

COMBINED ANAL SPHINCTER REPAIR AND SITE SPECIFIC POSTERIOR REPAIR WITH ANATOMIC PERINEORRHAPHY.

Hypothesis / aims of study

Diagnosed, obstetric anal sphincter injury occurs in 3-6% of all vaginal deliveries (1). To this prevalence must be added the occult injuries. Amongst risk factors are instrumental deliveries, perineal tears, episiotomy and parity. Anal sphincter injury is a major cause of anal incontinence and have been reported in self filled questionnaires to be as high as 59%, although restricted to flatus incontinence in 35%. Anal incontinence occur in various combinations with other symptoms of pelvic floor insufficiency, and sexual complaints occurs in 29% (1,2). A perineal body thickness of less than 10 mm has been shown to be associated with anal incontinence (3). As most perineal tears \geq grade 2 are combined with a vaginal tear including a tear in the rectovaginal fascia, our hypothesis is that women with anal incontinence and an ultrasonographic sphincter defect also have a defect in the rectovaginal fascia with a low rectocele due to separation of the fascia from the perineal body, which is therefore low and/or thinned. Such patients will therefore benefit from a combined anal sphincter repair and a site specific posterior repair with anatomic perineorrhaphy. The aim of the study was therefore to evaluate women who underwent such a combined procedure by a colo-rectal surgeon and a urogynecologist.

Study design, materials and methods

A retrospective, descriptive quality study among women, who underwent a combined anal sphincter repair, site specific posterior repair and anatomic perineorrhaphy at a university hospital. In cases with an overlooked grade four perineal tear a transverse incision was used at the mucocutaneous edge. In all other cases a midline incision in the perineum combined with a midline incision in the vaginal skin. The rectovaginal fascia and the perineal body was dissected by the urogynecologist. The fossa ischioirectalis was dissected by the colo-rectal surgeon who then performed an overlap sphincteroplasty. Rectovaginal fascia defekts were sutured by the urogynecologist, who also rebuild the perineal body anatomically, as the bulbospongiosus and the transverse perineal muscles were reunited in the midline. All women underwent a preoperative 3D anal ultrasound examination and a 3-month postoperative anal manometry. All women had a 3-month clinical follow up by the colo-rectal surgeon and a telephone interview follow-up for up to 53 months postoperatively. St. Mark score was used to evaluate anal incontinence. All women had a preoperative and a 3-month postoperative gynecologic examination by the urogynecologist. The clinical version of POP-Q was used to evaluate pelvic organ prolapse, i.e. stage 2 defined as point Ap within +/- 1 cm from hymen. ICI-Q was used to evaluate urinary incontinence. Bother in relation to defecation problems, urinary incontinence, lower urinary tract symptoms, prolapse, sexual function and QoL was evaluated using a visual analogue scale (VAS) 0-10 cm. The statistical methods used were descriptive, non-parametric using median (range). A paired students t-test was used to compare pre- and postoperative St. Mark scores.

Results

Eighteen women with a median age of 35.5 years (range, 22-54 years) were operated between September 2005 and October 2009. Median follow up was 22.5 months (range, 3-53 months). One woman was missed for telephone interview follow-up. Median parity was 2 (1-5). None had had caesarian sections or twin pregnancies. All deliveries were singletons. Six had a birth weight \geq 4000g. Two were delivered by vacuum and one by forceps. Sixteen described having had a big tear. According to the women, 11 of the sphincter injuries were diagnosed and sutured primarily (61%). The defect in the internal anal sphincter was median 120° (60°-240°) and the defect in the external anal sphincter was median 120° (60°-180°). Fourteen women had a rectocele stage \geq 2 preoperatively and 6 described having a wide genital hiatus. All women either had a rectocele and/or a low and/or a thinned perineal body. The mean St. Mark score was 13.9 preoperatively and 5.5 postoperatively, which was highly significant (student's t-test, $p < 0.001$) (Fig.1). The 3-month success rate in relation to anal incontinence was 83%, as three women were not satisfied with the clinical outcome. Another woman had recurrent anal incontinence after 16 months. The pre- and postoperative bother related to pelvic floor dysfunction is shown in Table I. Ten women had improved sexual function, two had dyspareunia for up to 1½ years postoperatively. One woman was dissatisfied with the outcome due to persistent dyspareunia. At 3-months follow up none of the women had a rectocele, 12 were satisfied with the caliber of the genital hiatus, and three women had a persistent low or thinned perineal body. Six and eight women respectively had persistent VAS \geq 5 in relation to defecation problems and affection of quality of life. Perioperative complications included rectal mucosal lesion with fistula, hematoma and wound infection.

Interpretation of results

Despite the usual weaknesses of the study being retrospective including problems with missing data, and despite the increased risk of perioperative complications the overall results after combined anal sphincter repair, site specific posterior repair and anatomic perineorrhaphy are excellent in relation to anal incontinence with a significant change in St. Mark score. The combined procedure provides satisfactory results in relation to other symptoms related to pelvic floor dysfunction, as the majority of women experienced improvement in relation to prolapse symptoms, urinary incontinence, lower urinary tract symptoms and sexual dysfunction. However, defecation problems and quality of life was still substantially affected in this group of women.

Concluding message

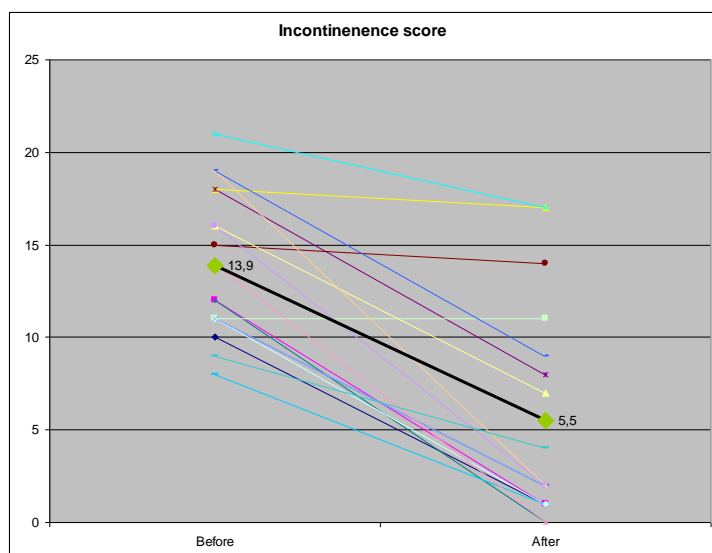
Women with anal incontinence and an ultrasonographic sphincter defect can benefit from combined anal sphincter repair with site specific posterior repair and anatomic perineorrhaphy. However further, prospective studies are needed to confirm our findings.

Table I. Bother related to pelvic floor dysfunction pre- and postoperatively after combined anal sphincter repair with site specific posterior repair and anatomic perineorrhaphy.

Symptoms*	Preoperative VAS \geq 5 (N)	Postoperative VAS \leq 3 (N)
Prolapse	6	17
Urinary incontinence	6	13
Lower urinary tract symptoms	6	9
Other defecation symptoms	10	10
Sexual dysfunction	10	11
Affected quality of life	12	8

* Limitation due to missing data

Fig 1. St Mark score pre- and postoperatively after combined anal sphincter overlap repair with site specific posterior repair end anatomic perineorrhaphy.



References

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Specify source of funding or grant	The study received no funding or grants. The main author has been invited to attend ICS/IUGA 2010 by Pfizer, Denmark.
Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	It is a quality control study, for which reason it was not necessary to obtain informed consent from the patients according to the committee of ethics.
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No