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# Inflatable penile prosthesis malfunction after prostatic urethral lift

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ABSTRACT

We report a case of malfunction of an inflatable penile prosthesis (IPP) after prostatic urethral lift (PUL) necessitating surgical intervention. A 70 year-old male underwent PUL for benign prostatic hyperplasia after IPP implant for organic erectile dysfunction. After PUL, the patient experienced IPP malfunction where he underwent subsequent IPP removal and replacement. A pinhole defect was noted in the reservoir upon removal attributable to PUL. Performing PUL before IPP implantation should be considered in light of potential iatrogenic PUL needle deployment injury.

## Introduction

Prostatic urethral lift (PUL) is a minimally invasive surgical technique used to treat lower urinary tract symptoms (LUTS) attributed to benign prostatic hyperplasia (BPH). Guidelines for PUL were most recently released by the American Urological Association in 2020. Rather than removing or ablating prostatic adenoma to treat BPH, PUL deploys transprostatic suture implants designed to compress the lateral lobes of the prostate. PUL has been utilized over the past ten years; however, no complications have been described in relation to inflatable penile prosthesis (IPP). We report the first malfunction of IPP secondary to PUL.

## Case presentation

A 70 year-old male underwent implant of an American Medical Systems (AMS) (Minnetonka, MN, USA) 700 CX IPP for organic erectile dysfunction with a 65cc-filled reservoir placed in the space of Retzius. In the postoperative period, the patient failed to respond to alpha blockade and finasteride for LUTS attributed to BPH. During 8 months of medical management, he was greatly bothered by symptoms of bladder outlet obstruction refractory to medication and sexual dysfunction (retrograde ejaculation) related to medication side effects. Cystoscopic evaluation ruled out a significant median lobe component. Eighteen months after IPP implantation, he underwent PUL for BPH. A total of 7 PUL implants were used: the most proximal implant conventionally placed 1.5cm distal to the bladder neck. Two weeks postoperatively, the patient had improved LUTS, post void residual, and uroflowmetry rate. Two months later, the patient experienced early IPP malfunction (within 20 months of implantation) necessitating surgical intervention. Thereafter, the patient underwent subsequent IPP removal and replacement via a penoscrotal approach. On evaluation of the removed device, cylinders, tubing, and pump were intact but a defect in the reservoir was noted (Fig. 1).

## Discussion

To our knowledge, we report the first malfunction of IPP secondary to PUL. PUL can be offered to patients with LUTS attributed to BPH with a prostate volume less than 80 cc and verified absence of an obstructive median lobe while preserving erectile and ejaculatory function.[1] The efficacy of this surgical technique has been evaluated in prospective, randomized, blinded control trials with 2–5 year data yielding promising functional outcomes and an acceptable side effect profile.[2,3]

IPP reservoirs are traditionally placed in the space of Retzius, next to the lateral lobe of the prostate, which is an area that can be compromised with prior pelvic surgery.[4] When performing PUL, after compressing the lateral prostatic lobe, a 19-gauge needle is fired through the lateral prostatic lobe and prostate capsule in order to deploy the lateral anchor of the permanent transprostatic suture implant. Although other reservoir-related complications have been described, none have been reported in relation to PUL.[5] We hypothesize the needle utilized to deploy the implant and anchor injured the IPP reservoir in the space of Retzius (Fig. 2). Most likely, the reservoir was pierced by the tip of the needle only, leaving the lateral anchor of the transprostatic suture implant between the reservoir and prostate. When the needle retracted,

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**Fig. 1.** Injured inflatable penile prosthesis reservoir.

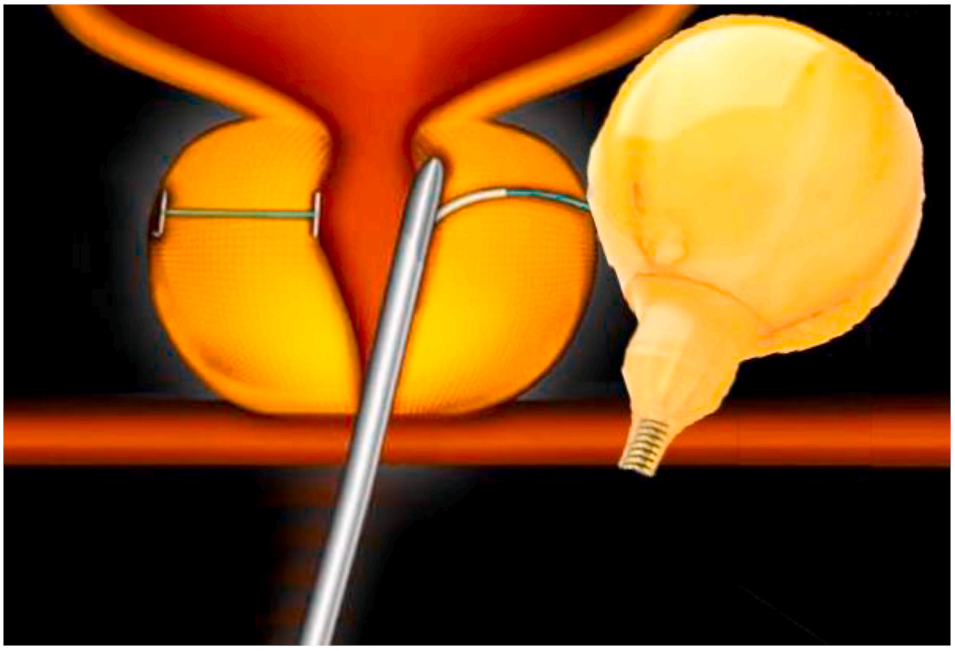

**Fig. 2.** Proposed etiology of reservoir injury.

the anchor was pulled out of the reservoir before its hook caused it to deploy against the prostate capsule. In conclusion, performing PUL before IPP implantation should be considered in light of potential iatrogenic PUL needle deployment injury.

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