Chapter 34
Prolapse Pessary Tests

Urodynamic testing with and without pessaries or other vaginal supports are necessary to evaluate patients who have genital prolapse and associated urethral hypermobility even if they do not complain of urinary stress incontinence. This is particularly important since the prolapse may protect the patient from stress incontinence by a mechanical kinking effect in the urethra during periods of elevated intra-abdominal pressure from coughing or other activities (Chapter 28). Certain patients may apparently develop stress incontinence following surgical repair of their genital prolapse if sufficient attention is not paid to providing permanent support to the urethrovaginal junction. Urodynamics with a pessary or other vaginal support is designed to simulate, in the urodynamics laboratory, the surgical correction of genital prolapse without resupporting the bladder neck. Urodynamic evaluation of these patients with and without support of their genital prolapse provides information on urethrovesical function which may guide the surgeon in selecting the most appropriate surgical procedure for that particular patient.

34.1 Urodynamic Study Without Pessary

In the example in Fig. 34.1 urethral closure pressure profiles are performed at maximum cystometric capacity while at rest, during rectal squeeze, urethral squeeze, Valsalva and repetitive coughing as previously described (Chapters 15–17). This patient was a 54-year-old mother of two children who had never complained of urinary incontinence but for the past year had noted prolapse of her cervix and proximal anterior vaginal wall to the introitus. Q-tip testing on initial evaluation did not demonstrate hypermobility.

Of major importance is the recognition in the rectal and urethral squeeze profiles of a marked increase in pressure in the distal urethra (small arrows). This dramatic increase of urethral pressure most likely represents a mechanical kinking effect which is only apparent when these maneuvers are performed. Positive pressure transmission is also demonstrated in the Valsalva and cough profiles when compared to the resting profile. This occurs because of the accentuation of the kink from the descending cystocele during increases in intra-abdominal pressure. All maneuvers demonstrate continence.

There are some artifacts in the tracing. The closed curved arrows indicate vaginal pressure waves and the open arrows indicate a minimal Valsalva effort accompanying the urethral and rectal squeeze profiles. The open curved arrows demonstrate the inequality of pressure transmitted between the bladder and the vagina and the effect this has on the true detrusor pressure.

34.2 Urodynamic Study with Pessary Demonstrating Continence

Fig. 34.2 demonstrates the changes seen in the same patient as shown in Fig. 34.1 with genital prolapse when a pessary was inserted. The study is normal except for the absence of pressure...
Fig. 34.1. Urethral closure pressure profiles in a patient with genital prolapse without a pessary supporting the prolapse.