Transvaginal Ultrasonographic Findings in a Case of Cystocele after Laparoscopic Burch Colposuspension

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BRIEF HISTORY

A 65-year-old woman, gravida 3, para 2, had undergone laparoscopic assisted vaginal hysterectomy, laparoscopic Burch colposuspension and posterior colporrhaphy for uterine prolapse with uterine fibroids, urodynamic stress incontinence and rectocele, respectively, 30 months previously. The postoperative course was uneventful. In the previous month, she experienced urinary frequency, urgency and a lump in the vagina.

CLINICAL EXAMINATION

On vaginal examination, the points of Aa, Ba, and C on the POP-Q system were -2.0 cm, -1.0 cm and -5.0 cm, respectively. Urinalysis showed mild leukocytosis (WBC count was of 5-10/HPF).

ULTRASONOGRAPHY

Transvaginal ultrasonography demonstrated that the bladder neck was anteriorly and superiorly elevated toward the pubic symphysis (Fig. 1A). On a Valsalva maneuver, there was a protrusion of the bladder base extending downward along the plane of the anterior vaginal wall (Fig. 1B). A three-dimensional axial view revealed protrusion of the bladder base interposed between the anterior vaginal wall and urethra (Fig. 2).

COMMENT

Clinically, cystocele is defined as a bulging anterior vaginal wall with overhanging bladder demonstrable during a pelvic examination. It is common and not specific for any particular bladder anomaly. Morphologically, a cystocele with open or wide retrovesical angle on stress is usually associated with severe anterior vaginal wall prolapse, whereas a cystocele with an intact or narrow retrovesical angle, a high cystocele, is commonly recognized after bladder neck suspension procedures.

Persistent cystocele after a Burch procedure may imply a pre-existing defect that was not corrected by the procedure. A persistent cystocele may also be an effect of the realignment of the bladder neck and bladder base anatomy by a colposuspension ridge following a Burch procedure [1]. Thus there may be more deformation of the trigone and posterior bladder than before. Prolapse or descent of the bladder base may then be relatively more perceptible or even aggravated postoperatively. It has also been reported that a cystocele with an in-

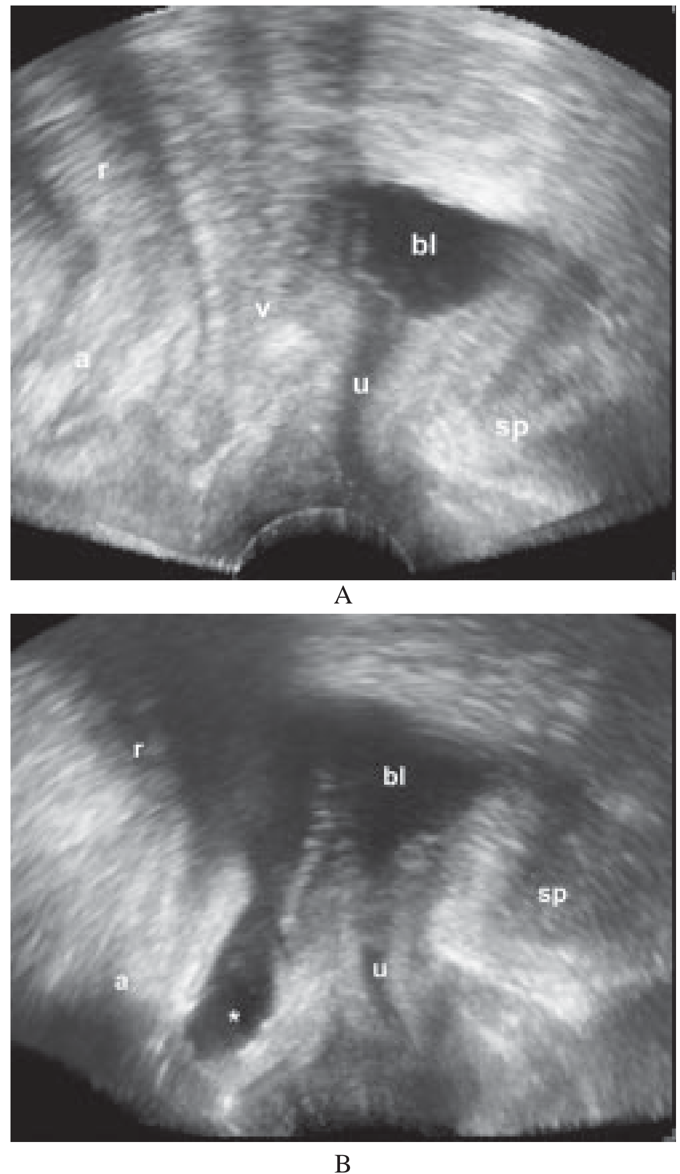

Fig. 1. (A) Mid-sagittal view at rest showing the bladder neck is elevated in the anterior and superior directions toward the pubic symphysis (sp). (B) Mid-sagittal view during stress showing a protrusion of the bladder base (*) extending along the plane of the anterior vaginal wall. There is an inferior-posterior motion of the bladder neck. The configuration of the bladder (bl) in the anterior and superior aspects is generally not changed when compared with the resting image (A). (sp: pubic symphysis; u: urethra; v: vagina; a: anal canal; r: rectum)

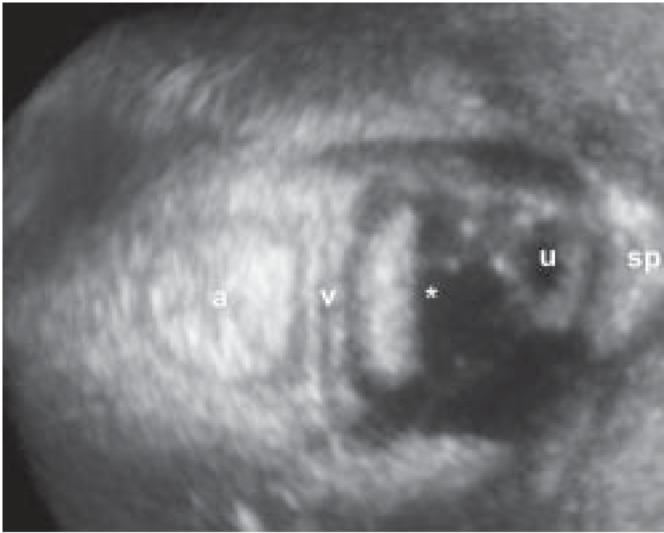

Fig. 2. Three-dimensional axial view showing protrusion of the bladder base (*) interposed between the anterior vaginal wall and urethra (u). The configuration of the urethra is not changed by the protruding cystocele. (sp: pubic symphysis; v: vagina; a: anal canal)

tact retrovesical angle suggests a central defect of the endopelvic fascia.

In our previous study [1], a weak association was found between the uterine suspension procedure and non-appearance of postoperative cystocele. Correction of uterine descent by plication of the bilateral uterosacral ligaments may, in some cases, revise the concomitant central defect of a cystocele. We are presently investigating this issue.

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