

# Clinic for Urology and Pediatric Urology

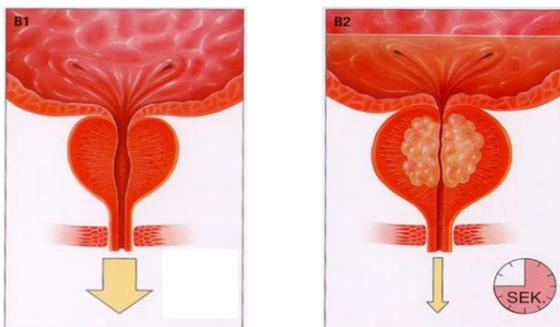
## Thulium or Holmium Laser Enucleation of the Prostate Gland



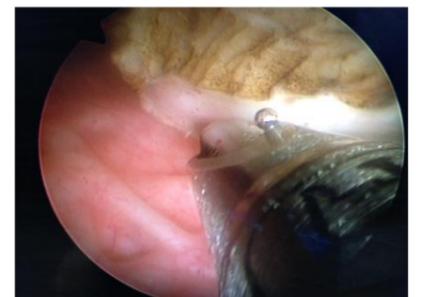
Laser enucleation of the prostate (TULP) is one of the minimally invasive transurethral (i.e. using endoscopic imaging through the urethra) surgical procedures for the treatment of benign prostate hyperplasia, which also includes classic transurethral resection of the prostate (TUR-P) with a hot sling or various surgical techniques that merely “vaporize tissue” (laser vaporization, TURIS, etc.). In TULP, on the other hand, the entire enlarged prostate gland, which is responsible for the obstructive symptoms during urination (delayed urination, reduced urine flow, prolonged time for urination, residual urine formation, overflow bladder, urinary retention), is normally removed by minimally invasive surgery. In contrast to procedures in which only part of the prostate gland is removed (TUR-P, laser vaporization of the prostate, TURIS, etc.), a recurrence (return of the symptoms) is therefore extremely unlikely.

### Advantages of TULP

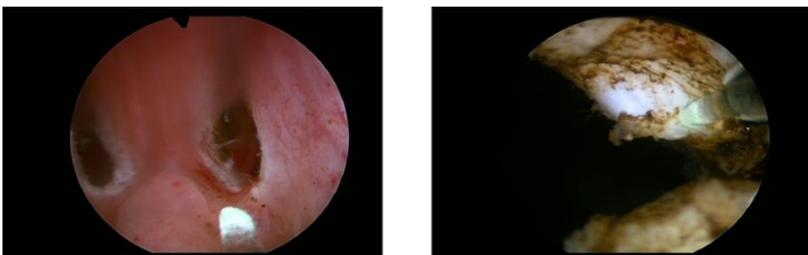
- Feasibility almost independent of prostate size (in contrast to laser vaporization or TUR prostate)
- shorter hospital stay (approx. 3 days, in open adenoma enucleation approx. 1 - 2 weeks)
- minimally invasive, gentle, post-operative, mostly almost completely painless operation (in contrast to open surgical adenoma nucleation)
- less to negligible blood loss
- low risk of injury to surrounding structures (sphincter, nerves for erection) due to orientation within the prostate capsule
- low recurrence risk
- ASA 100 does not have to be discontinued prior to intervention
- alternative to life-long medication for the treatment of prostate hyperplasia and its consequences



Benign enlarged prostate (right)



After laser enucleation, the enucleate is morcelated and aspirated



Prostate adenoma nucleation with laser

TULP is a technically highly demanding operation. In experienced hands, however, it is a very safe and highly efficient, minimally invasive procedure with multiple advantages for patients suffering from prostate enlargement that requires treatment.