

Metastasis to Small Bone (Acrometastasis) of Hand Originating from Malignancy of Urinary Bladder: A Case Report

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Abstract

Metastasis to small bones (Acrometastasis) alone is uncommon and is usually a sign of occult/ manifest advanced disease, therefore warrants active search for other sites of spread. Carcinoma urinary bladder is among the rare primary sources for acrometastasis, only three (3) cases being reported so far in the literature. We report a case of carcinoma urinary bladder with metastasis to small bone of hand (metacarpal) in a 65 year Asian male to add a case to this list.

Keywords: Acrometastasis; Urinary bladder; Palliative; Rare; Metastasis; Hand; Small bone; Metacarpal

Introduction

Acrometastasis is uncommon presentation in malignancy of any site, accounting approximately 0.1% of all metastatic osseous involvement. Most of these metastases have their origin in the name of lung, breast or kidney. Urinary bladder as primary site is rare.

Case Presentation

A 65 years old male presented to Radiotherapy department with history of increased frequency and burning of micturition of one and a half months duration. Patient had undergone TURBT at a private hospital. Pre TURBT ultrasonography revealed single 3.6×2.4 cm mass in right fundal area of urinary bladder with some calcified spots. Histopathological examination of the TURBT specimen revealed high grade papillary urothelial carcinoma, tumor invading the lamina propria. Patient was referred for radical cystectomy but surgery could not be done as the patient had unstable angina. The patient was given radical external beam radiation therapy to a dose of 60 Gy in 30 fractions over 6 weeks, completed radiation therapy without any significant morbidity and was kept on follow up. He remained alright for 3 years after which he presented with complaints of persistent pain in right hand and off and on dyspnea. X-ray of hand showed expansile lytic lesion of 2nd metacarpal bone (Figure 1) and X-ray of chest showed multiple non homogenous opacities in both lung fields. CT scan of thorax showed lesions in bilateral hilar regions with multiple



Figure 1: X-ray of hand showed expansile lytic lesion of 2nd metacarpal bone.

subpleural lesions in lower lobes of both lungs. 99Tc MDP whole body radioisotope bone scan revealed tracer uptake in right 2nd metacarpal bone with normal uptake in rest of the body (Figure 2). Fine needle aspiration from metacarpal lesion revealed poorly differentiated carcinoma (Figure 3). The patient was given 800 cGy, single session to right hand for palliation of pain. The patient was also given six courses of systemic chemotherapy with Platin and Gemcitabine combination. Three months after completion of chemotherapy the patient remains symptom free.

Discussion

More than 50% of cancers disseminate to the skeleton, which is the third most frequent site of metastatic spread after the lung and the liver.



Figure 2: X-ray of chest showed multiple non homogenous opacities in both lung fields. 99Tc MDP whole body radioisotope bone scan revealed tracer uptake in right 2nd metacarpal bone with normal uptake in rest of the body.

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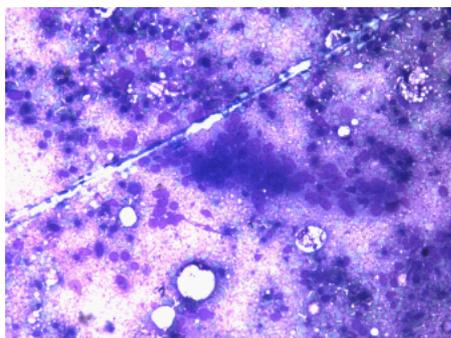


Figure 3: Fine needle aspiration from metacarpal lesion revealed poorly differentiated carcinoma.

The upper limb of the skeleton is least affected by bone metastases with approximately 10% to 15% occurring in this region. The primary tumors that more often metastasize here are cancers of the breast (73%), lung (32%), and kidney (24%) [1]. Furthermore, bone metastases located below the elbow or the knee, are very uncommon, and representing barely 4.1% of affected skeletal sites. Metastases to the hand are very rare as well accounting for only 0.1% of all metastatic lesions [2]. Handley was the first to report this unusual manifestation in 1906. Flynn et al. presented review of reported 257 cases of acrometastasis [3]. Ten more cases have been added to the list since then [4-9], making a total of 267 (excluding this particular case). Only three (03) cases of acrometastasis, so far have been reported with primary malignancy of urinary bladder; two of small bone metastasis and one to soft tissue of hand [10-12]. Acral metastases to the phalanges of the hand usually involve a single bone, while those proximal to the phalanges often involve multiple bones [13]. In this particular case, the presentation also contradicted. Typically the patient presents with the insidious onset of pain and swelling in the affected anatomic region [14]. Commonly, hand metastases are misdiagnosed as infection or other inflammatory processes [15]. It carries a grim prognosis, with a mean survival of three to six months after presentation [3]. As the cancer patient's survival has increased significantly in past decades with advances in treatment modalities, this kind of presentation and possibility of metastasis needs to be kept in mind in previously diagnosed cases of malignancy.

Conclusion

Isolated metastasis to hand bones is extremely rare occurrence for carcinoma of urinary bladder. The literature mentions acrometastasis as sign of extensive spread of disease and approximately 6 months as anticipated duration of life. Even if the presentation is with small bone lesion, other site of spread should be actively searched for. Radiotherapy with or without chemotherapy, is good option for palliative treatment of these cases, with advantage of organ preservation over surgery. Gemcitabine and platinum based chemotherapy seems appropriate to take care of anticipated widespread metastasis.

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