Inferior vena cava resection with right hepatectomy in case of cholangiocarcinoma with inferior vena cava invasion.

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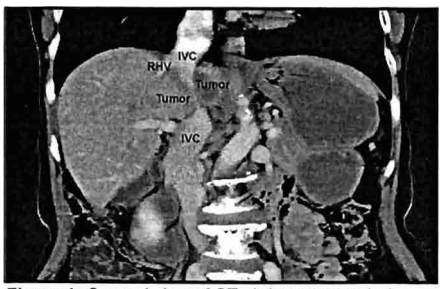

Figure 1: Coronal view of CT abdomen revealed mass involving segment I, VI, VII and IVC.

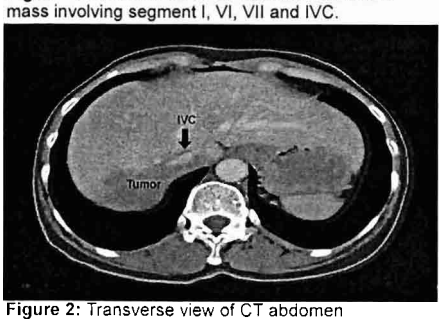

Figure 2: Transverse view of CT abdomen

Figure 3: After liver and diaphragm resection was done, supra-hepatic IVC was clamped.

Figure 4: IVC was transected and 20 mm Dacron graft was used for reconstruction.

Figure 5: Right hepatectomy, caudate lobectomy and IVC resection was done.

Introduction

Involvement of inferior vena cava (IVC) was considered a contraindication for liver resection. Advancement of operative technique, vascular prosthesis and neo-adjuvant treatment have enabled surgeons to performed operation in cases which previously though to be unresectable. We here presented a successful resectable case of cholangiocarcinoma with IVC invasion.

Methods

A 66 year-old female suffered from abdominal pain with prolonged fever for 1 month. Her abdominal CT scan revealed 5X7X6 cm mass involving segment I, VI and VII of liver with IVC invasion(Figure 1-2). Physical examination and all laboratories were reported normal.

Results

Right hepatectomy and IVC resection was performed in this patient. Operation started by mirror-L incision then right lobe of liver was mobilized. Right portal pedicle were selective encircled for inflow control. Supra-hepatic IVC and infra-hepatic IVC were encircled for outflow control. After right portal pedicle and infra-hepatic IVC was clamped, right hepatectomy, caudate lobectomy and diaphragm resection was done. At this stage, supra-hepatic IVC was clamped for occlude blood flow from common trunk(Figure 3) then IVC was transected and was replaced by 20 mm Dacron graft(Figure 4-5). Operative time was 360 minutes, supra-hepatic IVC clamped time was 20 minutes and blood loss was 700 ml. Pathological report revealed a 5X7X6 cm well differentiated cholangiocarcinoma of segment I, VI, VII with IVC invasion(Figure 6-7). Free all resected margin and negative all 13 lymph nodes. Post-operative course was uneventful. Patient was discharged on 12th post-operative day. Adjuvant chemotherapy was given and disease free survival was 12 months.

Conclusions

En bloc hepatectomy with IVC resection is the only curative procedure for patients with liver cancer involving IVC.

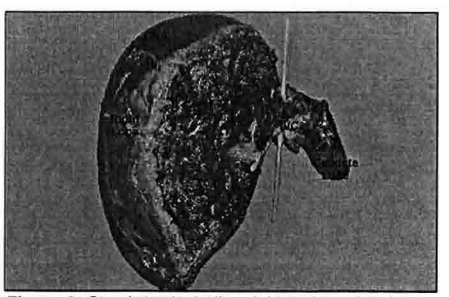

Figure 6: Specimen including right and caudate lobe with IVC.

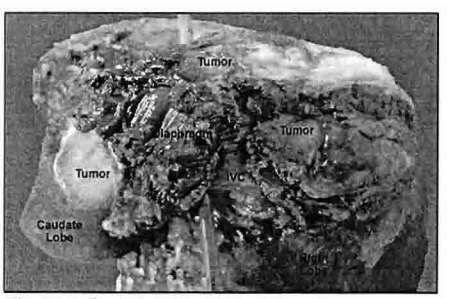

Figure 7: Posterior view of specimen.

References
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