RPLND in Post-Chemotherapy Residual Mass with 360 Degree Involvement of the Aorta: A Surgical Challenge

Introduction and Objectives: Post-chemotherapy retro-peritoneal lymph node dissection in patients with non-seminomatous germ cell tumour of the testis is a formidable surgery. A 360 degree encasement of the aorta by the post-chemotherapy residual mass adds a major challenge to this procedure. In this video we demonstrate a technique of handling this complex problem.
Material and Methods: A 23-year-old man presented with big post-chemotherapy residual masses in the retro-peritoneum. His tumour markers had normalised. His CT abdomen revealed an 18x14x10cm mass having cystic and solid components. Superiorly the mass was reaching the superior mesenteric artery (SMA). The left renal vessels were completely encased. There was moderate left hydronephrosis. Further down the aorta was completely surrounded and lifted by the mass (360 degrees encasement). There were inter-aorto-caval, retro-caval, para-caval, right and left common iliac components of the mass. The patient was explored with left thoraco-abdominal incision. Supra-coeliac aorta was identified. Dissection was carried along its left border and then along the anterior surface. The origin of SMA was identified and kept safe. The dissection was shifted inferiorly to identify the left common iliac artery below the mass. The whole mass was lifted and slowly separated from the posterior abdominal wall till the left edge of the aorta. The left colon was slowly dissected off from the anterior surface of the mass. The inferior mesenteric artery was identified at the base of the mesentry. *Using this artery as a guide, a complete split of the mass was carried out till the anterior surface of the aorta. Further dissection was carried up slowly till the SMA.* Left renal artery was divided from behind and left renal vein from front and para-aortic mass was delivered. A similar split was carried out along anterior surface of IVC. The aorta and both common iliac arteries were lifted on slings. Inter-aorto-caval, para-caval, left and right common iliac components were separately dissected and delivered and complete clearance achieved.
Results: The patient had an uneventful recovery.
Conclusion: A technique of following arterial planes from normal to abnormal can lead to complete 360 clearance of the aorta in RPLND.

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