

SVIII4: SIMULTANEOUS LAPAROSCOPIC EXCISION OF NON-ADRENAL RETROPERITONEAL TUMOR AND NON-FUNCTIONING UPPER POLE OF SINGLE COLLECTING SYSTEM KIDNEY

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Background We present a case of a 16-year-old girl with retroperitoneal tumor encasing the renal multiple arteries which caused arterial occlusion and consequently hypertension and loss of renal function in the upper part of kidney. The patient underwent simultaneous laparoscopic transperitoneal resection of retroperitoneal tumor and partial nephrectomy.

Materials and methods Case history: An otherwise fit and well 16 year old female presented to the emergency department after fainting. She had hypertension of 170/110 mm Hg. An abdominal ultrasound revealed a smaller right kidney (102 versus 136 mm) and pathological mass 38x20x29 mm between the upper pole of the kidney and inferior vena cava. There was no history of headache, sweating and palpitations which is suggestive of pheochromocytoma. Clinical evaluations and relevant investigations were undertaken to determine the cause of hypertension. Twenty four hours urinary total metanephrine, plasma metanephrine and 24-hours urinary vanillylmandelic acid level were within normal ranges. Computer tomography angiography showed three renal arteries, of which upper 2 were encased by the pathological mass at the right renal hilum causing vascular obstruction. The decreased perfusion compromises renal function, which was confirmed by renal scan. DMSA renal scintigraphy showed a markedly decreased uptake at the upper half of the right kidney with functioning lower pole (GFR=16%)

A subsequent gadolinium-enhanced MRI confirmed a solid pararenal 39x31x18 mm mass encasing two upper renal arteries. Lower renal artery of normal size. Right kidney smaller with hypoperfusion of the upper lobe. It was decided to perform laparoscopic tumor resection and partial nephrectomy to eliminate the source of the hypertension. Procedure: Using a transperitoneal approach the kidney was exposed. We found a highly vascular tumor being unrelated to the adrenal gland and kidney. It was located in the retroperitoneum in narrow space flanked by renal hilum, renal vessels to the lower pole inferiorly, inferior vena cava on the left side. With gentle dissection using monopolar diathermy and vessel sealing device intact tumor was extirpated without injury to adjacent vital structures. The arterial supply to the tumour was then clipped and divided, which resulted in devascularization of 1/2 of the kidney. The artery and vein to the lower lobe were preserved. Using the vessel seal device, the devascularized portion of the kidney was then removed. The cut surface was then covered with he-

mostatic patch. The patient made an uneventful recovery, her blood pressure returned to normal levels without need for antihypertensive medication.

Results The tumour was successfully removed laparoscopically, without the need for total nephrectomy.

Conclusions This case highlights the feasibility of laparoscopic partial nephrectomy and excision of retroperitoneal mass, even in the hazardous area of renal hilum.

Key words child, laparoscopic surgery, urology