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European Association of Urology

Case Study of the Month

Pregnant Woman Presenting with a Gross Retroperitoneal Mass: Surgical Treatment with Caval Replacement

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Article info

Article history:
Accepted June 13, 2008
Published online ahead of print on July 2, 2008

Keywords:
Leiomyosarcoma
Inferior vena cava
Surgical therapy

EU ACME

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Abstract

A 40-year-old woman in the twenty-fifth week of pregnancy presented with a gross retroperitoneal mass. At the end of the pregnancy, the patient was submitted to surgery, and the gross infiltration of the inferior vena cava wall required the resection of the vena cava with its prosthetic substitution. The histopathological examination demonstrated the presence of a leiomyosarcoma of the inferior vena cava. An electronic video supplement showing the most important intraoperative passages is available online at doi:10.1016/j.eururo.2008.06.074.

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1. Case report

We report the case of a 40-year-old woman in the twenty-fifth week of pregnancy, who presented sudden right flank and right lumbar pain. The woman underwent abdominal ultrasound examination and magnetic-resonance imaging, which evidenced the presence of a gross mass of apparent adrenal origin. The decision to go through with her pregnancy was made.

At the end of the pregnancy, the woman recovered in our urological department and was subjected to an angio-computer tomography (CT) scan, which confirmed the presence of a 12.5-cm mass. This large mass seemed to anteriorly dislocate the right kidney and to laterally dislocate the pancreas and the duodenum (Figs. 1–3). Moreover, the mass seemed to anteriorly dislocate the inferior vena cava (IVC), with such a compression that the flow was reduced to about 30%. The patient then underwent surgery.

Through a xifo-subumbilical incision, and after complete derotation of the intestinal mass, a gross mass was evident that had clearly infiltrated the IVC (Fig. 4). Initially, an attempt to excise only the mass was made, but due to the macroscopic infiltration of the IVC wall, the decision to resect the vessel became unavoidable. Therefore, the mass was

Fig. 1 – Pre-operative CT-scan demonstrating the presence of a retroperitoneal mass dislocating anteriorly the right kidney, laterally the pancreas and the duodenum and anteriorly the inferior vena cava.

Fig. 2 – Pre-operative CT-scan demonstrating the presence of a retroperitoneal mass dislocating anteriorly the right kidney, laterally the pancreas and the duodenum and anteriorly the inferior vena cava.

entirely removed along with the right kidney, the right adrenal gland, and part of the IVC wall. After removal of the mass, the wall of the IVC and of the left renal vein were compromised. After having discussed the case with the vascular surgeon, the decision to resect a segment of the infrarenal IVC with a prosthetic substitution and to place a patch on the left renal vein was made.

Therefore, a widening polytetrafluoroethylene (PTFE) patch was placed on the left renal vein wall.

The resected segment of the IVC was replaced with a PTFE Gore-Tex 20 mm (W.L. Gore & Assoc, Flagstaff, Arizona) prosthetic substitution through a Prolene 4-0 suture (Fig. 5). (The video can be watched

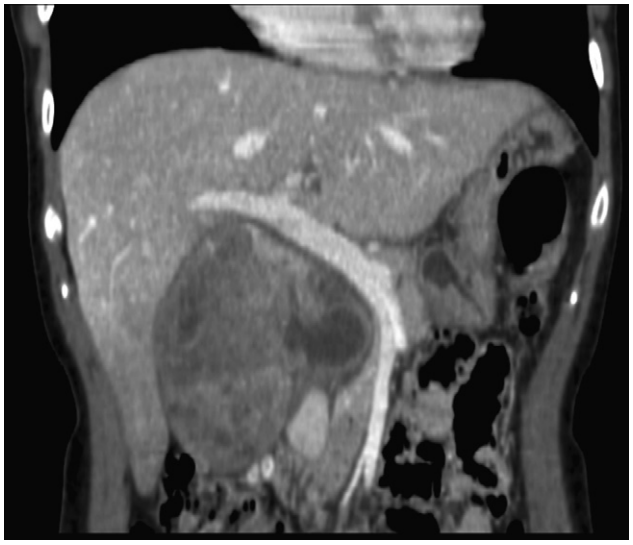

Fig. 3 – Pre-operative CT-scan demonstrating the presence of a retroperitoneal mass dislocating anteriorly the right kidney, laterally the pancreas and the duodenum and anteriorly the inferior vena cava.

online at doi:10.1016/j.eururo.2008.06.074.) Surgical time was 340 min, with an IVC–clamping time of 65 min. Estimated blood loss was 2500 ml. No perioperative complications occurred, and the woman was discharged from the hospital 12 days after the procedure. Ten days after surgery, an angio-CT scan was repeated and showed the clarity of the prosthesis, with neither periprosthetic clots nor infection (Fig. 6).

The histopathological report showed a leiomyosarcoma of the IVC, G3, pN0, infiltrating the right perirenal and periadrenal tissues, with negative

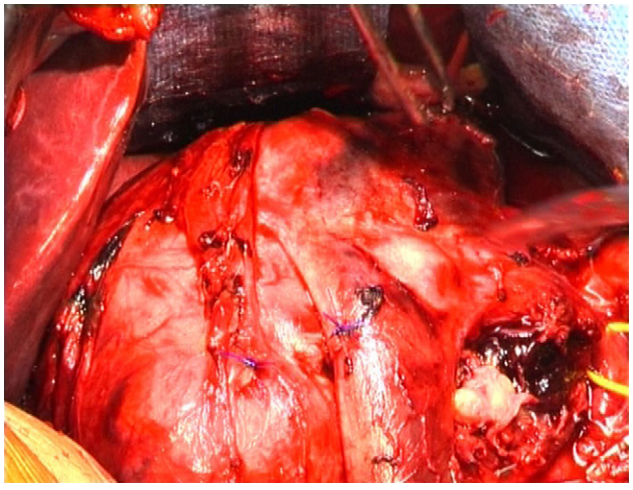

Fig. 4 – Intra-operative picture showing the mass dislocating and infiltrating the inferior vena cava wall.