

BLADDER PRESSURE DURING TURP UNDER INTERMITTENT AND CONTINUOUS DRAINAGE: CAN IT BE A CAUSE OF URINARY RETENTION AFTER SURGERY?

Synopsis of Video

The indications for surgical treatment of benign prostatic hypertrophy (BPH) are obvious in cases of significant bladder outlet obstruction. The syndrome of lower urinary tract symptoms (LUTS) comprises these cases of obstruction, with a bladder dysfunction playing an important role in the genesis of the symptoms and in the outcome from surgery. Frequently, patients stay in urinary retention for a variable time after the surgery, being the cause of this fact not totally known.

Herein, we describe a method of continuous monitoring of bladder and abdominal pressures during trans urethral resection of prostate (TURP), using a continuous flow drainage resectoscope and an intermittent one. The bladder pressure is registered through cystostomy done just before de TURP and the abdominal pressure measured through a small rectal balloon. The pressures and the endoscopic images are continuously recorded from a screen with picture in picture system. The grade of bleeding is compared to the intra-vesical pressures and both parameters can be evaluate continuously during the procedure. The continuous flow drainage resectoscope promotes stable intra-vesical pressures around 20 cm H₂O. Using the intermittent flow drainage resectoscope, the intra-vesical pressure rapidly increases to 70-80 cm H₂O (in about 70 seconds), according to the level of the reservoir. Most of the resection time is done under this intra-vesical pressure. In some moments, spontaneous increases as high as 120 cm H₂O were seen in some patients, possibly due to non sustained detrusor contractions. During evacuation of fragments by the Erlich's maneuver, the pressure intermittently goes to levels of 130 cm H₂O, independent of the types of resectoscope that had been utilized.

The level of intra-vesical pressures during intermittent flow drainage, sometimes over exceeds the suggested pressure in "therapeutic" bladder distension for instance in cases of interstitial cystitis. The significance of a long time resection under 60-70 cm H₂O of intra-vesical pressures and repeated short time pressures over 100 cm H₂O in the post surgical urinary status is still to be determined in further studies. The prolonged bladder distension at high pressures may be involved in cases with urinary retention after endoscopic prostatectomy. It is possible that in geriatric patients with compromised bladder walls, a continuous flow drainage resectoscope should be used and a special care taken during Erlich maneuver for evacuation of fragments.