AB021. Selective segmental renal artery clamping during retro and trans-peritoneal robotic-assisted laparoscopic partial nephrectomy for hilar tumours: technique and outcome

Omar Abaneh, Eva Browne, Cristian Albu, Nauman Nabi, Thomas Jacob, Mamoun Abdelrahman, Subhasis Giri

Department of Urology & Robotic Surgery, University Hospital Limerick, Limerick, Ireland

Background: Robot-assisted procedures are expanding rapidly in minimally invasive urologic surgery. We demonstrate the technique of selective segmental renal artery clamping (SRAC) during retro and trans-peritoneal robotic assisted laparoscopic partial nephrectomy (RALPN) to minimise global renal ischaemia.

Methods: We assembled the video footage from the above procedure from the two patients who underwent RALPN with SRAC without clamping of renal vein. Estimated blood loss (EBL), transfusion rate, operative/console time, segmental warm ischemia time (SWIT), pathology, and postoperative glomerular filtration rate (GFR) were compared.

Results: Two patients with hilar renal tumour underwent RALPN with SRAC. One had via retro-peritoneal approach and the other via trans-peritoneal approach. Surgical steps involved in RALPN are shown. Hilar dissection of renal artery is shown in detail. Mean blood loss 300 mL and SWIT was 20 min. There were no blood transfusion and no positive margin.

Conclusions: SRAC offers potential benefit of avoiding total renal warm ischaemia and was not associated with more transfusions or positive margin.

Keywords: Robotic; laparoscopic; partial-nephrectomy; retro-peritoneal; segmental renal artery clamping (SRAC)

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