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Removal of urinary tract stones

The Centre for Urology specialises in the removal or ureteral and kidney stones.

Thanks to efficient teamwork, we can remove kidney or ureteral stones on the day of hospitalisation, so the patient can be discharged the following day.

We reach the stones by using the natural urinary tract or directly through the skin. All surgeries are performed endoscopically using minimally invasive methods. We use the Ho-Yag or Thulium laser to crush the stones.

Removal of ureteral stones

To remove ureteral stones, we use ureteroscopy, which is usually performed under general anaesthesia:

- During the surgery, a thin instrument called an ureteroscope is inserted into the ureter. It is equipped with a video camera and a light.
- If necessary, X-rays are taken during the surgery to specify the exact location of the stone and rule out other urinary abnormalities.
- The doctor uses a laser to break the stone down into small pieces and remove them.
- Rarely, a stent must be left in the ureter after the ureteral or kidney stones have been crushed to connect the renal pelvis to the bladder and allow urine to pass freely into the bladder. The stent will be removed in the outpatient clinic within two to three weeks.

Removal of bladders stones

Bladder stones usually form when emptying the bladder is obstructed. In men, the most common cause is benign prostatic hyperplasia. For smaller stones, we use the natural urinary tract or urethra to reach the stones.

The surgery uses an endoscope to break up the stones with a laser. Bladder stones can also be crushed with ultrasound, after which the stones are removed.

Removing kidney stones

To remove kidney stones, we use retrograde intrarenal surgery (RIRS) or percutaneous nephrolithotomy (PCNL).

Retrograde intrarenal surgery (RIRS) is a method used to crush kidney stones in the renal pelvis or renal calyces. The procedure involves inserting a flexible fiber uretero-renoscope into the ureter or renal pelvis, where the stones are broken up into tiny pieces by a laser, after which the larger pieces are removed.

Percutaneous nephrolithotomy (PCNL) is a method for removing of kidney stones specifically for cases where the stones are large, dense or numerous and cannot be treated by other methods. The size and density of the stones are assessed using computed tomography.