

## Oncology

## Management of Anastomosis Leakage Post-RALP: A Simple Trick for a Complex Situation



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## ABSTRACT

A case of 74 years old male patient who underwent RALP with bladder neck reconstruction. Persistent vesicourethral anastomotic leak was seen at cystography. A self-made side fenestrated Foley catheter was used and on the day after, a complete reversal in fluid output between the Foley catheter and the drain was seen.

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## Introduction

It is a case of a patient with prostate adenocarcinoma treated by robotic assisted laparoscopic prostatectomy. Bladder neck reconstruction was performed during surgery. Post-operatively patient developed an important leak at the level of the vesicourethral anastomosis. Replacing the Foley catheter by a fenestrated one allowed a complete resolution of the leak without the need of further interventions.

## Case report

71 years old male patient known to have a prostate adenocarcinoma Gleason 8 (4 + 4), PSA at 12.5 ng/mL, cpT3a with negative metastatic work-up. Briganti score is 182. Decision of robotically assisted laparoscopic prostatectomy (RALP) with extended pelvic lymph node dissection.

During the procedure Rocco stitch closure was used with Stratafix 3.0 Spiral PGA-PCL Knotless Tissue Controled Device, 17 mm, ½ Circle Taper Point, RB-1. To note that, the presence of an important median lobe force us to do a larger resection at the bladder neck resulting in having ureteral orifices which are in close proximity to the limit of resection. So posterior bladder

neck reconstruction (“Tennis racket”) was performed with a new Stratafix leading to further approximation of the ureteral orifices to the median axis. At a later stage, vesicourethral



Figure 1. Anastomosis leakage at cystography.

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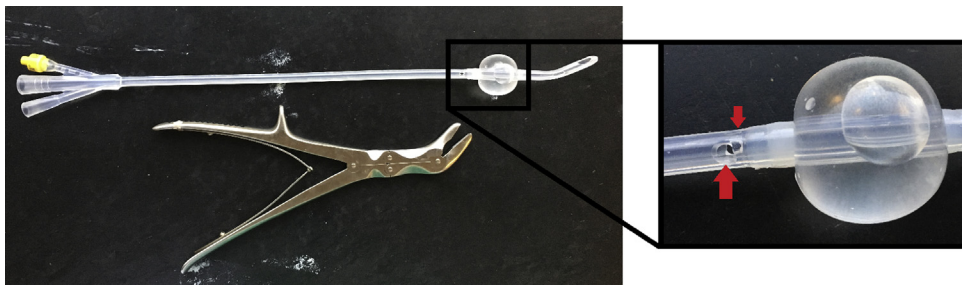


Figure 2. Side fenestrated Foley catheter with Gouge forceps.

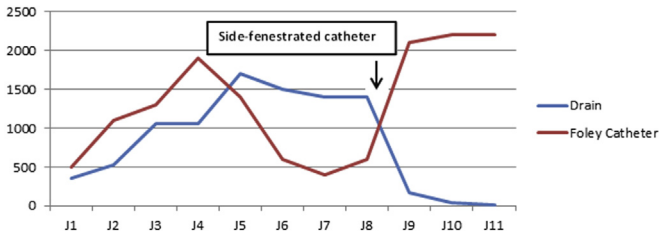


Figure 3. Fluid output (cc) per day into the drain and Foley catheter.

On the day after the procedure of changing the catheter by a fenestrated one, we already had a complete reversal in fluid output between the Foley catheter and the drain (Fig. 3).

For confirmatory purposes, liquid obtained from the drain was sent for analysis revealing a serous component with no urine (Urea = 37 mg/dL, Creatinine = 0.92 mg/dL).

Drain was removed the following day and patient was discharged with the Foley Catheter that was eventually removed 1 week later after another cystography.

**Discussion**

To our knowledge, the first use of a fenestrated catheter was by Turner-Warwick who suggested that it could decrease the risk of stricture post-urethral trauma and allow better drainage of the periurethral collection.<sup>1</sup>

By extrapolation, it was suggested to use this method for decreasing anastomotic leak following prostate surgery.

Management of vesicourethral anastomotic leak post-RALP with the use of a side fenestrated Foley catheter proved to be a simple yet efficient method which was described in the literature by Riikonen. By comparing a randomized subgroup of patients with a classic Foley catheter (106 patients) against another with fenestrated ones (108 patients), a statistically significant difference was found in the rate of urinary leakage.<sup>2</sup>

In our case, theoretically the presence of ureteral orifices in close proximity to the anastomosis and with the median axis deviation

anastomosis was performed using the van Velthoven technique. At the end of the procedure, an injection of 200 cc normal saline injection confirmed the presence of a water tight anastomosis.

Post-op patient was recovering well but we had persistent evidence of an anastomotic leak manifested by the presence of an important amount of fluid in the drain and a decreased urine output through the Foley catheter.

Cystography was done (Fig. 1) and the fluid was sent for analysis confirming it was urine (Urea = 575 mg/dL, Creatinine = 50.45 mg/dL).

As the correct positioning of the Foley catheter was confirmed, we expected an eventual decrease in leakage with time and the self-healing of the vesicourethral anastomosis. Few days later a mobilization of the drain didn't yield any different output.

On day 9 post-op, we decided to change the indwelling Foley catheter by another one of same dimension but with self-made fenestrations directly below the level of the balloon with a Gouge forceps (Fig. 2).

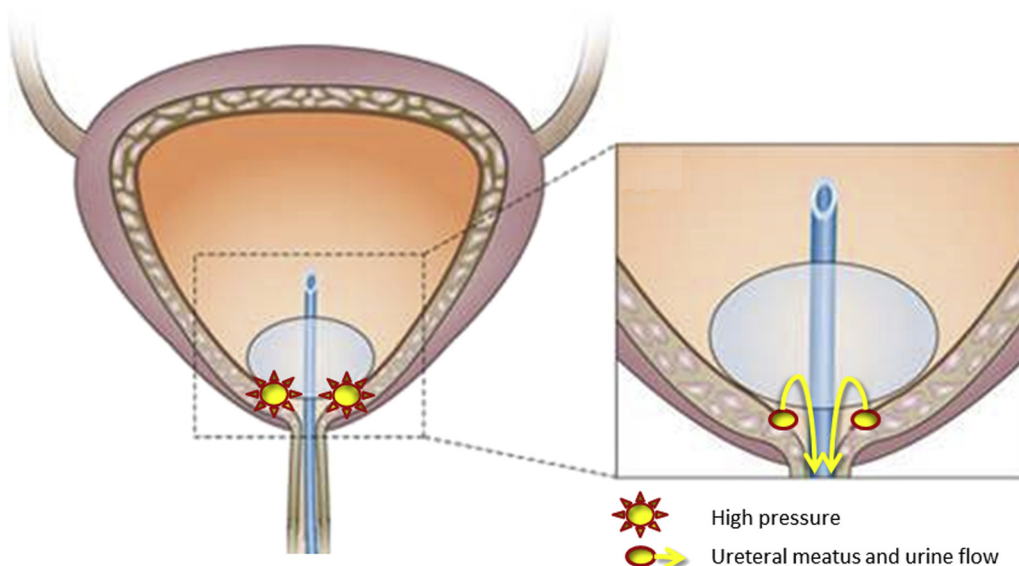


Figure 4. Increased pressure due to the Foley balloon and benefit of side fenestrated Foley catheter.

due to the performance of a posterior racket, can lead to increased pressure by the Foley balloon on this area therefore an increased risk of urinary leak through the anastomosis (Fig. 4). This method have been known to our institute for nearly 2 decades and actually imagined by Dr Peltier since open radical prostatectomy days. We observed a systematic resolution of urinary leak when the fenestrated catheter was placed additionally absence of leak was noted whenever this catheter was placed intra-operatively for appropriate cases.

To note that anastomotic leak can have repercussions on the patient with ileus, urinoma collection, increased risk of strictures and prolonged incontinence in addition to the need of surgical intervention in selected cases when the leak is persistent.<sup>3,4</sup>

This method is simple, safe and cost effective and can be used when facing the case of ureteral orifices which are in close proximity to the vesicourethral anastomosis and median axis. It allows to avoid the complications cited above.

## Conclusion

The use of a side fenestrated catheter is a simple, fast yet efficient method of managing post-prostatectomy leak. It actually

allows the surgeon to avoid the need for another surgical intervention.

## Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this paper, no funding or other financial support were received.

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