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Metastasis of a malignant neoplasm involving the distal phalanx of the index finger – a case report

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ABSTRACT

Metastases to the hand and wrist are rare, constituting less than 0.01% of all metastases. Neoplasms which most commonly (although very rarely) lead to distant metastases to the hand include lung, breast and renal cancers. Bones of the phalanges are usually involved, followed by the metacarpus and wrist. We report a case of a neglected, metastatic tumor to the distal phalanx of the index finger which appeared in an 80-year-old female patient approx. 7 years after a left side nephrectomy due to renal cancer. The tumor grew slowly for 2 years, attaining a size of 2 x 1.5 cm. Besides neoplastic disease, the patient suffered from several, serious concomitant diseases. Treatment involved amputation of half of the index finger with the tumor. The healing of the finger was uneventful, but the patient died 4 weeks after surgery, probably due to cardiological disease.

Keywords: renal cancer; metastasis to bone; metastasis to the hand.

INTRODUCTION

Metastases of malignant neoplasms to the hand are rare, constituting approx. 0.1% of all distant metastases. The most common neoplasm leading to metastases to the hand is lung cancer, followed by kidney, breast, colon and stomach cancers [1, 2]. A metastatic hand tumour in an advanced stage presents as a palpable mass or exophytic lesion. However, in early stages, patients may experience mild symptoms such as occasional pain and mild swelling. Hand metastases may present in the form of infections, mimicking chronic wound infection, felon, or rheumatoid arthritis. Commonly, metastasis to the hand may appear prior to the diagnosis of the primary neoplasm of the lung or kidney [3]. Diagnosis of these tumors are mainly based on results of a histological examination of biopsy samples. Most metastatic tumors involving bones show on X-rays, but small lesions may require computed tomography scans or Tc^{99m} bone scintigraphy to make a confident diagnosis. We report a case of exophytic metastatic tumor involving the distal phalanx of the index finger which appeared in a patient 5 years after a left nephrectomy due to renal cancer.

CASE REPORT

An 80-year-old female patient was referred to the authors' institution due to an exophytic tumour involving the distal phalanx of her left (non-dominant) index finger. The patient had been bed ridden for 2 years due to severe arthritis of the lumbar spine. She was also burdened with several concomitant diseases including chronic circulatory failure, cardiomyopathy, diabetes and renal insufficiency and her general condition was moderately severe at presentation. Seven years earlier, the patient underwent left nephrectomy due to clarocellular renal adenocarcinoma (oxyphilic type) followed by systemic chemotherapy. Unfortunately, the tumor node metastasis (TNM) staging of the original tumour was not available. The tumor in the index finger had grown slowly for 2 years, until it became large (2 x 1.5 cm) and involved the whole distal part of the finger (Fig. 1). The lesion was painless and did not bleed, but was discharging fluid and had an unpleasant smell. The appearance of the tumor at presentation did not raise doubts of its malignant character, and looked like skin carcinoma. After obtaining informed consent from the patient, half of the involved finger (with the tumor) was amputated under digital block anaesthesia followed by the closure of the stump in a standard manner. One dose of antibiotic was given prior to operation. The patient was dismissed with prescription of ambulatory care. Six weeks thereafter, a histopathologic verification was obtained. Surprisingly, it showed that the tumor was not skin carcinoma as was suspected, but G2 adenocarcinoma invading all structures of the finger including the bones. The surgical margins were free of neoplasm. Thus, it was obvious that it was a metastatic tumor, probably of renal adenocarcinoma origin, which developed and manifested approx. 7 years after the operation for kidney malignancy. Phone contact with the patient's family revealed that she died 1 month after the amputation of the finger, probably owing to cardiological disease. The patient's daughter informed us that the postoperative course was uneventful and the stump of the amputated finger healed in 2 weeks.

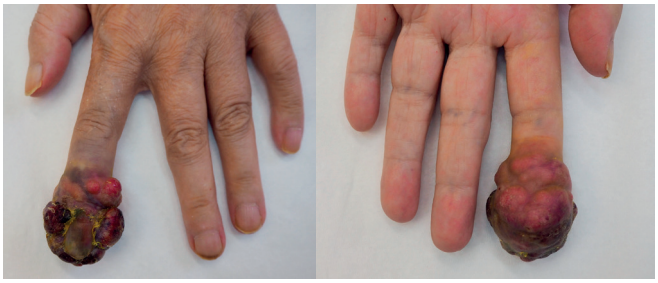

FIGURE 1. Tumor of the finger at presentation

DISCUSSION

The presented case is interesting because of its rarity. Metastases of malignant neoplasms to the hand are very uncommon and almost every case is published in medical journals. The literature shows several reports of metastases of malignant tumors to the hand, mostly to the bones. However, compared to metastases to other organs and tissues, they are extremely rare. The most number of cases were reported by Amadio and Lombardi who described 9 cases of hand metastases among 75,773 patients (0.01%) diagnosed with malignant neoplasm of various origin [4]. Ozcanli et al. only found 3 cases of metastases to the hand among 41,000 patients (0.007%) suffering from malignant neoplasms [5]. The phalanges of the fingers are the most common site of metastatic tumors in the hand and wrist, constituting approx. 66% of all cases [1, 2]. The expected length of survival for patients with malignant metastases to the hand is short and does not usually exceed 6 months [3, 4]. Our case is consistent with these data. During the last 10 years, a total of 3 cases of metastatic tumors to the hand were identified in the authors' institution: 2 originating from renal cancer and 1 from colonic cancer. One of these cases has been published [3]. It was a case of a neglected, large metastatic tumor involving the wrist and metacarpus originating from renal cancer, which appeared 2 years prior to the diagnosis of the primary neoplasm.

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