Liver metastasis in renal chondrosarcoma

D Mehanna, F M Abu-Zidan, S Rao

ABSTRACT

A 39-year-old woman who had a left radical nephrectomy for a renal chondrosarcoma presented 18 years later with a large epigastric mass and deep jaundice. The patient was very dyspnoeic and had a feeling of continuous pressure on her chest. Computed tomography arteriportography of the abdomen showed that the mass involved both lobes of the liver. Multiple non-anatomical resections of tumour masses were performed, including a mass arising from the falciform ligament, left lateral segment, and segments VII and VIII. The largest resected mass weighed 2.5kg and had a diameter of 15cm. Histopathology of the hepatic metastasis was similar to the original renal chondrosarcoma. The patient was followed up for 24 months postoperatively and had symptomatic relief. Our case demonstrates the slow-growing nature of this tumour and the usefulness of palliative surgery despite large tumour load.

Keywords: chondrosarcoma, extraskeletal chondrosarcoma, renal tumour, liver metastasis.

INTRODUCTION

Extraskeletal chondrosarcoma is a rare malignant neoplasm that was first described by Stout and Verner in 1953(1). It may occur in the head and neck, brain, meninges, trunk, retroperitoneum and extremities(2). Chondrosarcoma has a tendency to metastasise to unusual locations, often after remarkable period of delay(3). We report a case that exemplifies the slow-growing nature of this tumour and the usefulness of palliative surgery despite large tumour load.

CASE REPORT

A 39-year-old woman presented with a large epigastric mass, jaundice and dyspnoea. She had previously had a left radical nephrectomy for a renal chondrosarcoma in 1983. The tumour was localised with no evidence of metastasis at that time. On examination, the patient was cachectic and deeply jaundiced. A firm fixed mass that was bulging from the epigastrium was felt. She had a haemoglobin concentration of 113g/L, serum bilirubin of 78 µmol/L, ALT of 41U/L, INR of 1.1, serum protein of 82g/L, and serum albumin of 38g/L.

Abdominal ultrasonography showed a tumour of at least 10 cm diameter, that contained areas of extensive calcification. The mass was inseparable from the liver edge and had large hypoechoic areas, that did not exhibit increased vascular flow, consistent with central necrosis. A further 2cm nodule was seen in the right liver lobe, consistent with metastasis. Mild biliary dilatation secondary to the mass pressure was demonstrated. Computed tomography (CT) arteriportography of the abdomen (Fig. 1) showed that the mass involved both lobes of the liver. The posterior aspects of both lobes had a normal appearance. The anterior abdominal wall is attenuated due to the pressure of the tumour.
The patient continued to be dyspnoeic and had a feeling of continuous pressure on her chest. There was evidence of lung micro-metastasis shown on chest radiographs and CT of the thorax. A decision was taken to resect this tumour in order to reduce the pressure on the chest. At operation, a huge liver mass was seen arising from the falciform ligament, extending into the abdominal wall and compressing the liver parenchyma. Multiple metastatic lesions were located in left lateral segment, segment VII, and segment VIII. Multiple non-anatomical resections of the tumour mass were performed, including the mass (Fig. 2) arising from the falciform ligament, left lateral segment, and segments VII and VIII. The right hepatic duct was inadvertently entered, revealing the stent. This was repaired with prolene sutures and a T tube placed.

The resected mass weighed 2.5kg. It had a diameter of about 15cm (Fig. 3). Histopathology of the hepatic metastasis was similar to the original renal chondrosarcoma. It showed cellular solid areas associated with large lobulated nodules of cartilage. The solid areas had intermediate to large polygonal neoplastic cells with round to oval-shaped nuclei, a fine chromatin pattern, and ill-defined pale eosinophilic cytoplasm. The cartilage varied from being immature to being normal and mature. Some chondrocytes had large nuclei with irregular contours.

Two months after surgery, the patient felt much better, with improvement of her breathing with mass pressure decrease (Fig. 4). Serum bilirubin returned to normal and the patient gained weight. Twenty-four months post-operatively, the patient was still alive but had recurrence of the liver metastasis. She also developed pleural effusion which was treated by repeated aspiration.

DISCUSSION
Primary chondrosarcoma of the kidney, an extraskeletal tumour, is extremely rare. Pitfield et al were the first to describe this tumour in 1981. It is seen mainly in women in their twenties and thirties, and presents with abdominal pain or mass. Abdominal radiographs may show calcification in the renal region. Extraskeletal chondrosarcomas are known to produce widespread metastases. Hepatic metastasis of a soft tissue chondrosarcoma has been reported before, was treated with percutaneous ethanol injection and followed-up for one year.

The prognosis for patients with extraskeletal chondrosarcoma will vary more than with conventional chondrosarcoma. Some patients may live for long periods after surgical resection. Although spontaneous regression may occur, metastatic chondrosarcoma...
does not respond well to chemotherapy or radiotherapy, and surgery is recommended. The young age of our patient, recurrence 18 years after nephrectomy, clinical symptoms of dyspnoea, and the fact that the progress of extraskeletal chondrosarcoma is unpredictable favoured the option of palliative surgery. Our patient, who was very dyspnoecic at presentation, lived for more than 24 months with symptomatic relief. The fact that the patient had lung metastases preoperatively demonstrates the slow-growing nature of this tumour and reasonable survival in spite of the presence of metastases. This highlights the worthiness of surgical intervention despite large tumour load.

REFERENCES