

Laparoscopic Nephrectomy

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Description:

Indications for nephrectomy include kidney cancer, severe trauma to the kidney and benign disease such as symptomatic hydronephrosis, chronic infection, polycystic kidney disease, shrunken kidney, hypertension or renal calculus. The most common type of kidney cancer is renal cell cancer. Other types include Wilm's tumour (a childhood cancer) and transitional cell cancer.

The standard treatment for an irreversibly damaged kidney or localised kidney cancer is an open nephrectomy. Under general anaesthesia, the kidney is removed through a large incision that may be made in the side of the body, in the front of the abdomen or in the back. A simple nephrectomy is the removal of just the kidney whereas a radical nephrectomy also involves the removal of the adrenal gland and sometimes the lymph nodes.

A laparoscopic nephrectomy is performed under a general anaesthetic. Three or four small abdominal incisions are made in the abdomen to provide access for surgical instruments that are used to detach the kidney and to ligate the blood vessels. The intact kidney is enclosed in a bag and removed through an incision or it may be placed in an impermeable sack, morcellated and removed through one of the port sites.

Hand-assisted laparoscopic nephrectomy allows the surgeon to place one hand in the abdomen while maintaining the pneumoperitoneum required for laparoscopy. A small incision is made which is just large enough for the surgeon's hand and an airtight 'sleeve' device is used to form a seal around the incision. At the end of the procedure, the intact kidney can be removed through the same incision.

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