Hand acrometastasis from renal cell carcinoma: A case report

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OBJECTIVE

Acrometastases are secondary lesions located distally to the elbow and knee, representing only 0.1% of all metastases. The first case was described by Hinterstoisser in 1889. The average age of affected patients is 59 years, with a male predominance. The primary tumor most commonly originates from the lungs, followed by the kidneys and the colorectal region. In the upper limb, the phalanges are most frequently affected, followed by the metacarpals and then the carpal bones. Clinical symptoms include pain or discomfort leading to a reduced range of motion. Diagnosis is based on radiographs showing irregular osteolytic lesions without periosteal reaction. The diagnosis is confirmed by biopsy.

METHODS

A 79-year-old right-handed patient with a known history of clear cell renal carcinoma treated by right nephrectomy in 2013, noticed 11 years later a painless swelling on the dorsal side of his left hand, without any history of trauma. Radiographs showed a lytic, expansile, heterogeneous lesion in the proximal metadiaphyseal region of the 3rd metacarpal, with cortical breach. Biopsy confirmed the diagnosis of clear cell renal carcinoma metastasis. A 3rd ray amputation was performed, along with carpometacarpal arthrodesis of the 2nd and 4th rays and transposition of the 2nd ray onto the capitate. Due to instability, an intermetacarpal ligament reconstruction between the 2nd and 4th rays was performed using an ipsilateral palmaris longus graft. The 2nd–4th commissure was reconstructed with a local flap.

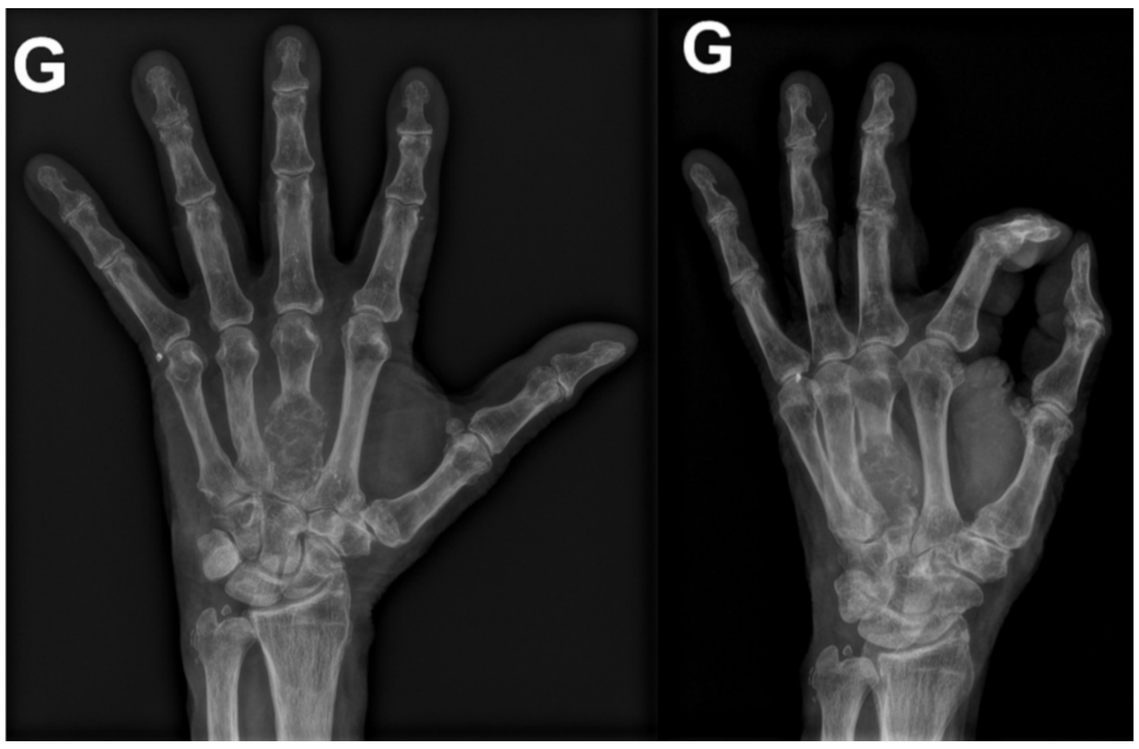

Fig 1 : Preoperative radiographs

RESULTS

Histopathological analysis revealed an R1 resection margin. The postoperative course was uneventful. Radiographs on postoperative day 10 showed arthrodesis with hardware in place. A CT scan at two months confirmed consolidation of the arthrodesis. A dorsal scar adherent to the bone was noted, yet the overall aesthetic and functional results were satisfactory. The patient subsequently underwent adjuvant radiotherapy.

Fig 2 : Postoperative radiographs

Fig 3 : Final clinical appearance

CONCLUSIONS

Acrometastasis is a poor prognostic indicator for survival and represents a diagnostic challenge. In 10% of cases, it is the first manifestation of an occult cancer, and is misdiagnosed in nearly half of the cases, most often as an infection or gout. No standardized therapeutic strategy currently exists; however, a 2023 literature review recommends amputation at the nearest joint to minimize tissue loss and preserve function.