CASE REPORT

Preoperative diagnosis by three-dimensional angiography of a leiomyosarcoma arising from the left ovarian vein

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SUMMARY

Leiomyosarcoma arising from the ovarian vein is extremely rare; we present a case with this unusual finding. A 78-year-old woman, diagnosed 2 years prior with a left retroperitoneal mass located in the lower part of the left kidney, was admitted to our hospital with a decrease in oral intake and a palpable, hard, abdominal mass. Contrast-enhanced CT showed a solid mass in the left lower abdominal cavity. On three-dimensional (3D) angiography the mass appeared to originate from the left ovarian vein. A simple total excision, including the involved vein, was performed and the tumour was found to be leiomyosarcoma. The patient’s postoperative course was uneventful. There was no evidence of recurrence 5 months after surgery. In this patient, the previous information about the location of the retroperitoneal mass as well as the 3D angiography results were helpful in giving preoperative evidence of leiomyosarcoma originating from the left ovarian vein.

BACKGROUND

Vascular leiomyosarcomas are rare lesions, representing less than 2% of all leiomyosarcomas; their prognosis is very poor compared with those that have other sites of origin.1 The inferior vena cava is the most frequently observed site for leiomyosarcomas that arise from a vessel wall.2 Excluding those of vena caval origin, vascular leiomyosarcomas most commonly originate in the renal vein, followed by the great saphenous vein, the pulmonary veins and the femoral vein3; leiomyosarcomas arising from the ovarian vein are extremely rare. The preoperative diagnosis of leiomyosarcoma and its origin is very difficult. In the patient, we reported, both the previous information regarding the location of a retroperitoneal mass and three-dimensional (3D) angiography were helpful in providing preoperative decisive evidence of leiomyosarcoma arising from the left ovarian vein.

CASE PRESENTATION

A 78-year-old woman was admitted to our hospital with a decrease in oral intake and a left abdominal mass. At the age of 76 she had been diagnosed with a left retroperitoneal mass, measuring 60×46×50 mm, during an investigation for continuous low-grade fever (figure 1A). She declined surgical treatment at that time, despite the recommendation for total excision, as her fever resolved with administration of antibiotics and she had no abdominal symptoms. Physical examination on the recent admission revealed a large, hard, palpable mass, with poor mobility, in the left abdomen.

INVESTIGATIONS

On laboratory investigation, her inflammatory responses were elevated with a white blood cell count of 11 400/μl and C reactive protein level of 14.34 mg/dl (normal range <0.45 mg/dl); levels of tumour markers, including CA125, were within normal limits. Radiographic examination demonstrated intestinal gas shifted to the right side of the abdomen. Enhanced CT showed a mass in the left retroperitoneal space, with a diameter of 210×130×90 mm. This mass was circumscribed and heterogeneously enhanced (figure 1B). On 3D angiography, the left ovarian vein was seen to branch from the left renal vein and be adhered to the right dorsal portion of the mass. The inferior

Figure 1 Axial contrast-enhanced CT images. (A) Retroperitoneal mass at initial diagnosis; the origin of the mass was unknown. (B) Left retroperitoneal mass is circumscribed and heterogeneously enhanced. There is no evidence of invasion into adjacent tissues.