

## PERINEAL APPROACH TO VASCULAR ANATOMY DURING TRANSOBTURATOR CYSTOCELE REPAIR

### Hypothesis / aims of study

A recent anatomic study concerning the Prolift® system demonstrates that medial branch of the obturator vessel may be at risk of injury during the passage of the anterior trocars [1]. We recently experienced a case of major venous hemorrhage during an Anterior Prolift® (Ethicon, Sommerville, NJ, USA) procedure when introducing the left posterior cannula-equipped guide of the device requiring resuscitation and blood transfusion [2]. The aim of our anatomic study is to evaluate the risk of vascular injury during this new procedure by assessing neurovascular anatomy of the obturator area through which the implant is set in a large number of cases.

### Study design, materials and methods

20 obturator regions of 10 fresh cadaveric females were dissected after placement of the Anterior Prolift® cannula-equipped guides. To identify the deep structures of the obturator area, the muscles were sectioned from their bone attachments and reflected or removed. The anatomy of the obturator region was mapped. Distances between needles and neurovascular structures of the obturator area were measured. All measurements were repeated three times and averaged, recorded and pooled on both sides of the anatomical subjects.

### Results

The anterior cannula-equipped needle perforated the gracilis and the adductor brevis muscles. The mean (SD) distance to the anterior obturator vessels was 21.2 (1.6) mm on the right side and 20.4 (1.5) mm on the left. The posterior needle perforated the adductor magnus. Its distance to the posterior division of the obturator vessels was 1.8 (1.0) mm on the right side and 1.1 (0.9) mm on the left.

### Interpretation of results

With the evolution of novel approaches to repair pelvic organ prolapses, a new set of complications may appear. During Anterior Prolift® procedure, the posterior obturator vessels division seems to be at risk of injury because of its location on the course of the posterior cannula-equipped guide [3]

### Concluding message

Surgeons must consider the risk of bleeding when performing cystocele repair by transobturator approach, more especially in patients with history of varicose veins. Further anatomic works are needed to validate current anatomic knowledge of the involved deep obturator area.

### References

1. Chen, C.C., et al., Anatomic relationships of the tension-free vaginal mesh trocars. Am J Obstet Gynecol, 2007. 197(6): p. 666 e1-6
2. Touboul C, Nizard J, Fauconnier A, Bader G. Major venous hemorrhagic complication during transvaginal cystocele repair using the transobturator approach. Obstet Gynecol. 2008 Feb;111(2 Pt 2):492-5
3. Touboul C, Nizard J, Fauconnier A, Bader G. Perineal approach to vascular anatomy during transobturator cystocele repair. Bjog, 2009

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<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>Anatomic study</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>