Support of the posterior vaginal wall by digitation or pessary use (PROVE): a prospective cohort study

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Hypothesis / aims of study

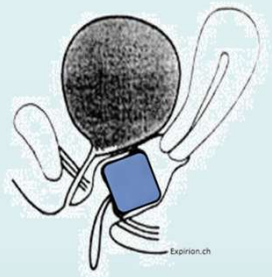
Stool outlet obstruction (SOO) in rectoceles is a complex urogynaecological entity with thorough therapeutic challenges. Surgery to correct rectocele is a common treatment option targeted toward restoration of anatomy and relief of symptoms like bulge and obstructed defecation.

Rectocele

Intussusception

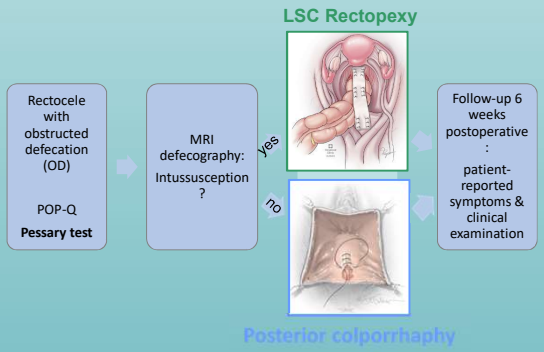
Aim of this prospective study is to determine the efficacy of preoperative digitations/pessary use in patients with rectocele and SOO.

Pessary test



Study design, materials and methods

Patients who suffered from rectocele with SOO were included in this comparative mono-center study from 2015 to 2022. The primary outcome of this study was persistent postoperative obstruction. The preoperative rectocele stage was determined according to the Pelvic Organ Prolapse Quantification System (POP-Q), and a pessary test was performed with pessaries or digital support of the posterior vaginal wall for defecation (digitation). All patients underwent a preoperative magnetic resonance imaging (MRI) defaecography to detect intussusception. If intussusception was detected, a laparoscopic rectopexy was performed; otherwise, a native-tissue posterior colporrhaphy with correction of the Denonvillian fascia. Follow-up took place after six weeks and included patient-reported symptoms and clinical examination.



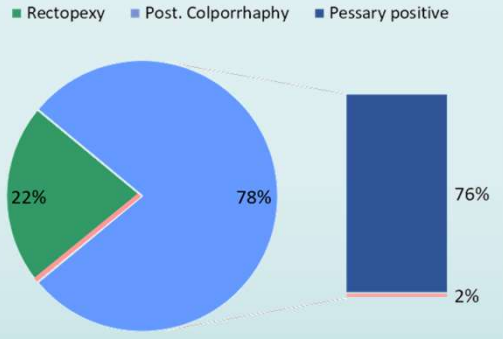
References

Ellis CN, Essani R. Treatment of obstructed defecation. Clin Colon Rectal Surg. 2012 Mar;25(1):24-33. doi: 10.1055/s-0032-1301756. PMID: 23449341; PMCID: PMC3348733.y
Grimes CL, Overholser RH, Xu R, Tan-Kim J, Nager CW, Dyer KY, Menefee SA, Diwadkar GB, Lukacz ES. Measuring the impact of a posterior compartment procedure on symptoms of obstructed defecation and posterior vaginal compartment anatomy. Int Urogynecol J. 2016 Dec;27(12):1817-1823. doi: 10.1007/s00192-016-3046-0. Epub 2016 May 26. PMID: 27230408.

Results and interpretation

50 patients were included, aged between 34 and 91 years, with a median of 63.5 years and a median body mass index of 28 kg/m^2 (range 18.5-34 kg/m^2). Most patients had a rectocele grade III (n=31, 62%), and the remaining had a rectocele grade II (n=19, 38%). Intussusception was diagnosed by MRI in 11 patients (22%). The pessary test was positive in 38 patients (OR 38, p<0.001, 5.22 - 276.77) and negative in all patients with intussusception. Consequently, 11 patients underwent rectopexy (22%) and 39 posterior colporrhaphy (78%).

Table 1	Patients (n=50)
Age, yrs, median (range)	63.5 (34 - 91)
BMI kg/m2, median (range)	28 (18.5 - 34)
Rectocele stage II, n	19 (38%)
Rectocele stage III, n	31 (62%)
Enterocele, n	6 (12%)
Rectal prolapse, n	1 (2%)
Pessary test positive, n	38 (76%)
Intussusception, n	11 (22%)
Rectopexy, n	11 (22%)
Posterior colporrhaphy, n	39 (78%)
Postoperative OD, n	2 (4%)



Rectopexy OR 3.8, Posterior colporrhaphy OR 0.26, p<.001*

After posterior colporrhaphy, only one patient had persisting SOO (OR 0.26, p<.001, 95%CI .003 – .192) as well as one after rectopexy (OR 3.8, p=.36, 95%CI 22 – 66.2): The patient with persistent SOO after posterior colporrhaphy was the one with a negative pessary-test. The patient with postoperative SOO after rectopexy had a persistent, very low rectocele. Further postoperative complication was a de novo anal incontinence (Parks II) after posterior repair (n=1).

	MRI defecography Intussusception	MRI defecography No intussusception	
Pessary test negative	11	1	Positive predictive value = **92%**
Pessary test positive	0	38	Negative predictive value = **100%**
	Sensitivity = **100%**	Specificity = **97%**	

Conclusions

The pessary test appears to be a simple and effective measure to (i) predict the success rate in patients undergoing native-tissue posterior colporrhaphy, (ii) differentiate between intussusception in patients with rectocele and SOO and consequently (iii) indicate the correct surgical treatment. All patients who underwent posterior repair with a previously positive pessary test presented a complete recovery of SOO postoperatively. Whether the pessary test can replace the unpleasant defaecography in the future needs to be researched further, including extensive follow-up studies.