

Resection of a large endometriotic nodule of the bladder using a combined laparoscopic and cystoscopic approach (“light to light technique”)

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Abstract

Bladder endometriosis is uncommon yet a cause of cyclical disabling urinary symptoms. Surgical excision of the bladder endometriotic nodule using combined cystoscopic and laparoscopic approach (“light to light technique”) remains the best approach where surgery is deemed the mode of treatment. A 31-year-old infertile woman underwent resection of endometriosis of the bladder by this method. The main surgical steps included ureteric stenting, bladder mobilization, marking the endometriotic nodule cystoscopically, cystoscopic transillumination, completion of the bladder nodule excision laparoscopically and bladder repair.

Key words: bladder endometriosis, cystotomy, deep infiltrating endometriosis, collins knife

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Introduction

Endometriosis affects 15-20% of women in the reproductive age group. Endometriosis of the urinary tract occurs in about 1-2% of women of which the bladder is the most frequently involved organ.

Case report

A 31-year-old housewife from Puttalam presented with primary infertility, dyspareunia, dysmenorrhea, dyschezia and bladder pain. The most significant feature was severe pain during micturition which

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Case report

increased during menstruation. Her quality of life was significantly affected.

Examination revealed deep infiltrating endometriosis involving the utero sacral ligaments, rectovaginal septum, with palpable nodules in the pouch of Douglas. The uterus was fixed and ante-verted.

Ultrasound scan revealed a 2.2cm diameter mass in the bladder suggestive of an endometriotic deposit (Figure 1) without hydro-nephrosis or hydro-ureter.

Pre-operative colonoscopy demonstrated normal rectum and bowel, while cystoscopy showed a lobulated lesion arising from the posterior bladder wall just superior to the inter-ureteric ridge.



Figure 1. **Transvaginal ultrasound scan image of bladder endometriotic nodule (Circled).**

Surgery

Cystoscopic guided bilateral ureteric stenting was performed initially. Clearance of deep infiltrating endometriosis was performed next. The uterus which was densely adherent to the bladder was released. These adhesions were holding the uterus in ante-version.

Bladder was dissected off the uterus by entering the utero-vesical space. Bladder mobilization was achieved by opening in to the Retro-pubic space.

Concomitant cystoscopy was performed to identify the margins of the endometriotic nodule. The resection line was marked on the mucosa of the bladder using a pointed bipolar diathermy probe (Collin's knife). The groove was deepened in to the detrusor muscle until

the peritoneal cavity was opened at the superior aspect of the bladder nodule (Figure 2). This step was aided by cystoscopic trans-illumination and concomitant direct laparoscopic vision.

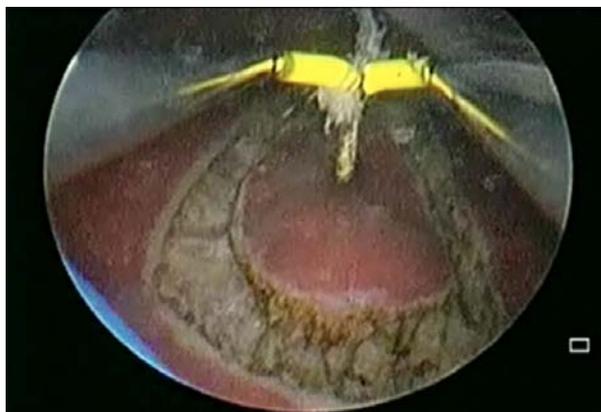


Figure 2. **Cystoscopic partial resection of bladder endometriosis nodule using Collin's knife.**

Bladder was opened using laparoscopic monopolar diathermy at the point of cystoscopic puncture and the endometriotic nodule was completely excised laparoscopically along the groove created by the Collins knife (Figure 3). Primary repair of the bladder was done using 2.0 PDS barbed suture. The ureteric stents were important to identify the ureteric orifices so as to prevent injury during bladder repair.



Figure 3. **Completion of resection of bladder endometriotic nodule laparoscopically.**

A three-way urinary catheter was inserted and kept for three weeks.

Post-operative X ray confirmed correct stent placement and one week of broad-spectrum IV were followed by oral antibiotics. Patient had an uneventful recovery. Ureteric stents were removed after three weeks.

Discussion

Bladder endometriosis is amenable to both medical and surgical management. Surgical excision of bladder endometriosis was the preferred treatment modality over hormonal suppression in this case as she had widespread endometriosis with fertility wishes.

Bladder endometriosis resection is best performed by combined cystoscopic and laparoscopic approach originally described by Seracchioli et al¹. This allows identification of the resection margins for complete excision of the lesion and allows for optimal repair of the bladder defect. It's a safe and a feasible option in experienced hands. Similar technique has been reported in a case report in Australia² and Brazil in a case series of 25 patients³ where the average surgical time was 137 minutes, with no relapse over 32 months of average follow up. This is the first reported case in Sri Lanka of this method.

References

1. Seracchioli R, Mannini D, Colombo FM, Vianello F, Reggiani A, Venturoli S. Cystoscopy-assisted laparoscopic resection of extramucosal bladder endometriosis. *J Endourol* [Internet]. 2002 Nov [cited 2020 Mar 22]; 16(9): 663-6. Available from: <http://www.liebertpub.com/doi/10.1089/089277902761403014> (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5293388/>)
2. Pontré JC, Yin JMA, Brown B, Karthigasu K, McElhinney B. Case report and surgical video presentation: Combined laparoscopic and cystoscopic partial bladder cystectomy for excision of deeply infiltrating endometriosis. *Ann Med Surg*. 2018; 35: 173-5. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6180305/>)
3. Stopiglia RM, Ferreira U, Faundes DG, Petta CA. Cystoscopy-assisted laparoscopy for bladder endometriosis: Modified light-to-light technique for bladder preservation. *Int Braz J Urol*. 2017; 43(1): 87-94. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5293388/>)