

Anatomic and functional significance of urogenital hiatus in primary urodynamic stress incontinence

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摘要

Abstract

Objectives To explore the correlations of anatomical and functional sonographic parameters of urogenital hiatus in primary urodynamic stress incontinence. **Methods** We reviewed retrospectively our urodynamic database from July 1996 to June 2003 and identified subjects with primary urodynamic stress incontinence who had had anatomical assessment of the lower urinary tract and the central part of the pelvic floor by ultrasound. The morphological changes that had occurred in the central pelvic floor were determined by the measurement of genitohiatal angle, genitohiatal distance and anorectal angle. **Results** A total of 396 women with a mean age of 48.8 ± 10.7 (range, 26-82) years were included in the study. One hundred and eighteen subjects (29.8%) were postmenopausal. Stage I pelvic organ prolapse was found in 345 (87.1%) of the women, stage II in 19 (4.8%) and stage III in 32 (8.1%). The genitohiatal angle and genitohiatal distance were significantly and positively associated with resting and straining bladder neck angles. The genitohiatal angle was associated with bladder neck funneling and dependent cystocele during stress ($r = 0.144$, $P = 0.016$ and $r = 0.140$, $P = 0.02$, respectively), and it was negatively associated with functional profile length ($r = -0.157$, $P = 0.012$). The genitohiatal distance was negatively associated with functional profile length and maximum urethral closure pressure ($r = -0.148$, $P = 0.018$ and $r = -0.227$, $P = 0.009$, respectively). Increased genitohiatal distance was also related to a low Valsalva leak-point pressure ($r = -0.199$, $P = 0.02$). Multivariate analysis revealed that resting bladder neck angle was the independent factor for genitohiatal angle and genitohiatal distance. **Conclusions** In primary urodynamic stress incontinence, an increased resting genitohiatal distance or genitohiatal angle on sonographic imaging implies anterior vaginal wall prolapse. In addition, an increased genitohiatal distance is associated with functional

impairment of urethral closure.