

## References

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## Prolapse mesh complication: large stone on vaginal mesh extruded in the bladder



Dear Editor,

We found an unusual and severe complication of mesh prolapse surgery we will to report. Synthetic meshes augmentation for pelvic organ prolapse repair by vaginal route has been associated with better anatomical outcomes without improvements in terms of symptoms and quality of life. However their widespread use raised a growing awareness of mesh-related complications which lead in 2011 to FDA warning. These complications include infection, fibrosis, shrinkage and exposure [1,2]. In particular mesh extrusion inside the urinary tract is uncommon and has been mainly related to incorrect suburethral tape positioning (bladder/urethra perforation or submucosal placement) [1]. Chronic contact of a foreign body with urine can

lead to concretion and calculus, which can bring to recurrent urinary tract infections, urgency and bladder pain. Cystoscopy is the gold standard for diagnosis, but also X-ray imaging, MRI or ultrasound can be useful. Interestingly, bladder stone formation has been described for suburethral tapes but very few reports are reported after vaginal mesh augmentation for pelvic prolapse [3,4]. The treatment consists of the surgical removal of the calculus with the extruded portion of the mesh. This goal can be obtained through open cystotomy, laparoscopic/robotic route or endoscopic approach. The aim of this report is to present iconography of this rare mesh-related complication.

The presented case is a 72-year-old lady was referred to the surgical outpatient clinic with recurrent urinary tract infections, bladder pain and overactive bladder syndrome for six years. Ten years before she had a vaginal hysterectomy with anterior mesh-augmented repair. On examination, no vaginal exposure was found. Urodynamic evaluation showed a detrusor overactivity associated to urge incontinence. Pelvic floor ultrasound demonstrated anterior vaginal wall mesh extruded in the bladder from the retrotrigonal region, with stone developed on the eroded mesh measuring 30 mm in its larger diameter (Supplemental Material 1). Cystoscopy confirmed a large stone attached to the mesh extruded in the bladder posteriorly to the inter-ureteric ridge (Fig. 1; Supplemental Material 2). Surgical management was required in order to remove the mesh-stone complex and relief patient's symptoms (due to complexity and stone dimension an open abdominal approach was chosen). This report is meant to rise awareness against this unusual mesh related complication.

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## Contribution to authorship

- S. Manodoro: project development, manuscript writing.
- C. Reato: project development, manuscript writing.
- A. Cola project development, manuscript writing.
- S. Palmieri project development, manuscript writing.
- M. Frigerio project development, manuscript writing.

## Consent

Written informed consent was obtained from the patient for publication of any accompanying images.

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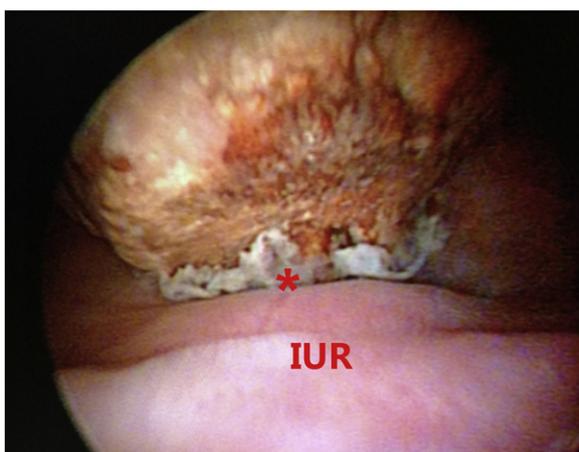
None.

## Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.ejogrb.2019.02.012>.

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**Fig. 1.** Cystoscopic view - focus on extrusion site. Mesh erosion is located posteriorly to the interureteric ridge (IUR). In the point of extrusion mesh tissue can be identified (marked with \*). IUR = inter-ureteric ridge, \* = point of extrusion of the mesh inside the bladder.

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