

Management of Renal Malignancies with IVC Thrombus: Our Experience

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Abstract : Introduction: Renal cell carcinoma is the most common malignancy associated with Inferior vena cava (IVC) thrombosis. Radical nephrectomy with tumor thrombectomy provides durable cancer-free survival. Other renal malignancies like Wilms' tumors are also associated with IVC thrombus. We describe our experience with the management of renal malignancies associated with IVC thrombus. Methods: This prospective study included 28 patients undergoing surgery for renal malignancies associated with IVC thrombus from February 2017 to March 2023. Demographics of patients, types of renal malignancy, level of IVC thrombus, intraoperative details, need for venovenous bypass, cardiopulmonary bypass and postoperative outcomes were all documented. Results: Out of a total of 28 patients, 24 patients had clear cell Renal Cell Carcinoma, 1 had renal osteosarcoma and 3 patients had Wilms tumor. The levels of thrombus were II in eight, III in seven, and IV in six patients. The mean age of RCC was 62.81 ± 10.2 years, renal osteosarcoma was 26 years and Wilms tumor was 23 years. There was a need for venovenous bypass in four patients and cardiopulmonary bypass in four patients, and the Postoperative period was uneventful in most cases except for two mortalities, one in Level III due to pneumonia and one in Level IV due to sepsis. All cases followed up till now have no local recurrence and metastasis except one case of RCC with Level IV IVC thrombus, which presented with paraaortic nodal recurrence and is currently managed with sunitinib. Conclusion: The complexity in the management of renal malignancy with IVC thrombus increases with the level of IVC thrombus. As radical nephrectomy with tumor thrombectomy provides durable cancer-free survival in most cases, the surgery should be undertaken in an expert and experienced setup with a strong cardiovascular backup to minimize morbidity and mortality associated with the procedure.

Keywords : renal malignancy, IVC thrombus, radical nephrectomy with tumor thrombectomy, renal cell carcinoma

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