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**Case Report**

# Cystocele management in multisurgical patients: a comprehensive case report emphasizing advanced diagnostic and surgical precision

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## ABSTRACT

Pelvic organ prolapses (POP), particularly cystocele, presents significant challenges in postmenopausal women, exacerbated in those with multiple caesarean sections (LSCS) and comorbidities like diabetes mellitus. This case report details the successful management of a 62-year-old woman with a large cystocele, three LSCS, and diabetes mellitus. Thorough preoperative evaluation, including ultrasound and diagnostic laparoscopy, guided surgical planning. Anterior colporrhaphy restored support to the anterior vaginal wall. Perioperative care included strict glycemic control and antibiotic prophylaxis. Multidisciplinary collaboration ensured comprehensive management. This case highlights the importance of advanced diagnostics, meticulous surgical planning, and multidisciplinary care in complex cystocele cases.

**Keywords:** Cystocele, Caesarean sections, Diabetes mellitus, Multidisciplinary collaboration, Pelvic organ prolapse, Surgical planning

## INTRODUCTION

Pelvic organ prolapse (POP) is a prevalent condition among postmenopausal women, characterized by the descent of one or more of the pelvic organs, resulting in a bulge in the vaginal wall.[1] POP can significantly impair the quality of life due to symptoms such as vaginal bulging, pelvic pressure, urinary incontinence, and difficulties with bladder emptying. Among the various types of POP, cystocele, which involves the bladder prolapsing into the anterior vaginal wall, is one of the most common. The etiology of cystocele and other forms of POP is multifactorial, involving factors such as childbirth, particularly multiple vaginal deliveries, aging, menopause, and conditions that increase intra-abdominal pressure like chronic cough, obesity, and constipation. The weakening of the pelvic floor muscles and connective tissues, exacerbated by the loss of estrogen post-menopause, plays a critical role in the development of POP.[2,3]

Management of cystocele ranges from conservative measures, such as pelvic floor muscle training and pessary use, to surgical interventions for more severe cases. Surgical options include anterior colporrhaphy, the use of mesh, and minimally invasive techniques, each with its own indications, benefits, and potential complications. The choice of treatment is influenced by the severity of symptoms, the degree of prolapse, patient comorbidities, and patient preference.[4,5]

In patients with a history of multiple caesarean sections, the management of cystocele presents additional challenges. Scar tissue from previous surgeries can alter pelvic anatomy, making surgical intervention more complex.[6] Additionally, comorbid conditions such as diabetes mellitus, which is common in the aging population, can complicate both surgical outcomes and recovery, necessitating careful preoperative planning and perioperative management.

This case report discusses the presentation, diagnosis, and management of a 62-year-old woman with a large cystocele, a history of three lower segment caesarean sections, and diabetes mellitus. It underscores the importance of thorough preoperative evaluation and individualized surgical planning in managing complex cases of POP. Diagnostic tools such as ultrasound and laparoscopy can be invaluable in visualizing altered pelvic anatomy and guiding surgical intervention. The successful management of such complex cases relies on a detailed understanding of pelvic anatomy, meticulous surgical technique, and comprehensive perioperative care to address potential complications and ensure patient safety.

## CASE REPORT

A 62-year-old female, para, presented to the gynaecology outpatient department with a longstanding complaint of a bulging mass from the vagina over the past decade.[3] She described the mass as progressively increasing in size and accompanied by sensations of heaviness and pressure in the pelvis, along with difficulty in completely emptying her bladder. The patient had a notable obstetric history, including three previous lower segment caesarean sections (LSCS), with the most recent one occurring 30 years ago. Additionally, she had been menopausal for 12 years and had a known diagnosis of diabetes mellitus for several years. On physical examination, the patient appeared well-oriented with stable vital signs. Abdominal examination revealed a well-healed vertical scar, indicative of her previous LSCS, with no palpable abdominal masses. Pelvic examination revealed a large cystocele protruding beyond the introitus, exacerbated upon Valsalva manoeuvre, indicating significant anterior vaginal wall prolapse. Notably, the cervix was not visualized, being highly pulled up and obscured from direct observation. There were no discernible signs of pelvic organ prolapse involving the uterus or posterior compartment.

**Figure 1: Showing uterus adherent to anterior abdominal wall.**

Investigations, including a normal urinalysis and pelvic ultrasound, confirmed the presence of a cystocele and revealed an elevated cervix with no additional pelvic pathology. Given the challenge posed by the non-visualization of the cervix, diagnostic laparoscopy was performed to locate the cervix and uterus. The procedure revealed an atrophic uterus adherent completely to the anterior abdominal wall, with the cervix highly pulled up (Figure 1). The cervix was carefully pulled down and identified. Subsequently, the patient underwent anterior colporrhaphy to repair the cystocele. During the procedure, the vaginal wall was incised, and dissection was performed to separate the bladder from the vaginal epithelium. The pubocervical fascia was then plicated in the midline to restore support to the anterior vaginal wall, excess vaginal mucosa was trimmed, and the incision was closed with absorbable sutures.

Postoperative care included close monitoring for urinary retention and voiding difficulties, with a Foley catheter placed and removed after 48 hours once normal voiding resumed. Pain management consisted of NSAIDs and paracetamol, while antibiotic prophylaxis was administered to prevent infection. The patient had an uneventful recovery and was discharged on the fourth postoperative day. This case underscores the importance of meticulous surgical planning and adaptation in addressing complex pelvic organ prolapse, particularly in patients with obscured anatomical landmarks. Collaboration between gynaecological and surgical teams, along with advanced diagnostic techniques, ensured successful management and favourable outcomes for the patient.

## DISCUSSION

Pelvic organ prolapse (POP) significantly impacts the quality of life for many postmenopausal women. Cystocele, a type of POP involving the bladder prolapsing into the anterior vaginal wall, is particularly prevalent and can present unique challenges in management, especially in patients with a history of multiple caesarean sections (LSCS) and comorbidities such as diabetes mellitus. Effective management of cystocele requires a comprehensive and multifaceted approach. A critical component of successful treatment is the thorough preoperative evaluation of the pelvic anatomy. Advanced diagnostic techniques, such as ultrasound and diagnostic laparoscopy, are essential tools. Ultrasound allows for non-invasive visualization of the prolapse and assessment of the surrounding pelvic structures, providing valuable information for surgical planning.[6] Diagnostic laparoscopy is particularly beneficial in patients with a complex surgical history, such as those with multiple LSCS. It offers a direct view of the pelvic cavity, helps in identifying adhesions, and assists in mapping out a precise surgical approach. Individualized surgical planning is paramount in addressing the unique anatomical challenges posed by previous surgical interventions and associated comorbidities.[7] In this case, the patient's history of LSCS and the resulting scar tissue significantly altered the pelvic anatomy, making the surgical repair more complex. During the surgical procedure, careful dissection was necessary to avoid damaging the bladder and other pelvic structures. The use of anterior colporrhaphy, which involves plication of the pub cervical fascia, has been shown to be effective in restoring support to the anterior

vaginal wall and reducing the recurrence of prolapse.[8] Management of comorbid conditions, such as diabetes mellitus, is also crucial in optimizing surgical outcomes. Diabetes can impair wound healing and increase the risk of postoperative infections, which necessitates careful perioperative management. In this case, strict glycaemic control and appropriate use of antibiotic prophylaxis were essential to prevent complications and ensure a smooth recovery. The importance of a multidisciplinary approach in managing complex POP cases cannot be overstated. Collaboration between gynaecologists and endocrinologists ensures comprehensive care. This multidisciplinary strategy addresses not only the anatomical and surgical challenges but also the patient's overall health status, including managing comorbid conditions. Studies have shown that multidisciplinary care models improve patient outcomes by facilitating better communication and coordination among healthcare providers.[9,10]

## CONCLUSION

The management of severe cystocele in patients with a history of multiple caesarean sections and other comorbidities requires a comprehensive and tailored approach. This case report adds to the existing knowledge by demonstrating the successful use of advanced diagnostic techniques and meticulous surgical planning in managing complex POP cases. The positive outcome in this case underscores the importance of a multidisciplinary and patient-centered approach in achieving optimal results for patients with challenging pelvic organ prolapse.

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