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FECAL INCONTINENCE AND STOOL OUTLET SYMPTOMS IN PATIENTS WITH SONOGRAPHICALLY PROVEN DEFECTS OF THE ENDOPELVIC FASCIA

Aims of Study

Two assumptions exist at present about the pathologic anatomy of the posterior compartment: the support concept according to DeLancey (1), on the one hand, and the fascial defect concept according to Richardson (2), on the other.

The following assumptions were regarded as the null hypothesis:

1. Defects of the endopelvic fascia in the area of Ap and Bp (3) are not depictable by ultrasound and cannot thus be differentiated according to their pathogenesis.
2. It is not possible to demonstrate correlations between fascial defects, clinical symptoms (obstipation, stool outlet symptoms, fecal incontinence), morphologic changes (posterior vaginal prolapse, external and internal anal sphincter muscle) and functional disturbances (manometry). A confirmation of this hypothesis would improve decision-making regarding the best surgical approach in patients in whom conservative measures have been unsuccessful.

Methods

The control group (group I) consisted of 20 nulliparous women (mean age 36 ± 8.3 years) with an inconspicuous history and no anatomic abnormalities.

The study group (group II) comprised 48 women with posterior vaginal prolapse (mean age 49 ± 15 years). Of the women in the study group, 21% had stool outlet symptoms, 12% obstipation, 60% fecal incontinence, and 54% a foreign body sensation.

The examinations included a clinical status with history, endoanal ultrasound of the sphincter muscle, gynecologic ultrasound, transvaginal ultrasound with a 360° transducer for depiction of the endopelvic fascia, and rectal manometry. Sonography was performed using a B&K ultrasound device with a 360° transducer (10 MHz). For transvaginal ultrasound, the transducer was enlarged by means of a condom to ensure coupling to the posterior and lateral vaginal wall. The fascia was visualized from the posterior vaginal fornix to the perineal body. Ultrasound depicted the fascia as a bright, echodense structure that was documented at levels Ap and Bp.

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Results

Ultrasound demonstrated no fascial defects in the controls of group I (n=20). In group II, fascial defects were identified sonographically in 38% of the cases (n=18) and an intact fascia was found in the other 62%.

	No fascial defect	Fascial defect
1. External anal sphincter defect	30%	22%
Internal anal sphincter defect	57%	56%
2. Posterior vaginal prolapse	**50%**	**94%**
3. Manometry (abnormal)	**23%**	**64%**
4. Stool outlet symptoms	**0%**	**100%**
Obstipation	17%	23%
Fecal incontinence	**44%**	**97%**

Table 1

Conclusions

Sonographically proven fascial defects were found to show a significant correlation with stool outlet symptoms, fecal incontinence, posterior vaginal prolapse, and with resting pressure and balloon defecation test. An association between fascial defects and defects of the anal sphincter was not identified in our investigations, and our findings do not explain why fascial defects correlate with fecal incontinence. The fact that the 30 patients in whom a defect at level II of the posterior compartment was found despite a sonographically intact fascia may be explained by the assumption that the defect originates in the area of the lateral perineal connective tissue body. The two hypotheses about the pathogenesis (DeLancey and Richardson) are equal in explaining pathologies of the posterior compartment. Ultrasound offers the possibility to depict both of these aspects of the underlying pathologic mechanisms with the pathogenesis according to DeLancey representing a sonographic exclusion diagnosis. The present results suggest that rectocele repair alone does not make sense. In patients with a sonographically intact fascia intraoperatively found to be markedly diminished, an alternative surgical technique or even tissue replacement may have to be considered besides conventional rectocele repair. Should our ongoing investigations ultimately confirm a correlation between the sonographic assessment of the endopelvic fascia, its intraoperative appearance, and histologic findings and thus prove the diagnostic value of ultrasound in assessing the fascia, then it would make sense to include the ultrasound findings in planning the surgical approach.

(1) Am J Obstet Gynecol 1999;180:815-823 (2) J Pelv Surg 1995;1:214-221

(3) Pelvic Organ Prolapse & Pelvic Floor Dysfunction, 1994:8