



Primary squamous cell carcinoma of iliac bone: - a rare case. Review of literature.

KEYWORDS

SCC, Iliac Bone, Primary, Naive epithelium.

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ABSTRACT Background: Unlike metastases, Primary squamous cell carcinoma (SCC) from the pelvic bone is a very rare presentation.(1) Very few cases of squamous cell carcinoma of the bone is reported in the literature. This is mainly due to the absence of naive squamous epithelium in bones. However, there were few reports of squamous cell carcinomas of bone, mainly from skull, tarsal bone and iliac bones. In 1997, Gangopadhyay reported a case of a primary squamous cell carcinoma of left iliac bone.(2) Abbas et al, reported another case of a primary squamous cell carcinoma of the distal tibia in 2003.(1) Czar Louie L et al, published a case of SCC from tarsal bone (3). Case details : Here, we are reporting a case of a primary squamous cell carcinoma of the iliac bone in a 60 year female, extensive initial work up did not reveal any primary foci even after 2 years of followup.

Case Report:

A 60-year-old female labourer, presented with left sided hip swelling and difficulty in walking of 2 months duration. There was no history of trauma. On examination she was found to have a swelling in the left hip, of size 10x10 cm with bony consistency, fixed to underlying structures. Skin overlying the swelling was freely mobile. General and systemic examination was apparently normal and did not reveal any signs and symptoms.. X-ray pelvis showed destruction of the iliac bone. Upper gastrointestinal endoscopy, colonoscopy, indirect and direct laryngoscopy were normal. No abnormality detected in tumor markers like CEA, CA-125.MRI and CECT of the pelvis showed a diffuse swelling arising from the left iliac bone which was invading surrounding muscles and-extended up to the sub cutaneous tissue. Bone scan showed solitary bone uptake in the Iliac bone.

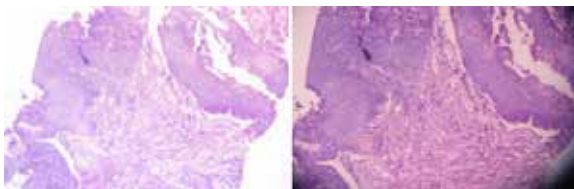


Figure1 (a&b): Shows islands of tumor cells along with bony trabeculae and marrow spaces showing hematopoietic cells.

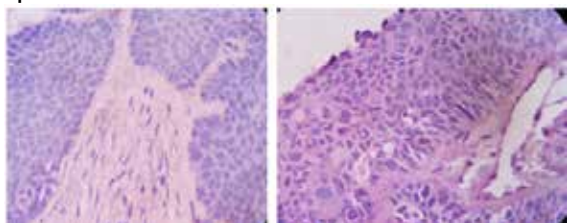


Figure 2 (a&b): Shows large polygonal cells arranged in sheets and nests exhibiting moderate pleomorphism and mitosis.

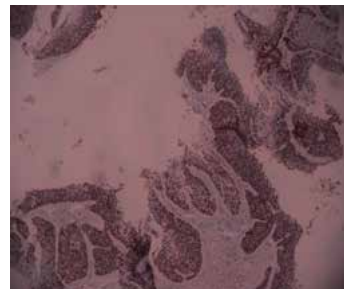


Figure 3 (a): Shows p63 positivity

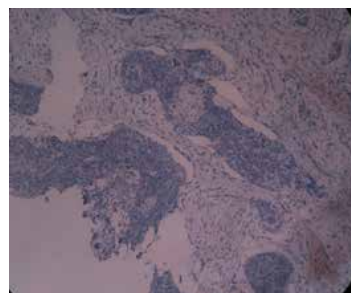


Figure 3 (b): Shows CK7 negativity

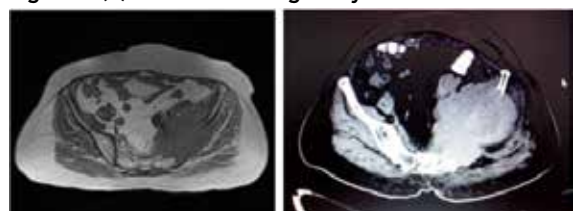


Figure 4 (a): T1 Weighted MRI image shows hypo intense mass which is occupying entire left iliac bone. Figure 4 (b): CECT Abdomen and pelvis shows hyper-

dense mass in the entire left iliac bone encroaching into intra pelvic organs.

This patient underwent core needle biopsy. Biopsy suggested moderately differentiated keratinizing squamous cell carcinoma with keratin pearl formation (Figure I, II a & b). Immunohistochemistry showed positive for p63 and negative for CK7, CK and CK suggesting a possibility of primary from anorectal origin (Figure III a & b). But clinically and radiologically there was no evidence of anorectal or genitourinary malignancy. Since tumor was deemed inoperable, patient was taken up for palliative radiotherapy, a total dose of 30 Gy in 10 fractions. was also considered for palliation of pain with opioids. After palliative radiotherapy patient symptomatically improved. On follow up, she had partial response. No primary was detected even after 2 years of follow up on CECT.

Discussion:

When compared to primary bone tumors and metastatic bone secondaries, Primary squamous cell carcinoma of bones is very rare.(1). This is due to the absence of naive squamous cells in the bones. S.C.C of facial bones are reported especially from temporal bone, alveolus, maxilla, and mandible.etc.(4,5). Various theories have been proposed to explain etiology of bone squamous cell carcinomas.. They suggest, traumatic inclusion of skin might be the reason. (6) Another theory says shearing forces over the area of exposed bones can turn up into malignancy. Other de novo theories proposed that, epithelial lining of bone cyst is a source of malignancy.(7).Our patient did not have any history of trauma, past history of bone diseases and surgery.

Metastases to iliac bone can occur in 20% to 30% of patients from genitourinary and colorectal malignancies. According to Daniel et al, pelvis is the second most common site for metastases after spine. In pelvis, Iliac bone secondaries are more frequently reported (8).Unlike our case, multiple bone involvement is the most common presentation in secondaries. The prognosis is very bad in patient with secondaries; expected survival is around 9 to 14 months. (9) .Our patient didn't have any symptoms related to above systems, also extensive workup did not reveal any primary even after 2 years of follow up. She never had generalized body pains throughout the course and alkaline phosphate was always at baseline. Bone scan showed only solitary lesion in the ilium.

Very few cases of sarcomas have been reported from Iliac bone. Osama et al (10) reported a case of Ewing's sarcoma of Iliac wing presented with lower quadrant pain. Manzoor et al (11) also reported a similar case of Ewing's sarcoma presented with arthritis. Tran et al reported a unique case of clear cell sarcoma of Iliac wing with liver metastases to liver. Ajlan et al (12) reported alveolar soft tissue sarcoma from iliac bone. Although, our case was mimicking soft tissue sarcoma by imaging, histopathology and IHC did not show any markers of soft tissue sarcomas. Treatment is always multidisciplinary approach. Surgery followed adjuvant radiotherapy +/- chemotherapy. Our patient received only palliative radiotherapy in view of inoperable disease.

Conclusion: In contrast to metastases, SCC of ilium are very rare (flat bones). Next to metastases, sarcomas are frequently reported from ilium. Histopathology is always confirmatory for diagnosis. Very extensive work up is always recommended to rule out secondaries. Our patient biopsy showed SCC, and we couldn't establish any other

primary even after extensive work up, and after followup period of 2 years.

Abbreviation:

SCC: squamous cell carcinoma
CA125: Carbohydrate antigen.
CEA: Carcino embryogenic antigen
CECT: Contrast Enhanced Computer Tomography
MRI: Magnetic Resonance Imaging
P63: Proliferative marker
CK : Cyto keratin

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