

## THE BOLOGNA PROCEDURE FOR THE TREATMENT OF CYSTOCELE IN ASSOCIATION WITH STRESS URINARY INCONTINENCE

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### ABSTRACT

Cystocele may occur in association with stress urinary incontinence, being therefore the simultaneous correction of both defects needed.

The purpose of this study is to describe the Bologna procedure, which utilizes two flaps taken from the anterior vaginal wall to create a urethral backboard support, by attaching them to the aponeurosis of the rectus abdominal muscle.

**Key words:** bladder; cystocele; urinary incontinence, stress; reconstructive surgical procedures  
**Braz J Urol, 28: 140-142, 2002**

### INTRODUCTION

Cystocele associated with stress urinary incontinence (SUI) is very common (1). The incontinence appears in the postoperative of approximately 6% of the patients who undergo some pelvic prolapse correction (1). This happens mainly because severe cystoceles can produce an obstructive component that hides an associated subclinical stress urinary incontinence. More than 100 techniques have been described for the treatment of stress urinary incontinence (2). One of these surgeries was proposed in 1974 by Umberto Bologna, and allows a simultaneous correction of the cystocele and the SUI. Bologna's procedure involves the use of two flaps that are taken from the anterior vaginal wall and anchored to the abdominal muscles fasciae (3). This procedure uses autologous material that reduces costs and risk of rejection. Hence, the description of this technique, which is not often used in urological practice, is justifiable.

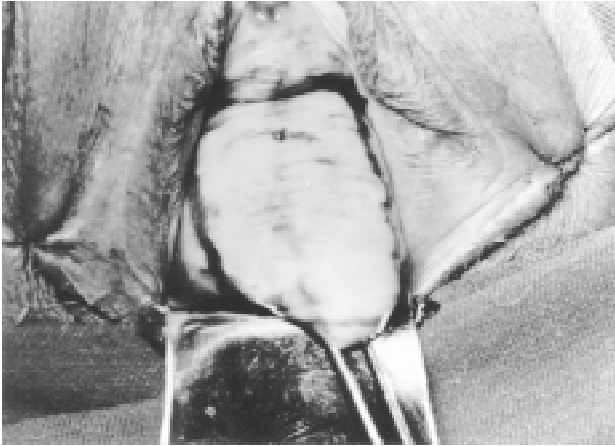
### SURGICAL TECHNIQUE

The preoperative care includes a detailed examination of the vagina in order to exclude pos-

sible pre-malignant or metaplastic lesions in the anterior vaginal wall due to recurrent trauma resulting from the eversion of the vaginal canal.

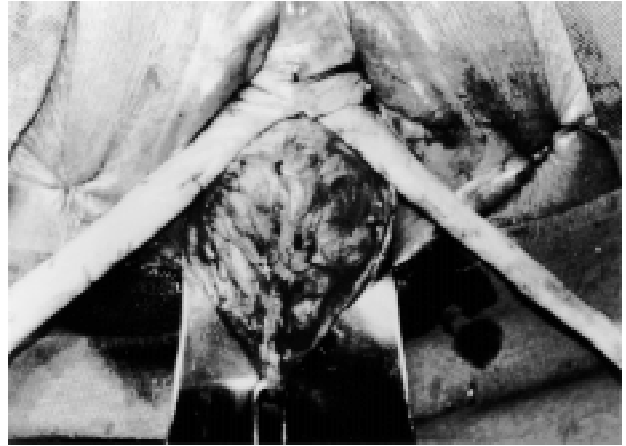
A Pozzi clamp is used to repair the cervix. If there is no contraindication, the vaginal wall can be infiltrated with a solution containing vasoconstrictor (adrenaline 1%) to facilitate dissection and reduce intraoperative bleeding. A transversal incision is performed near the cervix extending up longitudinally in the anterior vaginal wall 2 cm of the urethral meatus (Figure-1). The pubocervical fascia is dissected with a Metzenbaum scissors. Two 20-mm-wide strips and with a length that depends on the size of the anterior colpocele are prepared from the median incision (Figure-2). Care is taken to make sure that the base of the strips is not narrowed as this could cause their rupture. The defects observed in the pubocervical fascia are then corrected and should include the central plicature (Kennedy's anterior colporrhaphy) and the correction of any associated defects of the lateral approximation of pubocervical in the tendinous arc of pelvic fasciae (a transvaginal paravaginal repair).

A 5-cm-length suprapubic incision is made. The extremities of the flaps are repaired with 2-0 polypropylene sutures (Figure-3) and are transposed



**Figure 1** - Vaginal wall incisions demarcated.

through the space of Retzius using an endoscopic suspension needle. After adjusting the flaps so that no tension on the bladder neck is applied, the extremities of the threads are sutured to each other and supported on the aponeurosis of the rectus abdominal



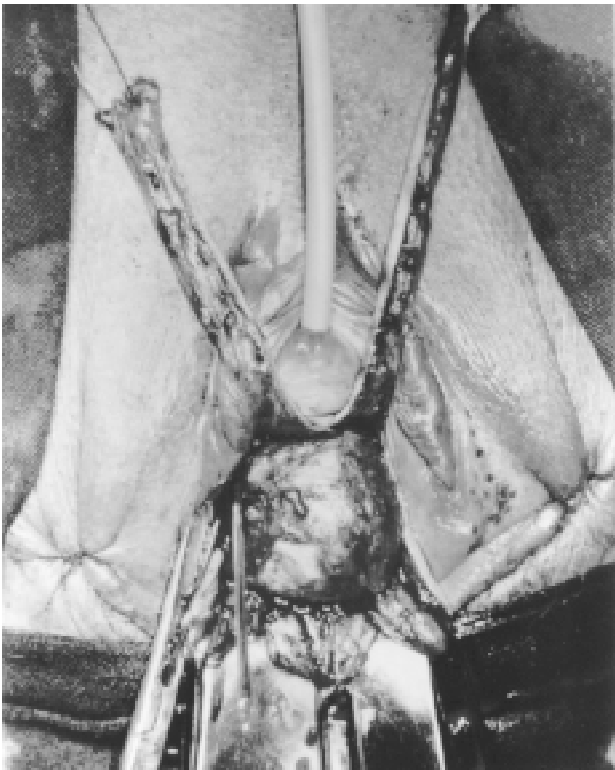
**Figure 2** - Appearance of the cystocele with the dissected vaginal wall flaps.

muscle. At the end of the procedure the redundant vaginal wall is excised and the edges are closed with absorbable sutures of chromic catgut 3-0 (Figure-4). The patient is maintained with a Foley catheter and cephalosporin based antibiotic prophylaxis for 48 hours.

### COMMENTS

In this technique, the cystocele and SUI are corrected with 2 pediculated vaginal tapes that are attached to the aponeurosis of the rectus abdominal muscle to create a backboard support to the bladder neck and proximal urethra.

Studies have been presented suggesting that patients who are at the postmenopausal period and



**Figure 3** - Transposition of polypropylene threads to the suprapubic region using endoscopic needle.



**Figure 4** - Final aspect after cystocele correction and with the vaginal mucosa tapes in position.

without hormone therapy should use topical estrogen a few weeks before the surgery to improve the vaginal mucosa tropism (1).

The reported complications related to this procedure are bladder lesions (6%), urethral hypercorrection due to short tapes, abdominal wall infection and acute postoperative urinary retention (17%) (2). The results vary, and according to some authors the success rate is about 85-95% (4).

This technique is especially indicated when the vaginal tissue is abundant and the tropism of the vaginal mucosa is adequate, which makes it a good option for surgeons who are dedicated to the treatment of cystocele associated with SUI.

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*Received: November 23, 2001*

*Accepted after revision: March 1, 2002*

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## EDITORIAL COMMENT

The purpose of this manuscript is to review an anti-incontinence procedure that combines addressment of anterior prolapse. Through this description, the potential is raised for future usage of this technique. The operation as described addresses cystocele (anterior repair) more than enterocele and

rectocele. The pictures are excellent and provide a strong point of the article.

The article does not contain any new facts such as a description of a clinical experience of this use in the author's hand, but does re-describe a procedure that has possible use in the area of readership.

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