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## THE PREVALENCE OF RECTOVAGINAL FASCIAL DEFECTS IN YOUNG NULLIPARAE: CAN RECTOCELE BE A CONGENITAL CONDITION?

**Hypothesis / aims of study**

A true rectocele, i.e., a defect in the rectovaginal septum or Denonvillier's fascia, is traditionally regarded as the archetypal traumatic pelvic floor lesion (1). It is generally assumed that such fascial defects are the result of childbirth, and rectoceles in nulliparous women are attributed to longstanding abnormal defaecation habits (2). If those assumptions were correct, one would not expect to find defects of the rectovaginal septum in young women prior to childbirth. This study defines the incidence of true rectocele in a cohort of 178 young nulliparous women.

**Study design, materials and methods**

We report an observational cohort study on 178 young nulliparous Caucasian women (age 18-25), recruited through the Australian Twin Registry for a twin study of pelvic floor anatomy and function. All women were interviewed and then examined by translabial ultrasound, supine and after bladder emptying (3). In a minority of 52 women 3D imaging was obtained, and most other scans were recorded on VHS video for quality control. All scans were performed by the principal investigator or by staff trained by him for a minimum of 100 assessments. Printouts, video recordings and volume ultrasound data were all reviewed by an assessor blinded against interview and demographic data for an evaluation of rectovaginal septum integrity.

Ethics Committee approval had been obtained for the main study (QIMR P434 (H0202-01-004)), and all subjects gave written informed consent. They received a shopping voucher over A$ 100.- for their participation.

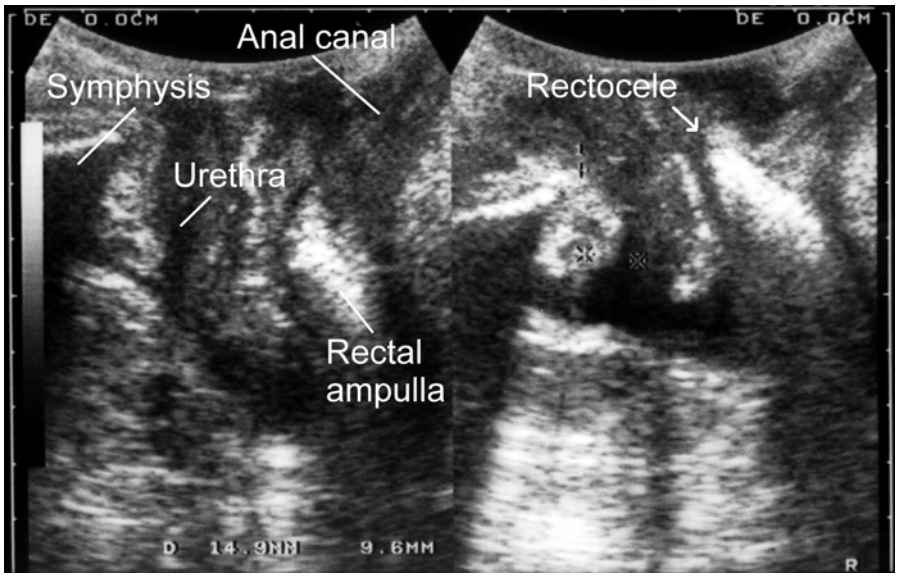


***Figure:*** *Small rectocele in 21 year old nulligravid Caucasian female. Image on left is at rest, image on right is at maximal Valsalva.*

**Results**

171 women had a technically adequate scan. In seven cases the posterior compartment could not be assessed fully. This was mostly due to faulty transducer alignment. A discontinuity of the anterior rectal wall with extrusion of rectal mucosa or contents (depth of 10 mm or more) was observed in 21/ 171 (12%). The depth of this herniation ranged from 10 to 25 mm and was filled with stool on 10 occasions, with rectal mucosa in 11 cases. None of the

171 women showed an enterocele. Descent of the rectal ampulla or anorectal junction to beyond the level of the symphysis pubis without actual fascial defect, i.e., significant perineal relaxation, was observed in 23/171 (13%) of the study population.

The finding of a rectovaginal septal defect was weakly associated with a higher Body Mass Index (p= 0.049) and with the complaint of chronic constipation (p= 0.049), and there was a weak trend towards an association with frequent straining at stool (p= 0.1). There also was an association with higher anterior compartment descent (p= 0.01). Neither a history of indicators of connective tissue abnormality (such as dislocations, epistaxis or herniae), a family history of prolapse or prolapse surgery, nor a clinical assessment of upper extremity joint mobility were associated with defects.

**Interpretation of results**

In this study of 171 nulligravid Caucasian women aged 18- 25, defects of the rectovaginal septum were demonstrated in 12% of subjects. As all confounding factors (most importantly levator coactivation which is common in nulliparous women) would tend towards minimisation of pelvic organ descent and rectocele development, this is likely to be an underestimate. Associations were observed with higher body mass index and a history of constipation which suggests that in some young women with bowel dysfunction such defects may be acquired in childhood and/ or early adulthood. Another explanation may be that, at least in some women, the observed defects are in fact congenital in nature.

**Concluding message**

Defects of the rectovaginal septum can be visualized on translabial ultrasound and are found in a surprising number of nulligravid young women, raising the possibility of a congenital aetiology.

**References**

1 Contemporary reviews in Obstetrics and Gynecology 1997;303-310.
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3 Ultrasound in Obstetrics & Gynecology 2001; (18): 511-514.