

672

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DIRECT CYSTOSCOPY ASSISTED TENSION-FREE VAGINAL TAPE PROCEDURE

Hypothesis / aims of study

Although tension-free vaginal tape (TVT™, Gynecare) procedure is known as relatively a safe surgical method to manage stress urinary incontinence, a few complications were reported associated with the instrument and procedure.

Among them, bladder perforation is the most common intra-operative or immediate post-operative complication and reported as 3-5% incidence in many centers. Most bladder injuries are developed in the upper lateral wall near bladder dome just before needle is piercing through the rectus fascia. Almost all surgeons use a catheter introducer and carry out an intraoperative cystoscopy after each needle pass of both needle pass to confirm that there's no bladder injury. Although stainless-steel guide wire in the Foley catheter with urethral deviation during advancement of needle may be helpful to prevent bladder injury in conventional TVT procedure, bladder injury including perforation always possible during blind needle passes. To solve this problem, new technique assisted with direct cystoscopic examination during needle advancement was tried and evaluated in respect of safety and time-saving

Study design, materials and methods

70 consecutive stress urinary incontinence patients were enrolled into this study and investigated with direct cystoscopy-assisted procedure. Through 1-2cm anterior vaginal wall incision, a needle was inserted into the ipsilateral paraurethral tissue and retropubic space. Then, cystoscopy was inserted. Urethral deviation with metal stylet-indwelling Foley catheter could omitted in this step. With this cystoscopic examination, direction of needle advancement confirmed under the camera monitoring upward into the suprapubic incision and bladder injury could prevent in all cases. Tape was delivered to the suprapubic area and adjustment was done as a usual manner (1). The same method was applied in contralateral site.

Results

With this direct cystoscopic guidance, urethral deviation with stylet-indwelling Foley catheter to prevent bladder perforation could be omitted and operation time was shortened in average 9.5 ± 1.8 minutes as compared with conventional procedure lasting 25-30 minutes. Bladder perforation was not observed in all procedures.

Concluding message

Under the direct cystoscopic examination, needles could safely advanced into the suprapubic area and there's no need to perform cystoscopy after needle passes. Saving urethral deviation procedure using metal stylet-indwelling Foley catheter to prevent bladder injury, this new procedure could save time at least 10 minutes in every operation.

References

(1) An ambulatory surgical procedure under local anesthesia for treatment of female urinary incontinence. *Int urogynecol J Pelvic Floor Dysfunct* 1996; 7(2): 81-86,