Ex-situ liver resection and autotransplantation (ELRA) for inferior vena cava (IVC) leiomyosarcoma extending in right atrium ; stretching surgical limits for oncological resection.

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A 84-years patient was referred to our institution for abdominal mass suspicious for sarcoma. She suffered from dysphagia, nausea, epigastralgy, bilateral lower limbs oedema and dyspnea (NYHA grade 2) rapidly degrading. She was in excellent general condition (ECOG 0) without relevant past medical history.

Thoraco-abdominal scanner revealed a 15 x 5 x 5 cm mass originating from retrohepatic IVC, invading cavo-hepatic confluence with a intracaval thrombus protruding in right atrium for 2 cm without any metastasis. IVC leiomyosarcoma was diagnosed on biopsy. After consultation of multidisciplinary sarcoma board, a surgical indication was retained gived the quickly evoluting symptomatology and excellent general status.

Under veno-venous extracorporeal circulation, a sterno-laparotomy was performed consisting in a right nephrectomy for exposure and en-bloc complete liver resection with retrohepatic IVC after atriotomy for intra-cardiac thrombus exraction. Tumorectomy (retrohepatic IVC + segment I) was performed on back table. Native IVC was reconstructed with a double tubulized graft originating from heterologous iliac vein confluence and bovine pericardium. A second tubulized heterologous venous patch was used for reconstruction of retrohepatic IVC ; permitting a side-to-side cavo-caval anastomosis for liver reimplantation.

Post-operative evolution was marked by a pyelonephritis, treated by antibiotics and a disabling gastroparesia, spontaneously et slowly resolving. Patient was discharged on post-operative day 32. Pathological examination confirmed diagnosis of a 16 x 5 cm IVC leiomyosarcoma, $pT_4N_0L_0Pn_0\ R_0$.

3 months after surgery, general status was conserved with disappearance of symptoms. CT scanner revealed no recurrence and a permeable IVC reconstruction.