

## A MATCHED PAIR COHORT ANALYSIS OF TRANSANAL AND TRANSVAGINAL REPAIR.

### Hypothesis / aims of study

A recent study comparing laparoscopic and transanal repair of rectoceles over a 4 year period showed that the transanal group had a greater improvement in obstructive defecation symptoms but may be more likely to experience faecal incontinence (1). It has been hypothesised that the use of transanal retractors during a transanal repair procedure may weaken the anal sphincter thus precipitating faecal and/or flatus incontinence. Little data exists to support or refute this; for example, a recent review of this subject provided data on post-operative constipation but no information about postoperative faecal incontinence was cited (2). Therefore the aim of the present study was to compare transanal rectocele repairs with the traditional gynaecological transvaginal rectocele repair as it was suspected that faecal incontinence would be less common after a vaginal procedure. A secondary aim of this study is to determine the influence of known risk factors in the incidence of post-operative faecal incontinence.

### Study design, materials and methods

Our colorectal colleagues defined a series of patients who had undergone transanal repair more than 12 months previously. To date we have matched 45 patients for age, parity and length of time since procedure. We analysed pre-operative risk factors for pelvic floor dysfunction by assessing the obstetric and gynaecological history in both groups. Details such as parity, mode of delivery, perineal tears, episiotomy and weight of the largest baby born vaginally, were noted in all patients during pre-operative assessment. A traumatic vaginal delivery was defined if one of the following was present: large baby (>4kg), forceps delivery, perineal tears requiring suturing or episiotomy. Patients were grouped into high, medium and low risk categories according to these risk factors as per table 1.

High Risk	traumatic vaginal delivery AND large baby
Medium Risk	Either a traumatic vaginal delivery OR large baby (>4kg)
Low Risk	Normal vaginal delivery, no perineal trauma and largest baby <4kg

Table 1: Criteria for pre-operative risk assessment

Also at the pre-operative visit, standard questions regarding incontinence of faeces or flatus were routinely asked. For long-term follow up assessment, patients were contacted via telephone and verbal consent was obtained before completing a modified Wexner questionnaire (maximum score = 24) during the phone consultation (3) (Table 2).

<b>Original Wexner Score:</b>	never	rarely	sometimes	weekly	daily
Incontinence of solid stool	0	1	2	3	4
Incontinence of liquid stool	0	1	2	3	4
Incontinence of gas	0	1	2	3	4
Alteration of lifestyle	0	1	2	3	4

<b>Amendments to original score:</b>	YES	NO
Need to wear a pad or plug	0	2
Constipating medicine	0	2
Unable to defer defecation for 15 minutes	0	2

Table 2: Modified Wexner continence score (n=24) to quantify faecal continence.

Statistical analyses was performed using the paired t test with a 95% confidence interval and p<0.5 considered significant.

## Results

The median duration of follow-up after surgery for the matched pairs was 6.6 years. The Wexner score was significantly increased ( $p=0.02$ ) in the transvaginal group compared with the transanal group overall (Figure 1). The most common score item in the transvaginal group was incontinence of flatus on a daily basis (score=4) while items such as faecal urgency and the use of constipating drugs were rare. In contrast, incontinence of flatus was rare in the transanal group. In 98% of cases symptoms of faecal or flatus incontinence were of new onset i.e. they occurred postoperatively.

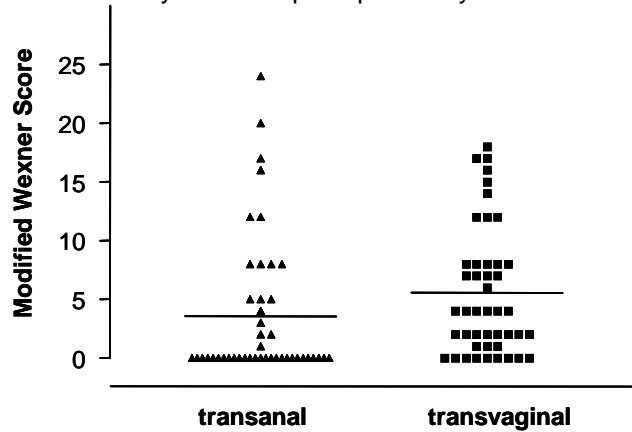


Figure 1: A comparison of Wexner scores between transanal and transvaginal rectocoele repair groups (n=45).

When analysing the different subsets of the data, no statistically significant difference ( $p>0.5$ ) was seen in the Wexner scores for the Medium Risk (n=18) and High Risk (n=7) groups when comparing transanal versus transvaginal rectocoele repair. The difference in Wexner scores was highly significant ( $p=0.02$ ) between the two operations in the Low Risk subset (n=20) (Figure 2).

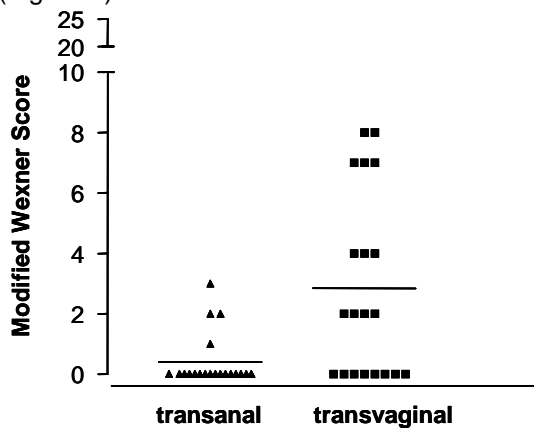


Figure 2: A comparison of Wexner scores between transanal and transvaginal rectocoele repair groups in 20 matched pairs of patients who were assessed as low risk for pelvic floor dysfunction prior to surgery (note truncated Y-axis).

The relatively large proportion of patients found to be low risk (44%) influenced the overall conclusion of the study. Data acquisition is still in progress with the aim of a total sample size of 60 matched pairs.

## Interpretation of results

High risk women appear to have similar Wexner scores post-operatively irrespective of a transanal or transvaginal surgical approach to their rectocoele. In low risk patients it would appear that the transvaginal approach to rectocoele has greater risk of an increased Wexner score at 6 years. The reason for this remains unclear and further recruitment of patient pairs might provide further insight upon completion of this study.

## Concluding message

This study provides valuable insight into the influence of pre-existing risk factors on long-term post-operative faecal incontinence as well as highlighting the difference in outcome between the two surgical approaches to rectocoele repair. This knowledge may assist in selecting patients for a particular surgical approach according to risk factor assessment.

## Reference

1. ProcAges AGES Meeting Melbourne Aug 2003, pg19
2. Int Urogynecol J Pelvic Floor Dysfunct. 9:37-47, 1998
3. Dis Colon Rectum 36:77-97,1993.