

Laparoscopic partial nephrectomy with ICG-guided segmental ischemia in a patient with T1aN0M0 kidney cancer

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Epublication [WebSurg.com](http://websurg.com), Jun 2020;20(06). URL: <http://websurg.com/doi/vd01en5640>

This is the case of a 56 year-old male patient with a BMI of 27.5. He presented with a renal cell carcinoma at a clinical stage of T1aN0M0. Its R.E.N.A.L. score was 6a. The tumor was 2.4 x 3.3 x 3.5cm in size, and was localized in the inferior segment of the left kidney. On the CT-scan, the segmental branch of a renal artery was identified. The surgery was performed under general anesthesia. The patient was placed in left kidney position at an angle of 45°. Ports were placed in a standard fashion for laparoscopic kidney surgery. After the dissection of renal vein and arteries in the hilum, the inferior kidney segment containing the tumor was exposed. The inferior segmental arterial branch was identified and clamped with a bulldog clamp. An intravenous injection of 12.5mg indocyanine green (ICG) was performed, so that 2-3 minutes later the ischemic zone with the tumor could be defined. Enucleoresection of the tumor was performed using a standard technique. "Cold" scissors were used to clearly visualize the surgical margins. The first suture line was placed in the tumor crater using a 3-0 polyglycolic acid suture. It was secured with Hem-o-lok® clips at each end for hemostasis, and was combined with a local hemostasis using Absolock clips. The second suture line was placed using a 0 polyglycolic acid suture, and was secured with Hem-o-lock clips to close the parenchymal defect. The blood flow was controlled in the resection zone by performing a 12.5mg indocyanine green intravenous injection. There was no sign of ischemia. Segmental ischemic time was 9 min 40 sec, and blood loss was 75ml. The postoperative course was uneventful. Conclusion: ICG visualization helps to better control both segmental ischemias during partial nephrectomy and blood flow in the parenchyma at the end of the surgery.

Urology, kidney and ureter, cancer, partial nephrectomy

Лапароскопическая частичная нефрэктомия с использованием ICG у пациента с раком почки T1aN0M0

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Урология, почки и мочеточники, частичная нефрэктомия

Néphrectomie partielle laparoscopique guidée par vert d'indocyanine avec ischémie segmentaire chez un patient atteint d'un cancer du rein T1aN0M0

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Tags Urologie, reins et uretère, cancer, néphrectomie partielle