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VS1-2**Keys of TURP Education****Department of Urology, Tokai University Hachioji Hospital**

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When I first started TURP 25 years ago, one thing Dr. Koshiba told me was that I could do anything except cut an external sphincter, and that I should call him whenever I could no longer handle the job. Now I am in a teaching position as a trainer and I also say the same thing to young surgeons. The difference now is that I can use video to demonstrate exactly how to identify an external sphincter. Upon reviewing the past methods of teaching, I have decided to summarize them using the following four points.

1. **What are the boundaries for the resection?** From the bladder neck to just short of the external sphincter (verumontanum). To identify an external sphincter, you can feel the external sphincter contracting as you slowly push a resectoscope in and out from the bulbar urethra towards the membranous urethra, where the external sphincter is situated, and the verumontanum is located behind it. After using congelation to place a mark slightly to the inside of the external sphincter, the resectoscope is pulled out toward the bulbar urethra, you can see that the mark is hidden under the external sphincter.

2. **What is the depth of the resection?** The answer is until you reach the circular capsular fibers. Circular rugae appear when resecting 1 or 2 layers around the 4 to 8 o' clock positions of the bladder neck. These are circular capsular fibers. Once this layer appears, a resection is performed from the bladder neck to the prostatic apex along the surface. The circular capsular fibers around the bladder neck are relatively easy to identify; they become difficult to identify because they tend to become thinner as they near the apex. Furthermore, it should be noted that the circular capsular fibers, the indicators for the resection, are not flat. The circular capsular fibers appear slightly convex-concave, like a wave, particularly when the bladder is emptied of any irrigating fluid, but when the bladder is filled with irrigating fluid, the circular capsular fibers become flat. If you resect this convex portion assuming that the adenoma still remains, then you risk resecting deeply into the fat tissues and thereby causing a capsular perforation.

3. **Tips for hemostasis** As the best means for dealing with perioperative bleeding, it is important to try to resect by creating a systematic and flat resection surface (i.e. making the resection surface flat through slow and long resection strokes). The strokes tend to be short and fast when you try to resect a large amount too quickly; a better surgeon resects with slower and longer strokes. When confirming the bleeding point, it is easier to find the bleeding point if you hold a resectoscope as close as possible to the point assumed to be the bleeding point after the irrigating fluid in the bladder is emptied. Moreover, if the drainage is still red after a certain degree of hemostasis is obtained, then we recommend a method in which the region for hemostasis in the urethra of the prostatic portion is divided into 4 areas (3 to 12 o' clock, 9 to 12 o' clock, 3 to 6 o' clock and 9 to 6 o' clock) and thereafter the hemostasis in each area should be confirmed.

4. **The mindset of a trainer** Although I always tell surgeons to call me they can no longer manage a job, I will normally take over after about 15 minutes for the first 23 cases performed by a young surgeon and after about 30 minutes for the following 23 cases, and thereafter I will take over whenever requested to do so by the surgeon. However, I actually always monitor operations from behind the window of the operating room every 30 minutes, while making sure not to be noticed. Based on my experience, it tends to be more difficult to perform an operation when a trainer is present.

Conclusion Video systems now play a very large role in educating students about TURP. However, at the same time, there is no better way for us to improve our skills in performing TURP other than experiencing and learning from each case.

VS1-3**Surgical Technique for Holmium Laser Enucleation of the Prostate (HoLEP)****Department of Urology, Kyoto University Graduate School of Medicine**

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Introduction: Transurethral resection of the prostate (TURP) is regarded as the gold standard for treatment of patients with benign prostatic hyperplasia; however, it is associated with significant morbidity rates. Therefore, over the past decade various alternative treatment options such as TULIP, VLAP, ILCP, HoLEP and PVP have been developed. Many of these have been discarded because of their low efficacy, high cost, or long learning curve; however, a substantial number of reports suggest that HoLEP might indeed be a valuable treatment alternative. Some reports though note that a major disadvantage is the perception that HoLEP is a difficult procedure to learn. We offer step by step comments on this surgical procedure as an educational tool for the application of this technique.

Overview: There are two major steps in this surgical technique; enucleation and tissue morcellation. In the former there are many modifications that can facilitate HoLEP.

In the latter, a standard safety technique has already been established. First, the three-lobe technique is suitable as an induction technique. This technique involves initially enucleating the median lobe, followed by the lateral lobes. the technique is applicable whenever there is a significantly large and well-defined median lobe.

The many steps are sequentially described below.

- (i) A vertical incision between 5 and 7 o' clock in front of the verumontanum.
- (ii) Median lobe enucleation.
- (iii) Lateral lobe inferior enucleation.
- (iv) An incision at the 12 o' clock position, and supero-apical attachment incision.
- (v) Lateral lobe superior enucleation.
- (vi) Tissue morcellation