the oncology center for palliative radiotherapy and surgery.

DISCUSSION

Thyroid carcinoma commonly presents with a solitary nodule or multi-nodular neck mass. Papillary thyroid carcinoma is the most common histological subtype of thyroid carcinoma. . Papillary thyroid carcinoma usually metastasise to regional lymph nodes, and it is the least likely subtype to show bone metastases(1.4 – 7%) (1,2). Papillary thyroid microcarcinoma (PTMC) is a term used if the tumour size is less than 1cm (8). Distant metastasis is very rare in papillary microcarcinoma and it generally have a good prognosis. In the medical literature , only few cases of distant or bone metastasis from papillary microcarcinoma have been reported. Present case illustrates how clinically significant bone metastasis, can arise from PTMC.

Papillary thyroid microcarcinoma should not be considered as a simple occult thyroid carcinoma, because this early stage can

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eventually progress into papillary carcinoma thyroid (3). Most of the patients with PTMCs have good prognosis and it has mortality rate of 0.5% (4) ,but in some cases this tumour behave in an aggressive fashion . The prognosis is favourable in differentiated thyroid carcinoma with a survival rate of ten years in 80-95% of cases (5) but this is decreased to 50% when distant metastases are present.

A number of risk factors such as unfavorable histology, multifocality, tumour infiltration of capsule and evidence of metatasis is strongly associated with cancer-related mortality and survival of the patient(6,7) . This case report has described an extremely rare case in which extensive bone metastases were the first sign of PTMC. This case highlighting the need for further research on PTMCs is required, and early detection of bone metastases is essential for early management and it may improve overall prognosis of the disease.

CONCLUSION

Papillary thyroid micro carcinoma is most often diagnosed incidentally .Rarely it presents with distant or bone metastasis. Further research on PTMC is needed for early intervention and it may improve overall prognosis and patient survival .

ACKNOWLEDGEMENTS

Authors would like to thank all the members of the multidisplinary tumour board team for their efforts in the treatment of this patient.

DECLARATIONS

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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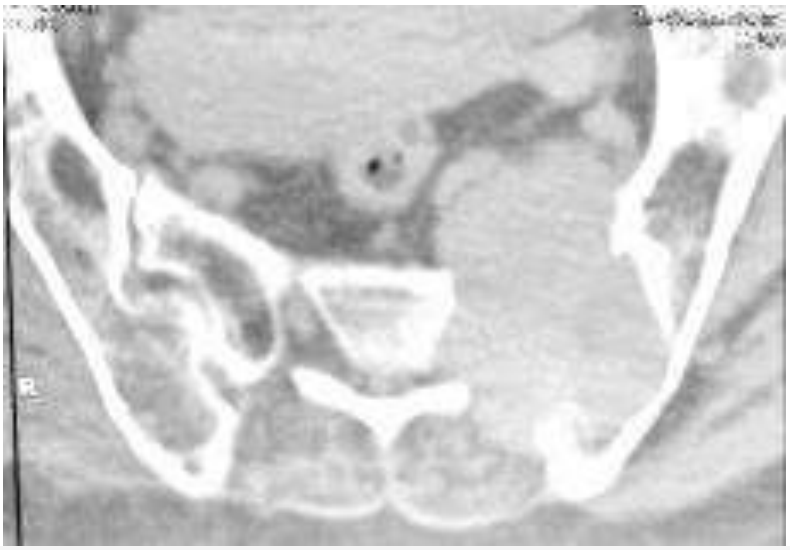

Figure 1: CT Show Left Osteolytic Sacral Lesion of 4.5 × 3.5 × 6 cm S1, S2, and S3 Vertebral Involvement.

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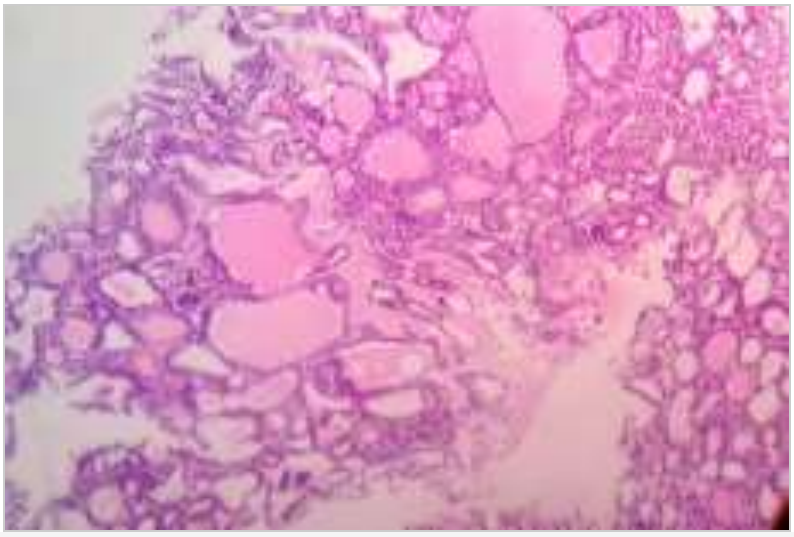

Figure 2: HE ×4 Showing Tumor Invading Bone.

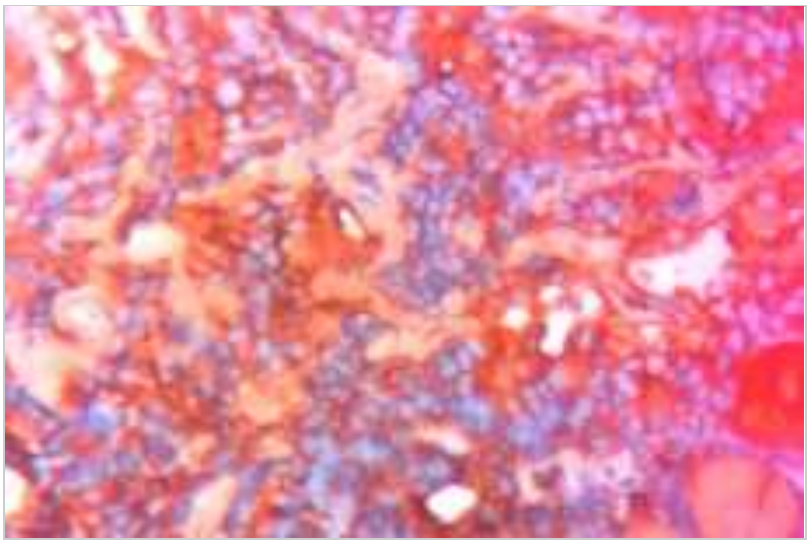

Figure 3: Tumor Cells Stain Positively for cyto keratin 7 (Biotin-Avidin method, X600

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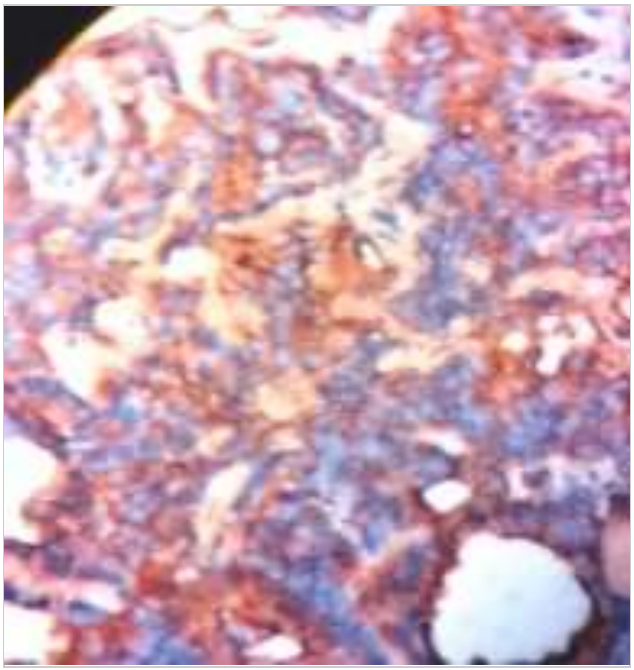

Figure 4: HE ×4 Tumor cells stain positively for Throglobulin (Biotin-Avidin method, X600

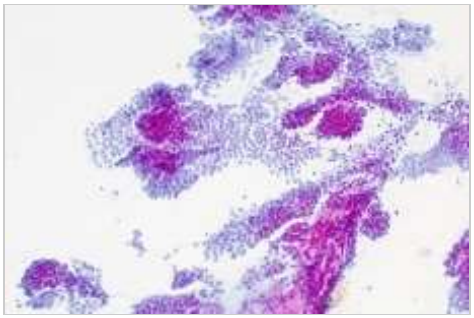

Figure 5: Ultra Sound Guided Fine Needle Aspiration from Thyroid Nodule show Papillary Carcinoma Thyroid.