

## THE PREVALENCE OF SONOGRAPHICALLY DIAGNOSED TRUE RECTOCELE IN A UROGYNÆCOLOGICAL POPULATION

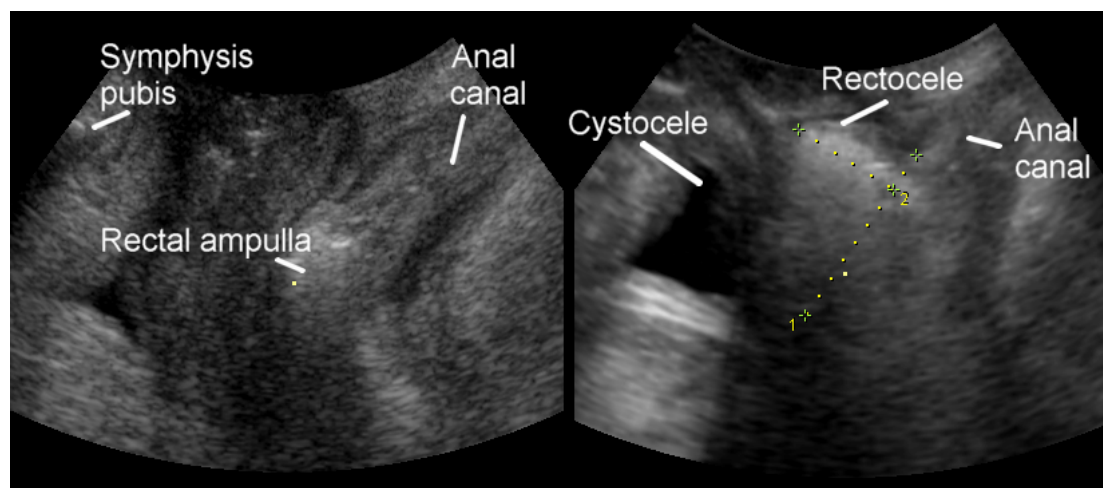
### Hypothesis / aims of study

Rectocele is traditionally regarded as the archetypal traumatic pelvic floor lesion (1). It is assumed that fascial defects in the rectovaginal septum are the result of childbirth; rectocele in nulliparous women is attributed to longstanding abnormal defaecation habits (2). There is little data on prevalence, and prevalence studies are complicated by the fact that a clinically apparent rectocele may be due to perineal hypermobility or a true defect of the rectovaginal septum, and occasionally may even be due to an isolated enterocele (3). The objective of this study was to sonographically determine the prevalence of true rectocele, i.e., defects of the rectovaginal septum, in a urogynaecological population.

### Study design, materials and methods

207 women attending urogynaecological clinics for a first visit were evaluated for prolapse according to a modified Baden- Walker classification. They were then examined by translabial ultrasound, supine and after voiding, using 3D capable equipment (Kretz Voluson 730 and Medison SA 8000) with 7-4 MHz volume transducer (Kretztechnik, Austria). Volumes were obtained at rest, on levator contraction and on maximal Valsalva. Evaluation of volumes was later performed by the first author, blinded against all clinical data, with the help of the software 4D View (GE Kretztechnik GMBH, Zipf, Austria) on a PC.

The extent of downwards displacement of a rectocele, or, in its absence, of the rectal ampulla or its contents, was used to quantify posterior compartment prolapse. A defect of the rectovaginal septum was rated as present if there was a sharp discontinuity in the ventral contour of the anorectal muscularis, and if the resulting herniation measured  $\geq 10$  mm in depth (Figure).



**Figure:** Quantification of a true rectocele on translabial ultrasound. Measurements indicate width (3.3 cm) and depth (1.9 cm) of a rectovaginal septal defect which is apparent as a discontinuity in the anorectal muscularis. Image at left is at rest, on right at maximal Valsalva.

### Results

Mean age was 54 (25-87) years. Median parity was 2 (range 0-7). Clinically, a rectocele was diagnosed in 88 cases (Grade 1, n= 87, Grade 2, n=21, Grade 3, n=2). Of 207 datasets, seven were excluded due to incomplete clinical data, and two could not be evaluated due to poor image quality. All ultrasound data therefore refers to the remaining 198 patients.

The rectal ampulla descended on average to 5.5 mm above the symphysis pubis on Valsalva. True defects of the rectovaginal septum were observed sonographically in 78/198 women (39%). These defects were on average of 23 mm width and 16 mm depth. Table 1 shows

ultrasound data stratified for clinical rectocele grading. There was a statistically significant relationship between ultrasound data and clinical assessment (all  $p < 0.001$  on ANOVA).

Rectocele	Ampulla*	Presence of defect	Width	Depth
Grade 0	13.2 mm	16/88 (17%)	18.7 mm	13.7 mm
Grade I	0.3 mm	47/87 (54%)	21.7 mm	15.7 mm
Grade II	-4.3 mm	13/21 (62%)	28.4 mm	19.9 mm
Grade III	-6.7 mm	2/2 (100%)	49.8 mm	29.6 mm
P=	<0.001	<0.001	<0.001	<0.001

**Table:** Clinical rectocele grading against sonographically determined position of rectal ampullary contents on Valsalva ('Ampulla'), presence, width and depth of rectovaginal septal defects. \*Measurements describe position relative to the inferior margin of the symphysis pubis, with negative numbers implying descent below this level.

Women who had delivered vaginally were more likely to be diagnosed with a clinical rectocele ( $p = 0.003$ ). However, neither position of the rectal ampulla on ultrasound, nor presence, width or depth of rectovaginal septal defects correlated with parity or vaginal childbirth. In contrast, age seemed to be a predictor, showing a weak correlation with clinical staging ( $r = -0.191$ ,  $p = 0.007$ ) and an association with the presence of fascial defects ( $P = 0.002$ ) and their depth ( $p = 0.02$ ).

#### **Interpretation of results**

True defects of the rectovaginal septum can be readily identified on translabial ultrasound and are common. In this group of 198 women seen for urodynamic assessment, defects of 10 mm or more in depth were observed in 39% of cases. This compares with prevalence data obtained by radiological means (3) and is in contrast to a recently determined prevalence of 12% in young nulliparae (own unpublished data). However, it is rather surprising that in this series all ultrasound measures of posterior compartment descent and presence/ depth of a true rectocele correlated weakly with age, not parity. It appears that the association between clinical rectocele and parity may be due to loss of perineal body, exposure of the posterior vaginal wall and/or alteration of the levator hiatus rather than due to actual fascial defects.

#### **Concluding message**

The aetiology of defects of the rectovaginal septum, hitherto assumed to be due to intrapartal trauma, may have to be re-examined.

#### **References**

- 1 Contemporary reviews in Obstetrics and Gynecology 1997;303-10.
- 2 Vaginal surgery. Baltimore: Williams and Wilkins; 1995. p. 257-89.
- 3 Female Urology and Urogynecology. London: Isis Medical Media; 2001. p. 616-625.