

Outcomes of Arterial and Caval Resection During Post-Chemotherapy Retroperitoneal Lymph Node Dissection in Metastatic Testicular Cancer

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Background/Objective:

In the United States, testicular cancer is the most common solid tumor in men aged 15 to 34. Fortunately, testicular cancer has a cure rate greater than 90% and a 97% five-year survival rate. For the men not cured, a relapse to the retroperitoneum (RP) is most common. Of the patients with RP metastases, a minimal number may require post-chemotherapy retroperitoneal lymph node dissection (PC-RPLND) with resection of the aorta, external iliac, or inferior vena cava (IVC). We hypothesized this procedure would yield reasonable cure rates with acceptable levels of postoperative complications to warrant the indication for surgery.

Methods:

Between 2000 and 2020, 2,054 patients with metastatic testicular cancer underwent a PC-RPLND; of those men, 39 also underwent an aortic, external iliac, and/or IVC resection. For the men with a PC-RPLND and vascular resection, demographic, clinical, pathologic, and operative information were reviewed. Next, a Kaplan-Meier curve was created to determine overall survival.

Results:

In this retrospective cohort study of 39 patients, PC-RPLND and vascular resection occurred at a median age of 40. The median follow-up of the cohort was 9 months. The median pre-operative mass size was 9 cm and 19 cm in the RP and pelvis, respectively. At PC-RPLND, 54%, 13%, 18%, and 15% of patients demonstrated cancer, teratoma, teratoma and cancer, and necrosis, respectively. Following PC-RPLND and vascular resection, 22 (56%) patients recurred. The median (IQR) time to relapse was 4.2 (2.5 – 8.2) months. Recurrence to the lung was most common, followed by the RP and liver. In total, 17 (44%) patients died of disease with a median overall survival of 14.8 months.

Conclusion:

With an overall survival rate of 45% at two years in this heavily pretreated patient population, PC-RPLND with resection of the aorta, external iliac, and/or IVC is reasonable in very select cases.