

ASSESSMENT OF STRUCTURAL CHANGES AND COMPLICATIONS IN OBTURATOR FOSSA DUE TO OUTSIDE-IN TRANSOBTURATOR TAPE PROCEDURE USING MRI

Hypothesis / aims of study

Outside-in transobturator tape (TVT-O) procedure for the treatment of stress urinary incontinence (SUI) is performed by the blind needle passage through the obturator foramen. The aim of the study was to determine if structural changes and complications occurred in the obturator fossa from such a blind needle passage, using MRI [1].

Study design, materials and methods

This prospective study included 11 women (mean age 48,8) who underwent TVT-O procedure by the same surgeon, using a commercial sling material for stress urinary incontinence. Pelvic MRI scans were obtained before the procedure and 72 hours postoperatively. All preoperative and postoperative scans were assessed and compared by the same radiologist in terms of the several parameters of anatomical landmarks (urethral length, bladder neck to pubis distance, bladder neck to pubococcygeal line distance), distance from tape to main anatomical structures (bladder wall, obturator pedicles, external iliac vessels, pubococcygeal line, pubis and bladder neck) at the blind passage of the obturator foramen and the changes of the main anatomical structures inside the obturator region [2].

Results

No labioinguinal ecchymosis/ hematoma was found. MRI scans revealed neither hematoma nor collection in the obturator fossa, whereas the signals relating to oedema and bleeding products determined around the external obturator muscle fibers in six patients (four patients bilateral, one patient left and one patient right). No statistically significant changes was found between preoperative and postoperative parameters investigated, except bladder neck to pubococcygeal line distance that was significantly increased postoperatively ($p=0.003$). No patient had a complication. This study was limited in sample sizes and by the lack of dynamic MRI study.

Interpretation of results

TVT-O results in some minor structural changes due to blind needle passage through the obturator foramen without major complications. Also, TVT-O causes bladder neck elevation.

Concluding message

Our MRI study demonstrated that TVT-O, by performing with a blind needle passage, is a safe procedure for the obturator fossa, although minor structural changes occurred during the needle passage. Also, TVT-O causes bladder neck elevation, even if it is considered as a tension-free procedure.

References

1. Mellier G, Mistrangelo E, Gery L, Philippe C, Patrice M. Tension-free obturator tape (Monarc Subfascial Hammock) in patients with or without associated procedures. *Int Urogynecol J Pelvic Floor Dysfunct.* 2007;18 :165-72.
2. Fernandez P, Raiffort C, Delaney S, Salomon L, Carbonne B, Delmas V, Ansquer Y. MRI anatomical study of the outside-in transobturator suburethral tape procedure. *Acta Obstet Gynecol Scand.* 2008;87 :457-63.

Specify source of funding or grant	None
Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	The procedures used in the study were the part of the routine clinical process for such patients
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes