

# Προεγχειρητική εκτίμηση και χειρουργικές επιλογές στη συμπτωματική εσωτερική πρόπτωση του ορθού

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- No Disclosures or Funding

# Εσωτερική πρόπτωση ορθού

- Εσωτερικός εγκολεασμός
- Εξωτερική πρόπτωση (πλήρης) ορθού
- Rectal intussusception/prolapse, internal/external rectal prolapse, procidentia
- Telescopic Invagination like a sleeve of rectal mucosa and rectal wall into the distal rectum up to the anal canal

# Κλινική σημασία

- Φυσιολογικό μηχανικό φαινόμενο;
- Συχνό εύρημα στο πρωκτογράφημα στο φυσιολογικό γενικό πληθυσμό
- Κλινική σημασία ανάλογα με το βάθος εγκολεασμού
- Βαθύς ολικού πάχους εγκολεασμός στο ύψος του πρωκτικού καναλιού (Oxford III) οδηγεί σε αποφρακτική δυσχεσία (obstructive defecation)
- SRUS ως αποτέλεσμα εσωτερικής πρόπτωσης

Shovron PJ et al. Gut 1989

Dvorkin LS et al. BJS 2005

Lundby L et al. Colorectal Dis 2015

# Oxford grading

**Table 2**

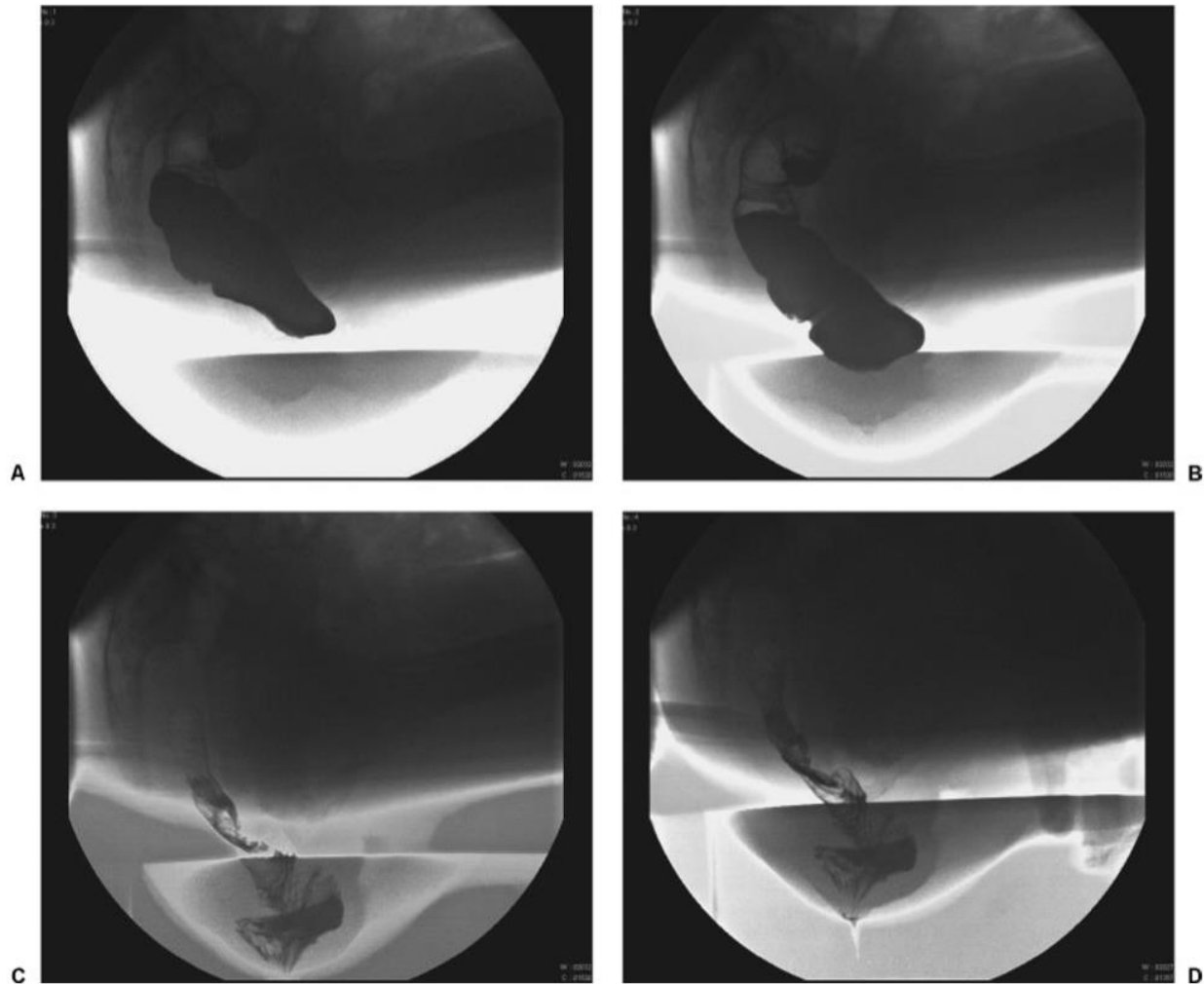
Oxford internal rectal prolapse grading system.

Radiological characteristics of prolapse		
<b>Internal rectal prolapse</b>		
Low-grade	Grade I	Descends to proximal limit of rectocele
	Grade II	Descends into level of rectocele, but not onto anal canal
High-grade	Grade III	Descends onto anal canal
	Grade IV	Descends into anal canal
<b>External rectal prolapse</b>		
	Grade V	Descends through anal canal, protrudes from anus

# Shorvon Grading

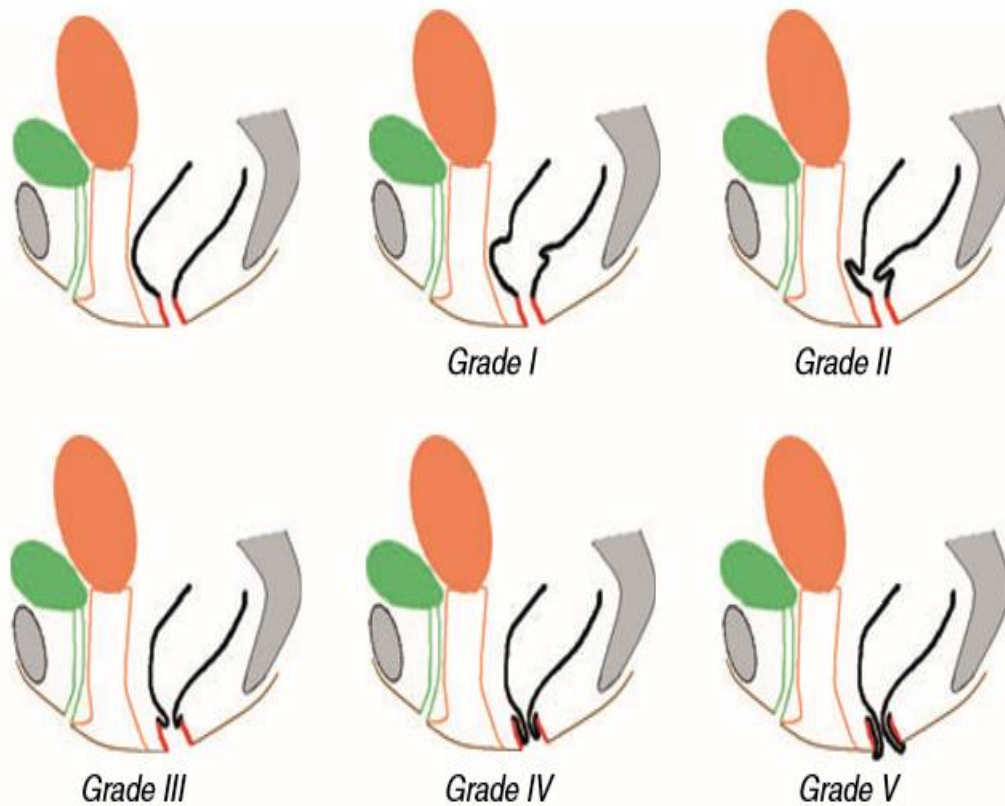
**TABLE 1.** The Shorvon grading system for mucosal intussusception and prolapse

<i>Grade</i>	<i>Description</i>
1	Noncircumferential infolding <3 mm
2	Circumferential infolding <3 mm
3	Noncircumferential infolding $\geq$ 3 mm
4	Circumferential infolding >3 mm that remains intrarectal
5	Edge of circumferential infolding impinges on the internal anal orifice
6	Circumferential infolding descends into the anal canal
7	External rectal prolapse



**Figure 1** Defecography. The rectum is filled with high density, barium paste. In the seated position, static images are taken (A) at rest, (B) during straining, and (C, D) evacuation. The enfolding of the rectal wall is visualized in the evacuation images.

# Oxford Grading



**Figure 1** Oxford radiological grading of rectal prolapse.

# Assessment of Female Patients With Rectal Intussusception and Prolapse: Is This a Progressive Spectrum of Disease?

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Marion Allison, M.Sc. • Norman S. Williams, M.S. • Christopher L. Chan, F.R.C.S., Ph.D.

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intussusception. Within 2 years, 19.2% and 3.8% of patients with rectorectal intussusception on the initial proctogram demonstrated progression to rectoanal intussusception and external prolapse.

**LIMITATIONS:** This study was limited by its retrospective nature.

**CONCLUSION:** Rectal intussusception may be an initial abnormality leading to external prolapse, but this appears to happen infrequently. Long-term observational studies are required to fully understand its natural history.

# Internal Rectal Intussusception Seldom Develops into Total Rectal Prolapse

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Anders Dolk, M.D., Ph.D.†

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**PURPOSE:** This study was designed to analyze how often internal rectal intussusception develops into total rectal prolapse. **METHODS:** Repeated investigations with defecography were performed in 312 patients because of persisting symptoms. In 79 patients who had a rectal intussusception at the first defecography, results of the second defecography and the patients' records were studied. **RESULTS:** A total of 38 patients had not undergone any surgical treatment of rectal intussusception or rectal prolapse between the first and second defecographies. One of these patients had a rectal prolapse at the second defecography, and another developed a clinical prolapse after the second defecography. **CONCLUSIONS:** The present study demonstrates that the risk of developing a rectal prolapse in patients with rectal intussusception is small. This risk should, therefore, not be used as an indication for surgery. [Key words: Rectal intussusception; Rectal prolapse; Defecography; Surgery; Rectal procidentia; Evacuation proctography]

Surgical treatment of rectal prolapse is often indispensable. Indications for treatment of patients with rectal intussusception are debated because postoperative functional outcome is frequently unsatisfactory.<sup>19</sup> Sometimes patients with rectal intussusception are treated to avoid development of a rectal prolapse. However, there are no longitudinal studies on the risk of developing a total rectal prolapse in these patients. The aim of the present study was to analyze how often internal rectal intussusception develops into total rectal prolapse.

## MATERIALS AND METHODS

### Patients

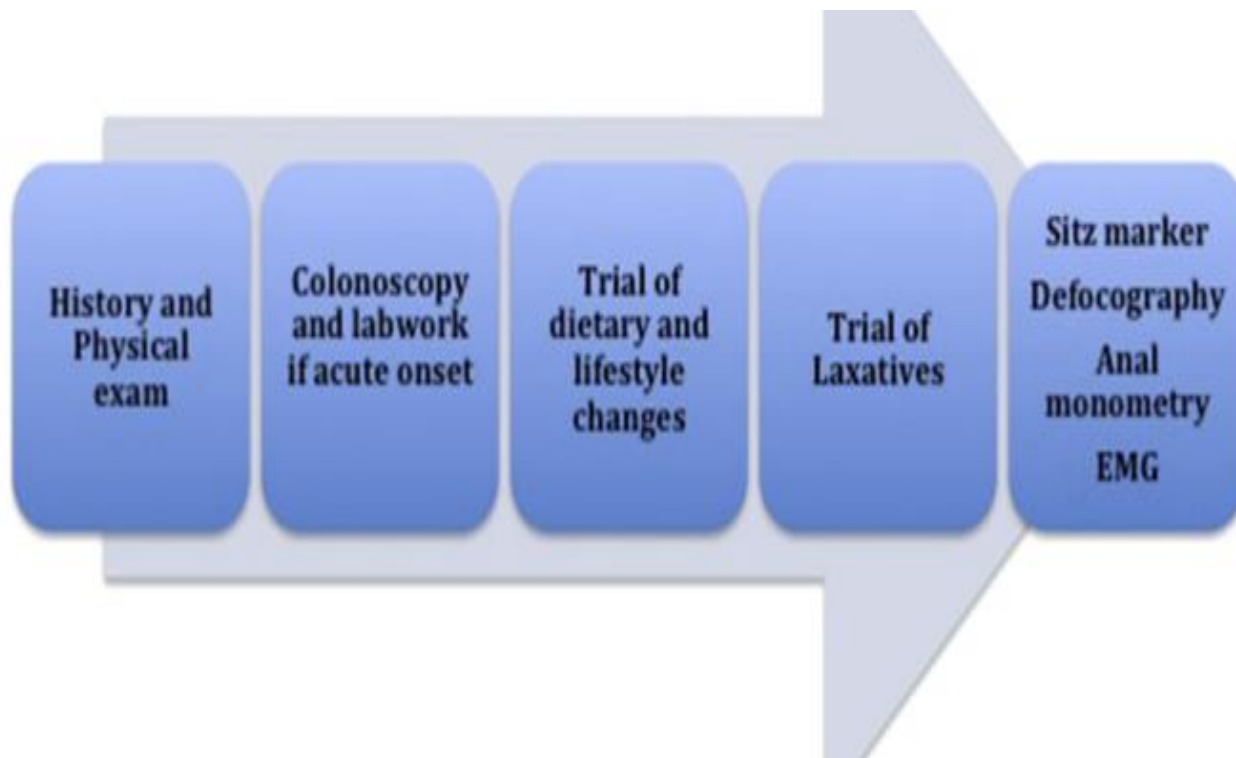
# ODS symptoms

## Box 1

### Rome III criteria for the diagnosis of constipation

- Must include at least 2 of the following
  - Fewer than 3 stools per week
  - Hard stools in at least 25% of defecations
  - Manual maneuvers to facilitate at least 25% of defecations (eg, support of pelvic floor or digital stimulation)
  - Straining during at least 25% of defecations
  - Sensation of incomplete evacuation for at least 25% of defecations
  - Sensation of anorectal blockage for at least 25% of defecations
- Loose stools rarely present without the use of laxatives
- Insufficient criteria for irritable bowel syndrome

Symptoms must be present for at least 3 months with onset of symptoms 6 months before diagnosis.



# Ιστορικό-Φυσική εξέταση

- Διάρκεια συμπτωμάτων, συσχέτιση με βραδεία διάβαση
- Διάρκεια στην τουαλέτα, αίσθημα ατελούς κένωσης
- Κάθοδος περινέου, χειρισμοί
- Straining-Anismus
- Δακτυλική εξέταση
- Πρωκτοσκόπηση στο ιατρείο
- Αναπαραγωγή συμπτωμάτων σε καθιστή θέση
- Ακράτεια

Weiss E et al. Clin Colon Rectal Surg 2008

# Ενδοσκόπηση

- Αποκλεισμός κακοήθειας
- Δολιχόκολο-σιγμοειδοκήλη
- Μονήρες έλκος ορθού



Original research

## High-grade internal rectal prolapse: Does it explain so-called “idiopathic” faecal incontinence?



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Department of Colorectal Surgery, Oxford University Hospitals NHS Foundation Trust, United Kingdom

**Table 3**

Prolapse numbers.

	Low-grade IRP				High-grade IRP		ERP
Grade	No IRP	Anismus	Gr I	Gr II	Gr III	Gr IV	Gr V
Frequencies	38 (21%)	6 (3%)	13 (7%)	29 (16%)	38 (21%)	50 (28%)	6 (3%)

**Table 4**

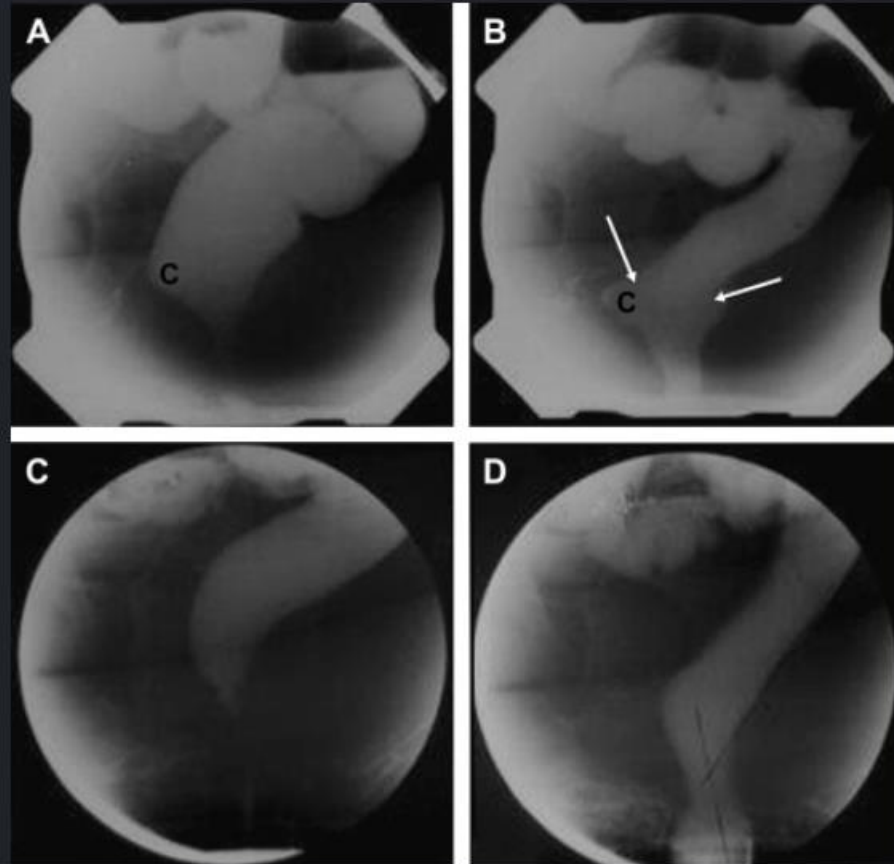
Incontinence type vs. IRP grade.

	Urge incontinence		Passive incontinence	
	Yes	No	Yes	No
<b>Prolapse</b>				
No prolapse	23 (61%)	15 (39%)	27 (71%)	11 (29%)
Low-grade	18 (43%)	24 (57%)	31 (74%)	11 (26%)
High-grade	70 (80%)	18 (20%)	43 (49%)	45 (51%)

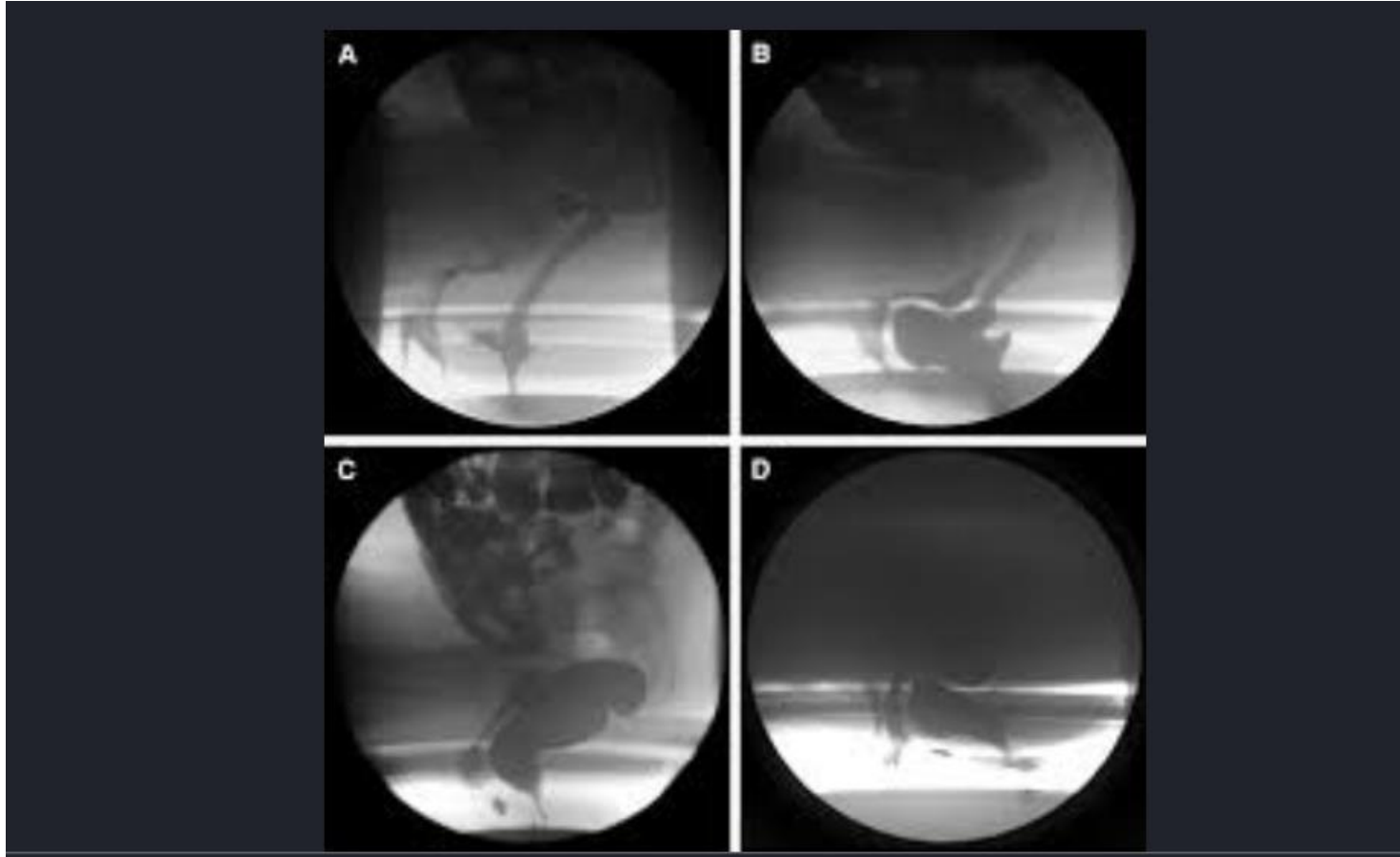
# Πρωκτογράφημα

- Gold standard για τη διάγνωση
- Τριπλή σκιαγράφιση
- Baritor από το ορθό
- 10-20 ml γαστρογραφίνη p.o 30 min προ της εξέτασης προς ανάδειξη εντεροκήλης
- 100ml barium sulphate cream από τον κόλπο
- Έξειδικευμένοι διαγνώστες, MDT

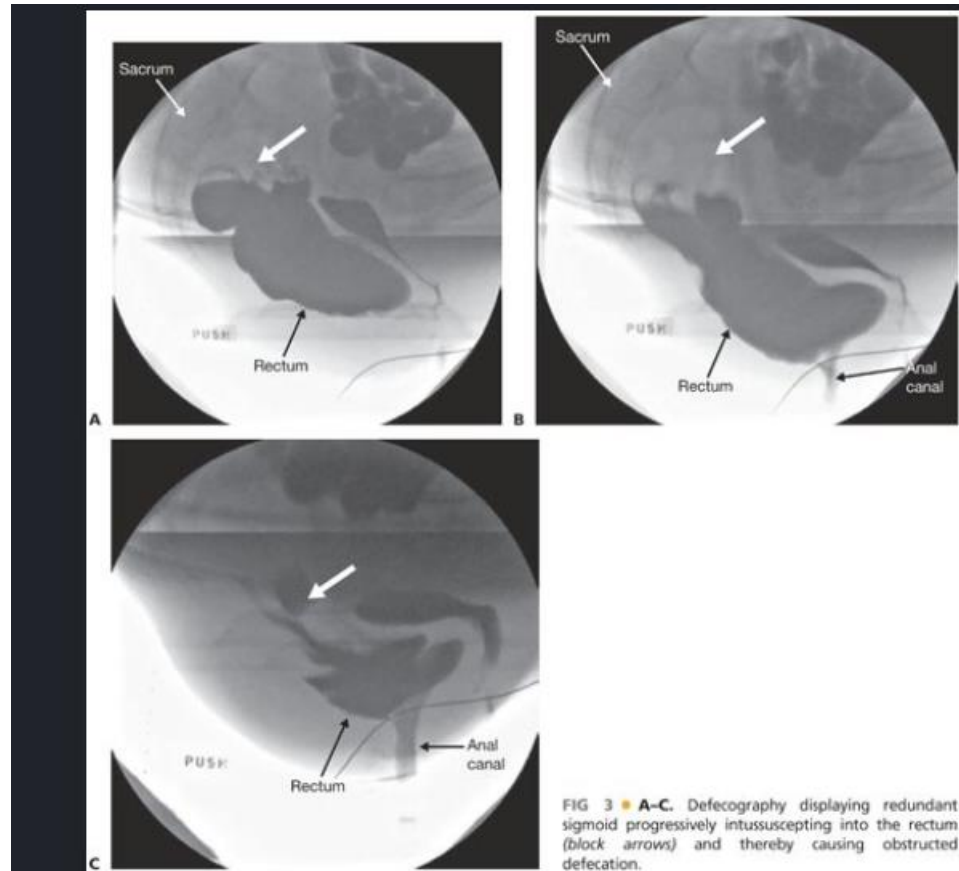
# Πρωκτογράφημα



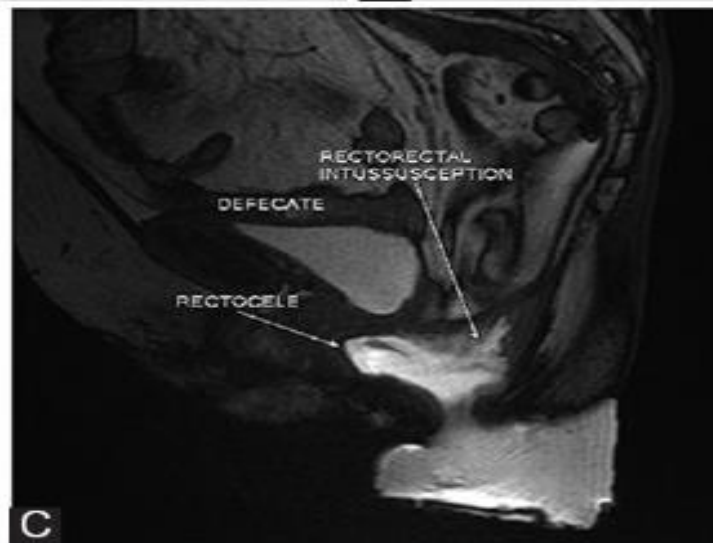
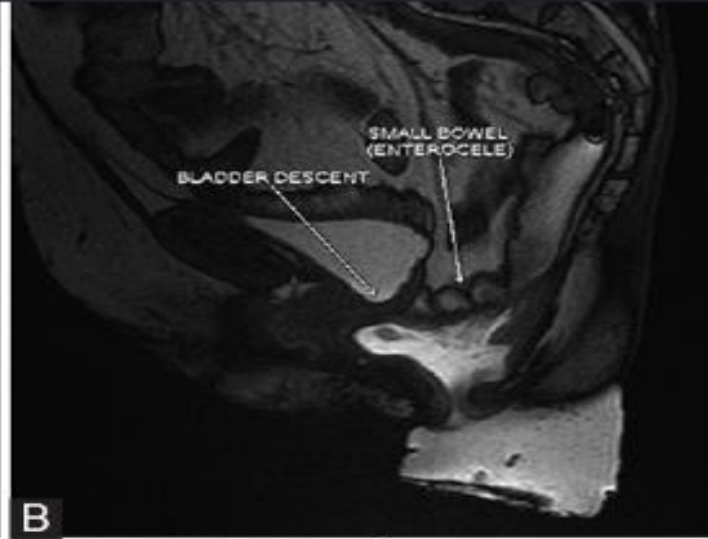
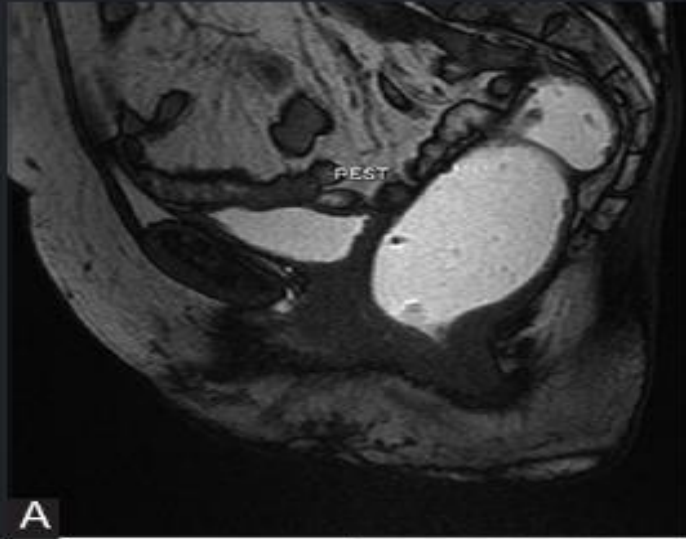
# Πρωκτογράφημα διπλής αντίθεσης



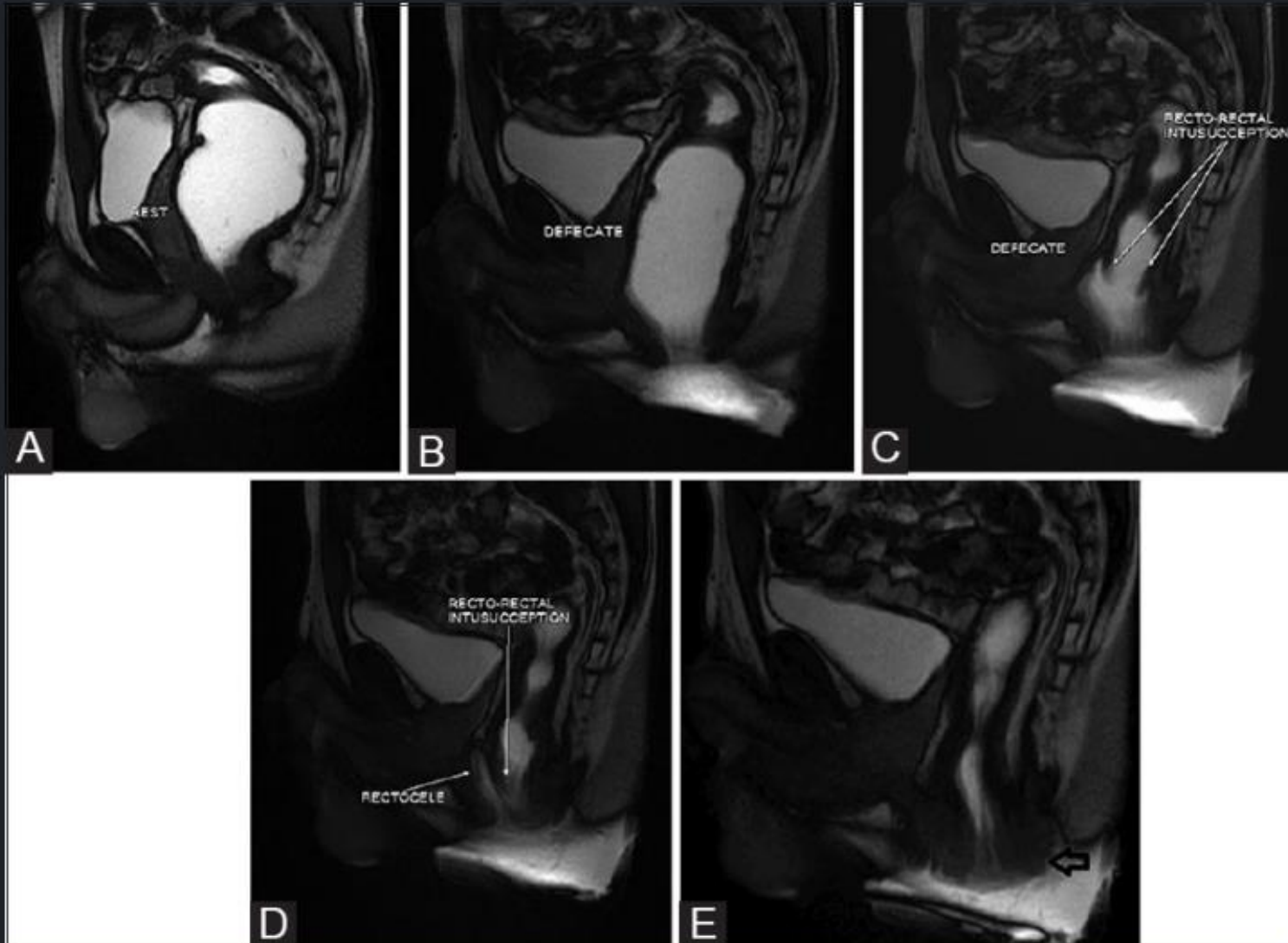
# Τοποθέτηση ασθενή



# MRI πρωκτογραφία



# MRI πρωκτογραφία



# Rectal intussusception and unexplained faecal incontinence: findings of a proctographic study

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Received 12 October 2007; accepted 16 February 2008

## Abstract

**Background** The aetiology of faecal incontinence is multifactorial, yet there remains an approach to assessment and treatment that focusses on the sphincter. Rectal intussusception (RI) is underdiagnosed and manifests primarily as obstructed defecation. Yet greater than 50% of these patients admit to faecal incontinence on closer questioning. We aimed to evaluate the incidence of RI at evacuation proctography selectively undertaken in the evaluation of patients with faecal incontinence.

**Method** Patients with faecal incontinence seen in a pelvic floor clinic were evaluated with anorectal physiology and ultrasound. Where the faecal incontinence was not fully explained by physiology and ultrasound, evacuation proctography was undertaken. Studies were classified as 'normal', 'low-grade RI' (recto-rectal), 'high-grade RI' (recto-anal) or 'anismus'.

**Results** Forty patients underwent evacuation proctography (33 women, 83%). Median age was 63 years (range 34–77 years). Seven patients (17%) had a normal proctogram. Three (8%) had recto-rectal RI. Twenty-five (63%) demonstrated recto-anal RI. Five patients (12%) had anismus.

**Conclusion** Recto-anal intussusception is common in patients undergoing selective evacuation proctography for investigation of faecal incontinence. The role of recto-anal intussusception in the multifactorial aetiology of faecal incontinence has been largely overlooked. Evacuation proctography should be considered as part of routine work-up of patients with faecal incontinence.

**Keywords** Rectal intussusception, occult rectal prolapse, internal rectal prolapse, evacuation proctography

# Rectal intussusception and unexplained faecal incontinence: findings of a proctographic study

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**Table 2** Frequency of rectal intussusception by grade ( $n = 40$ ).

Grade	No RI	Anismus	Low-grade RI		High-grade RI	
			Gd I	Gd II	Gd III	Gd IV
Frequency	7	5	1	2	13	12

RI, rectal intussusception; Gd, grade.

**Table 3** Characteristics of rectocele ( $n = 40$ ).

Grade of RI	Nil	Size of rectocele		
		≤ 2 cm	> 2 cm and < 4 cm	≥ 4 cm
No RI	2	4	1	
Low grade (Gd I–II)			2	1
High grade (Gd III–IV)	3	10	10	2
Anismus	4		1	

RI, rectal intussusception; Gd, grade.

**Table 4** High-grade RI and maximum resting anal canal pressure ( $n = 40$ ).

	High-grade RI	
	Yes	No
Subnormal MRP	15	7
Normal MRP	8	10

RI, rectal intussusception; MRP, maximum resting pressure.  
 $\chi^2$  test,  $P > 0.1$ .

**Table 5** High-grade RI and maximum squeeze increment ( $n = 40$ ).

	High-grade RI	
	Yes	No
Subnormal MSP	11	10
Normal MSP	12	7

RI, rectal intussusception; MSP, maximum squeeze pressure.  
 $\chi^2$  test,  $P > 0.1$ .

# Μανομετρία RI/ODS

- Χρονιότητα ODS επιφέρει αλλαγές στη μανομετρία του πρωκτικού καναλιού
- Μειωμένες πιέσεις ηρεμίας

Bloemendaal AL et al. Int J Surg 2016

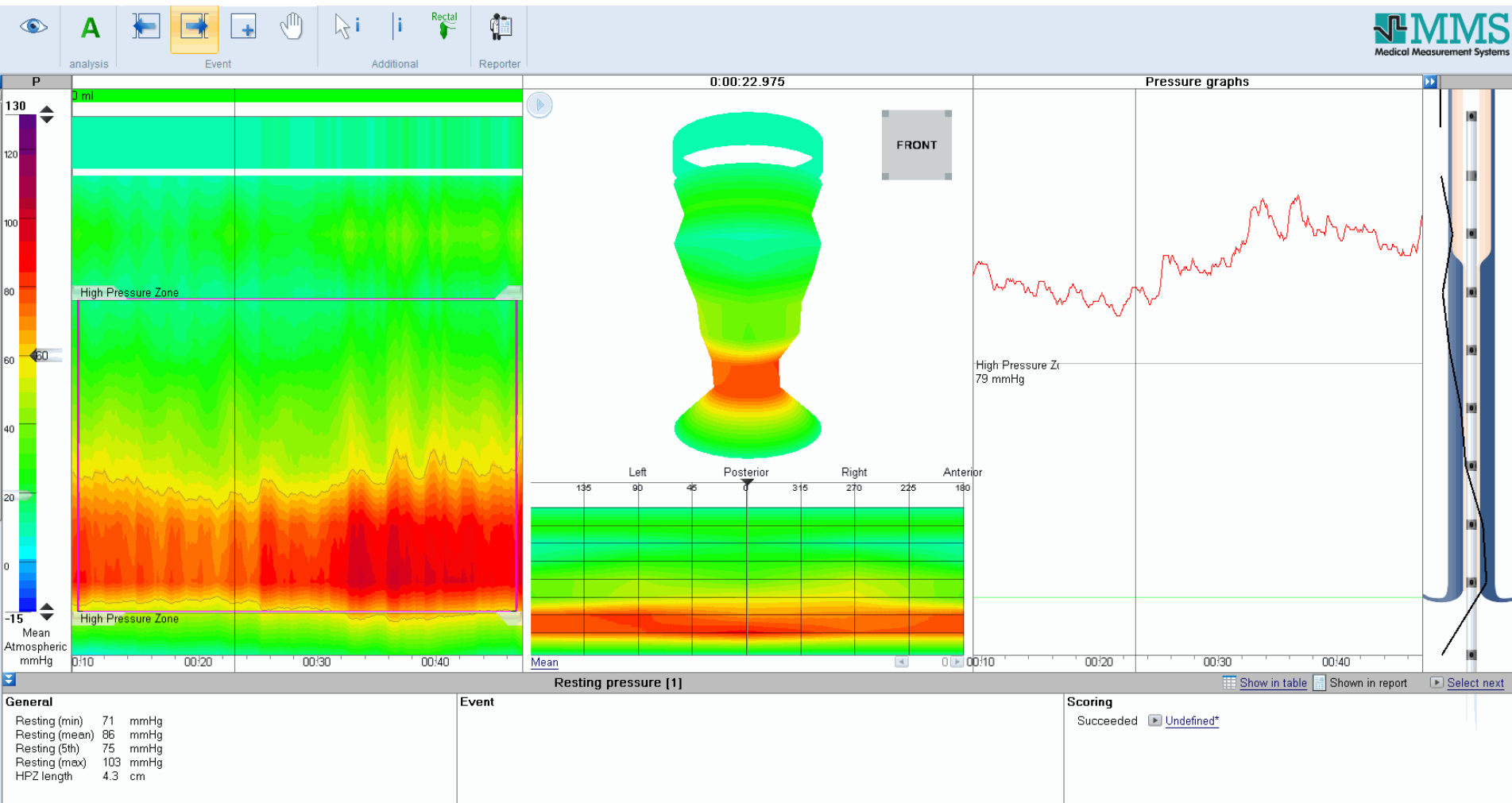
Collinson R et al. Colorectal Dis 2008



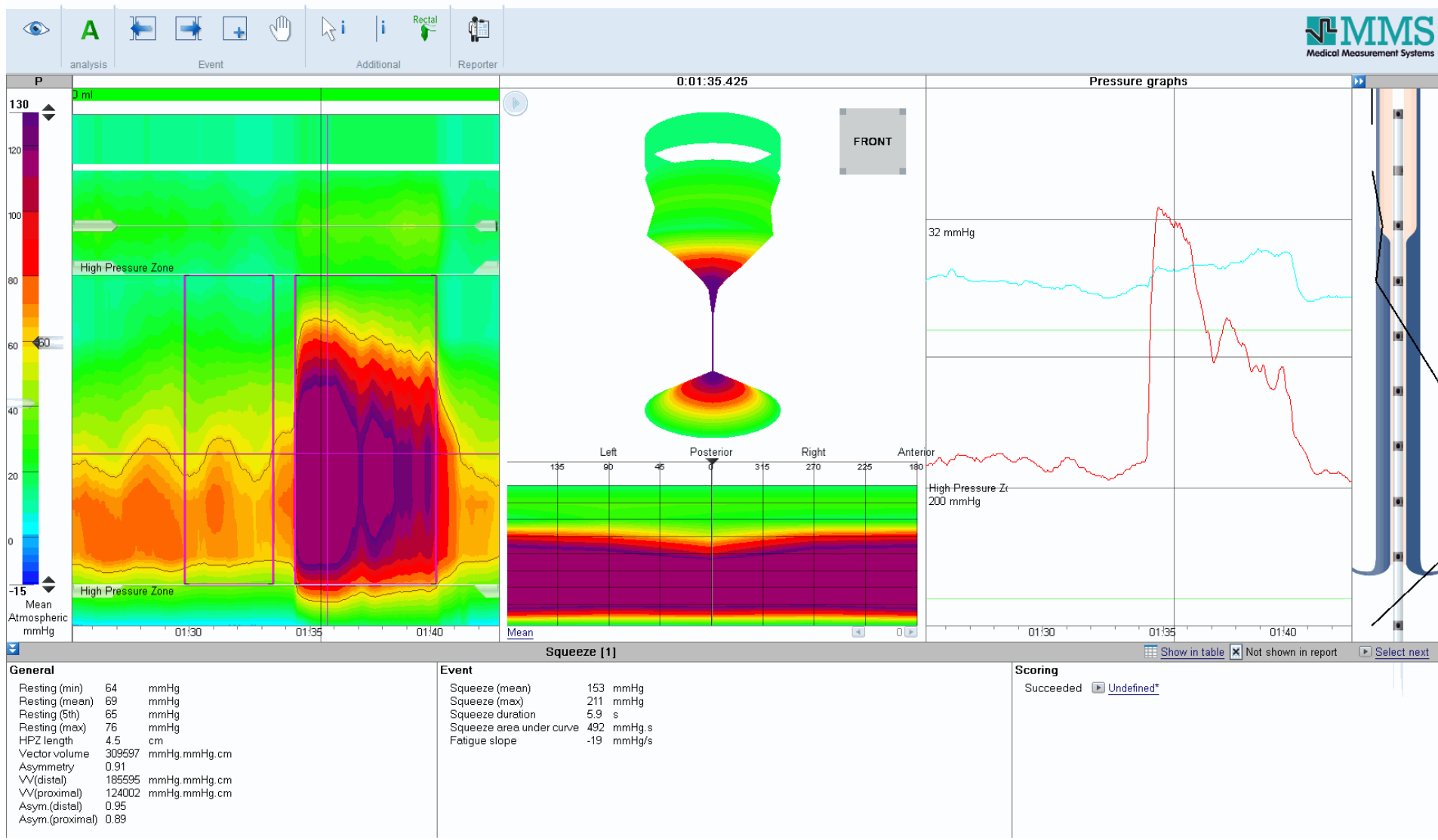
# HRAM - Investigation

- Resting pressure Πιέσεις ηρεμίας
- Squeeze pressure Πιέσεις εκούσιας σύσπασης
- Πίεση αφόδευσης
- RAIR αντανακλάστικό
- Sensation-compliance ορθού
- Πιέσεις κατά το βήχα
- Balloon expulsion

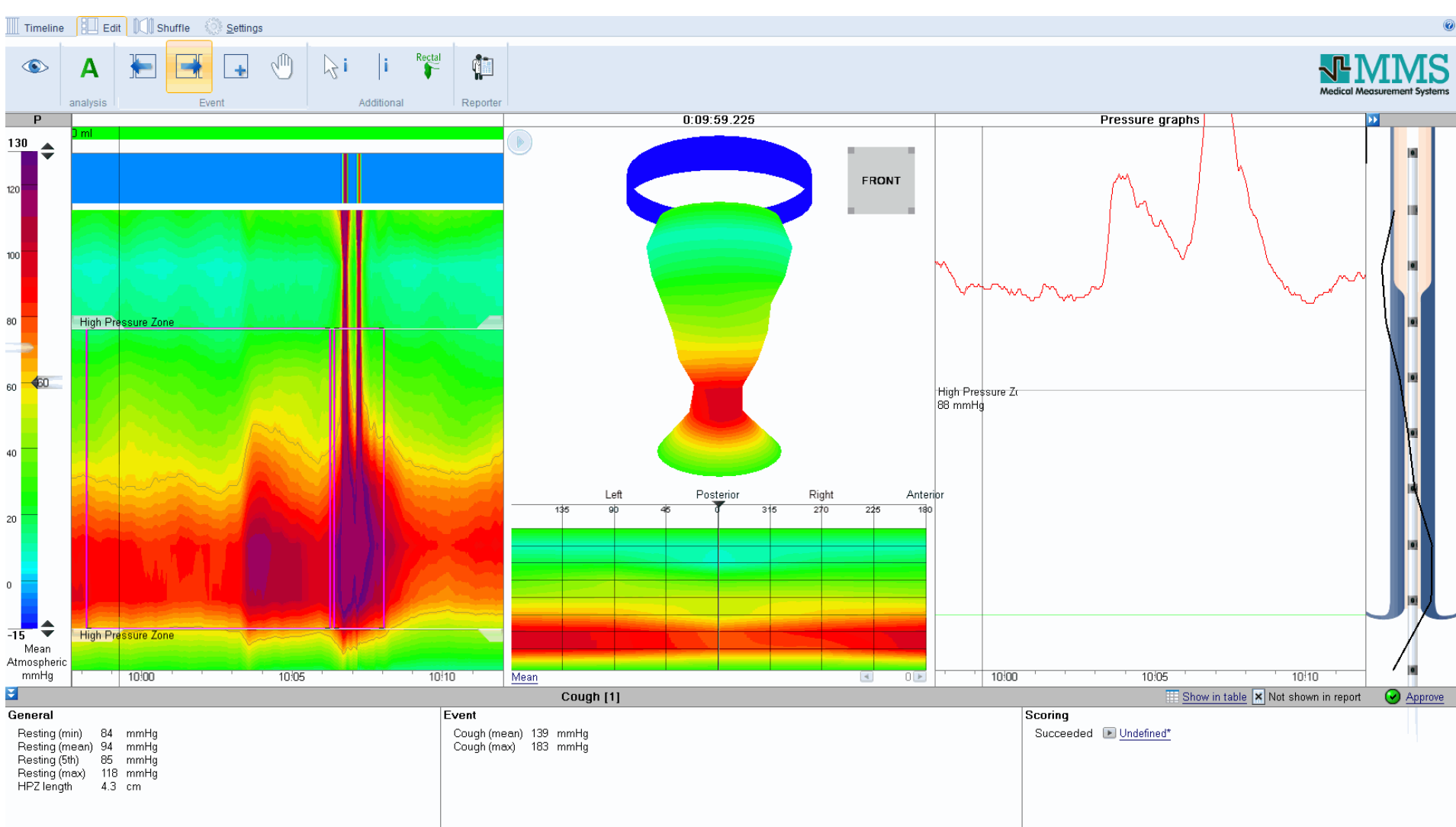
# Rest



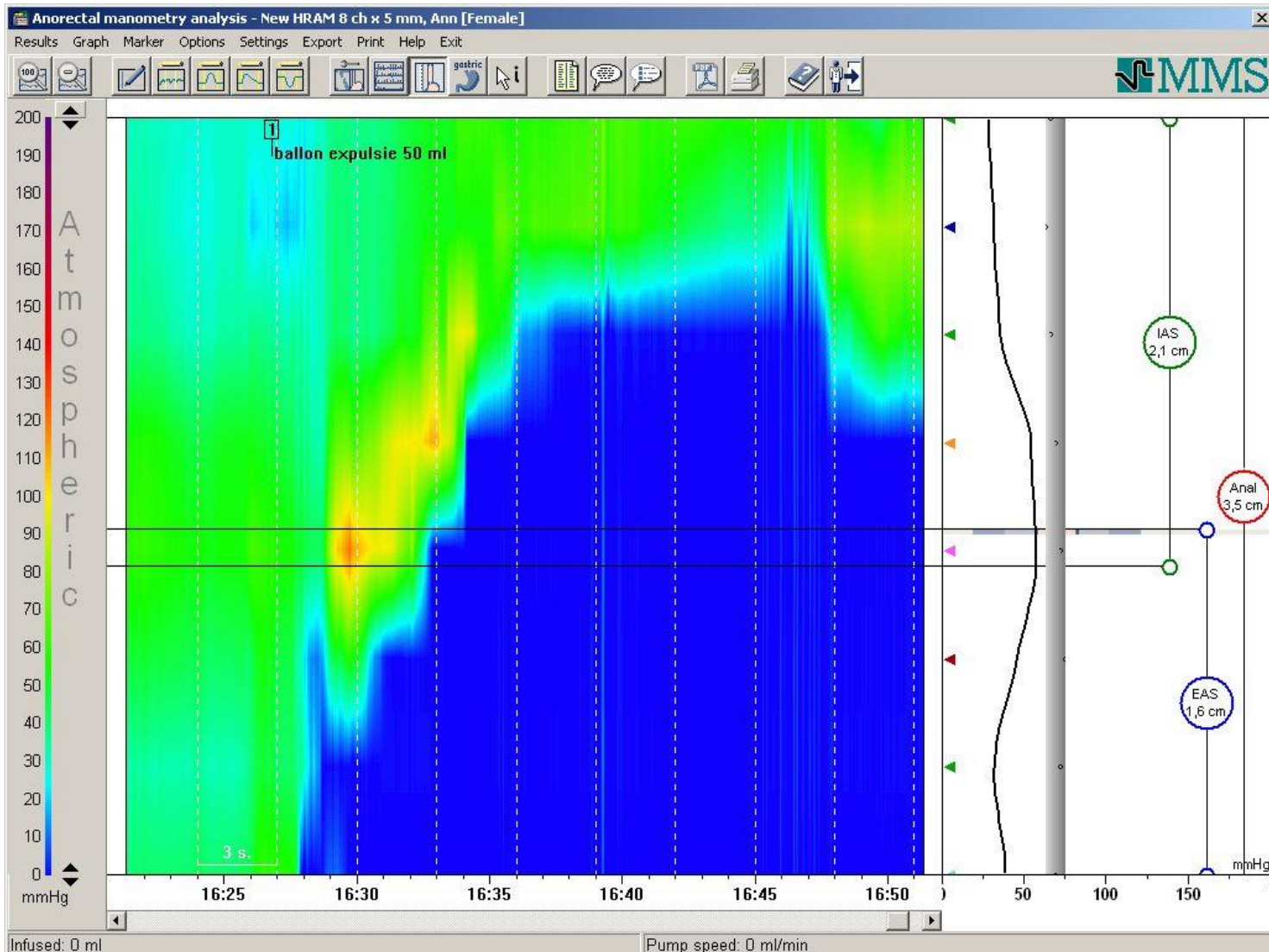
# Squeeze



# Cough



# HRAM – Balloon expulsion (50 ml)



# Μανομετρία σε RI

**Table 4** High-grade RI and maximum resting anal canal pressure ( $n = 40$ ).

	High-grade RI	
	Yes	No
Subnormal MRP	15	7
Normal MRP	8	10

RI, rectal intussusception; MRP, maximum resting pressure.  
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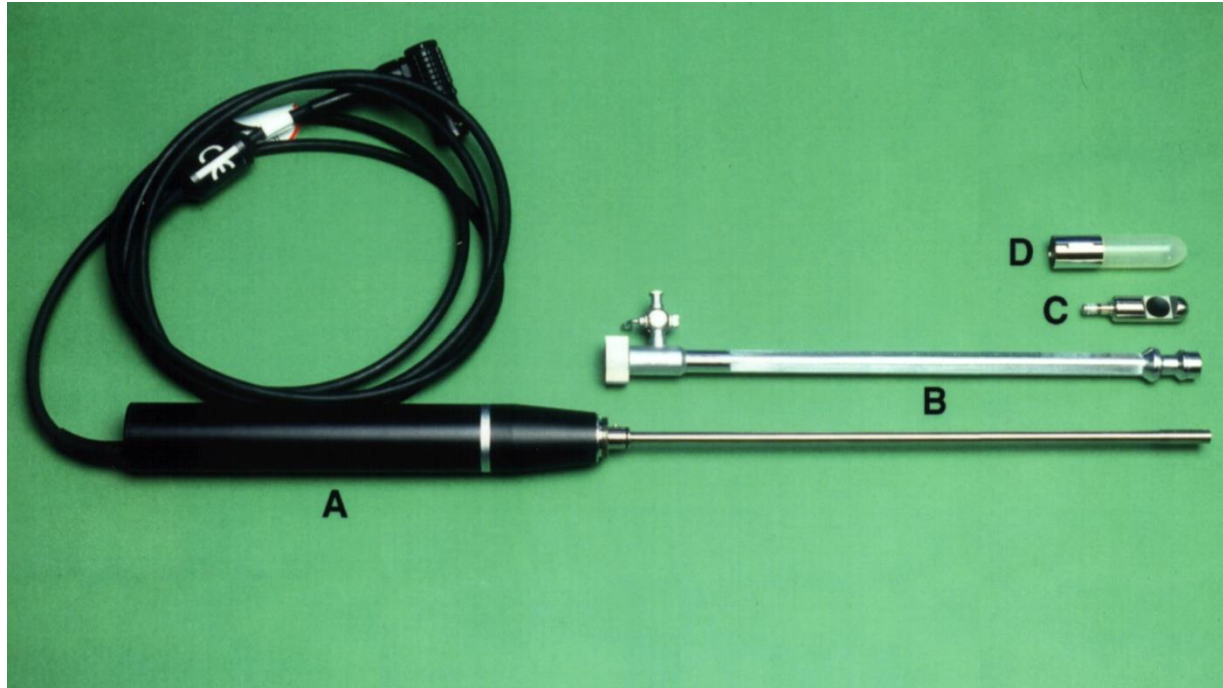
**Table 5**

Anorectal physiology vs. IRP grade.

ARP (cmH <sub>2</sub> O)	No prolapse	Low-grade IRP	High-grade IRP
Max resting pressure	55.7	66.3	54.4
Peak squeeze increment	52.5	60.1	62.0
Endurance squeeze	21.1	22.0	24.5
Threshold volume	48.0	46.1	46.5
Urge volume	106.7	82.4	92.4
Maximum volume	152.3	130.8	138.0

# Διορθικό και περινεϊκό υπερηχογράφημα

- Υψηλή διαγνωστική αξία σε εξειδικευμένα κέντρα
- Έλεγχος και ακεραιότητας σφιγκτήρα
- Διαφοροδιάγνωση με ορθοκήλη-εντεροκήλη
- Δυο φάσεις (διορθικά για σφιγκτήρες, περινεϊκά ή και διακολπικά για μεσαίο και οπίσθιο πυελικό διαμέρισμα)
- Χωρίς προετοιμασία εντέρου



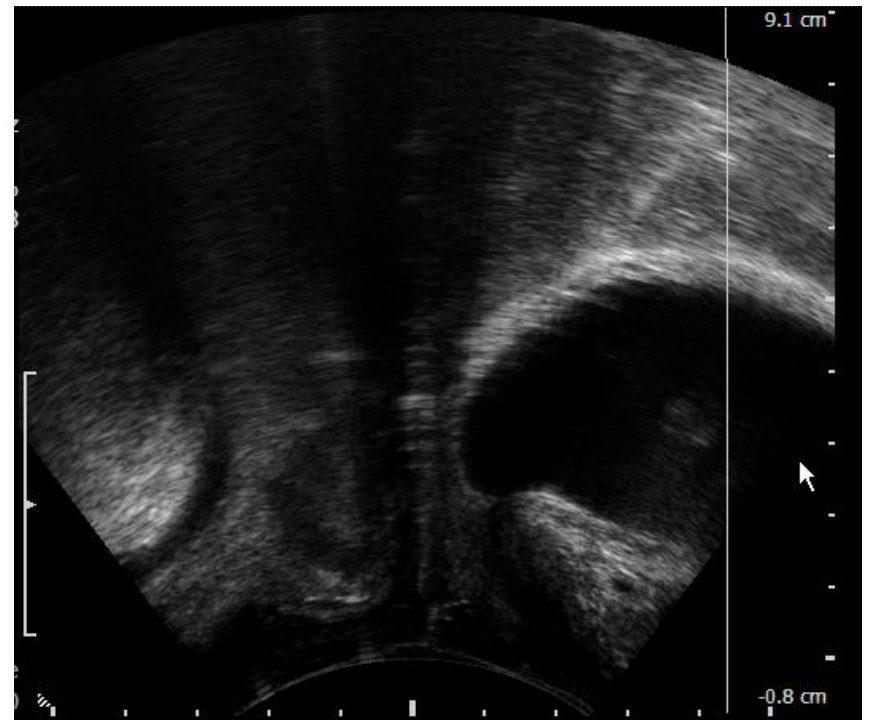
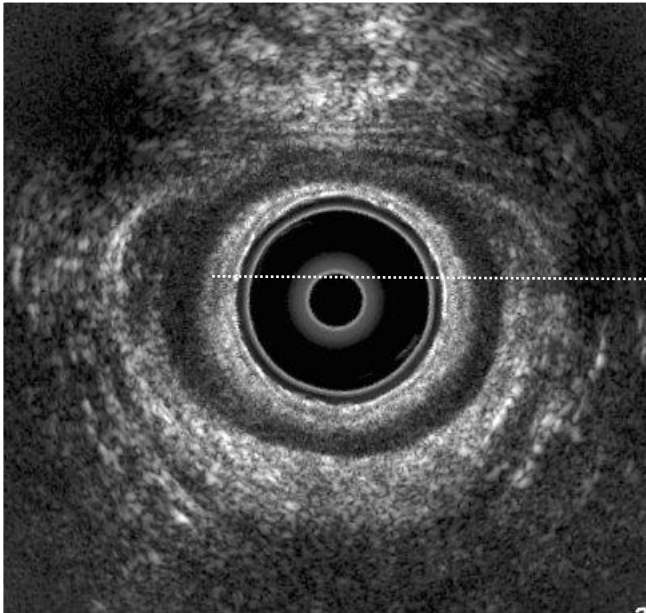
# Anal endosonography (AES)

B & K 10 Mhz probe 1850

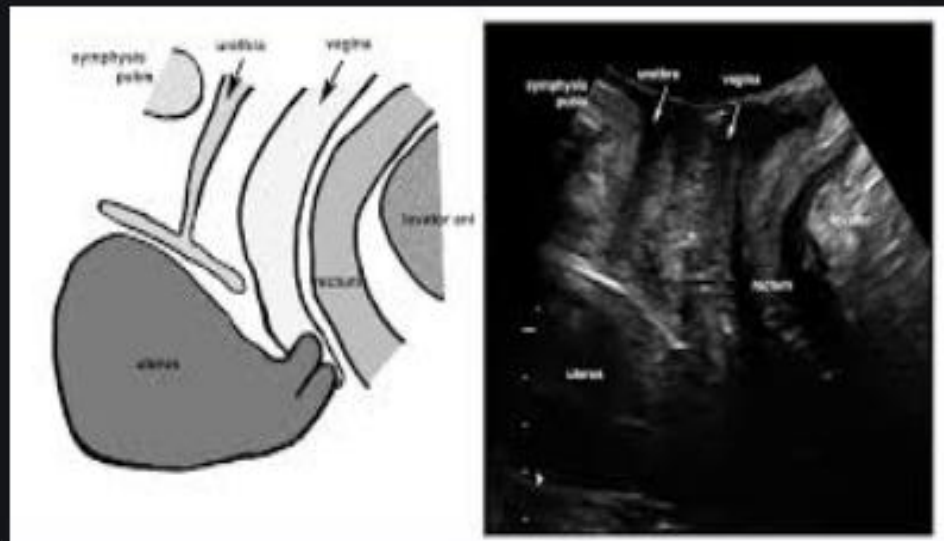
6 – 16 Mhz 2050



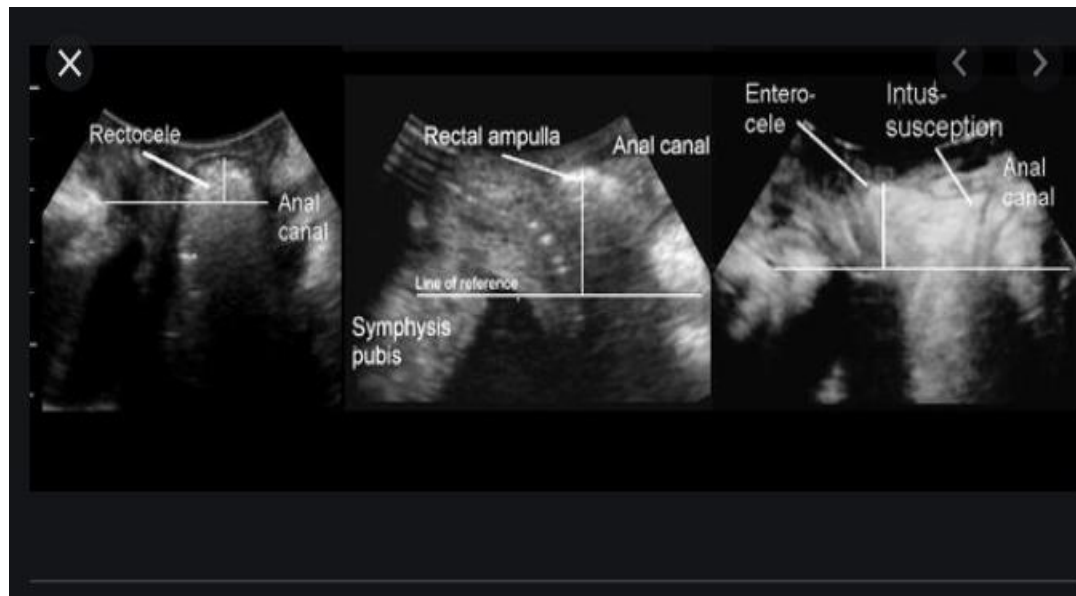
# Endoanal- transperineal US



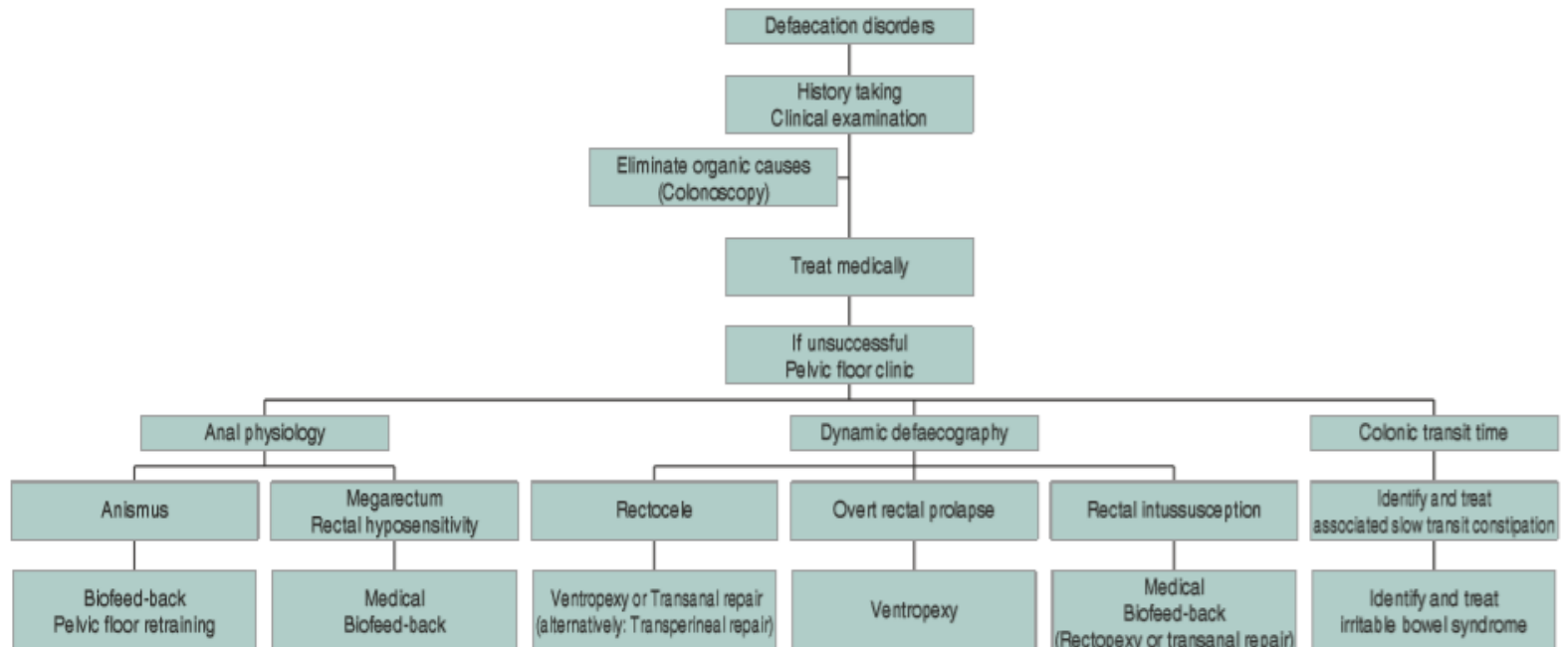
# Transperineal us



# Transperineal us



# ESCP guidelines



# Συντηρητική αγωγή

- Δίαιτα υψηλή σε ίνες
- Effecol
- Biofeedback
- Low grade RI δυσσυνέργεια

Choi et al Am J Gastroenterol 2001

Rao SS et al Am J Gastroenterol 2010

Chiarioni G et al Gastroenterology 2006

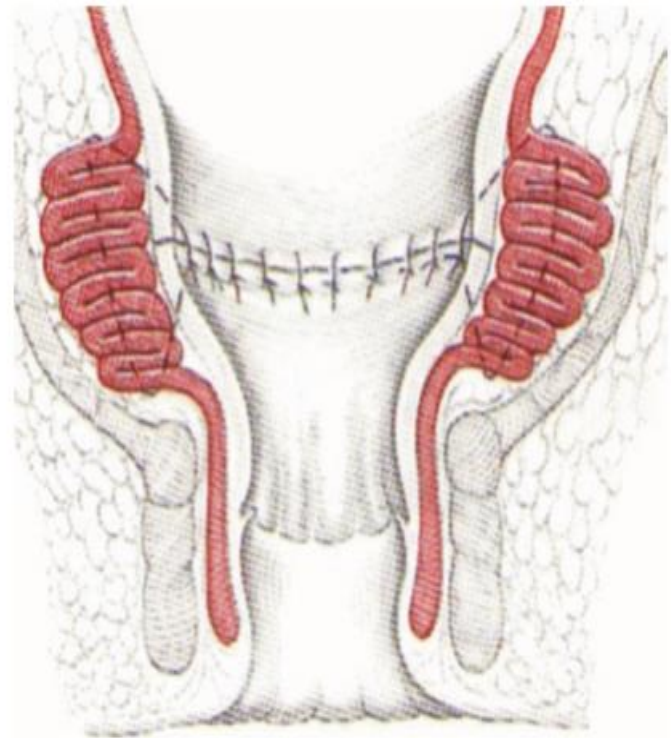
# Χειρουργείο πότε;

- Σε αποτυχία συντηρητικής αγωγής
- Απαραίτητα μετά από biofeedback
- Θα επακολουθήσει νέο biofeedback
- Σε συμπτωματικούς αρρώστους, ποτέ προφυλακτικά, ποτέ σε grade I-II, ποτέ βάσει μόνο απεικόνισης

# Endoanal Delorme

Anatomic Specificity in the Diagnosis and  
Treatment of Internal Rectal Prolapse

IRWIN R. BERMAN, M.D., D. HUBERT MANNING, M.D., KELLY DUDLEY-WRIGHT, R.N.



# Endoanal Delorme

- Ελάχιστες μελέτες
- Λίγοι ασθενείς , case series, όχι τυχαιοποιημένοι
- Μικρά f.u
- Τεχνικά δύσκολη

Lechaux JP et al Dis Colon Rectum 1995

## Short-term results after STARR versus internal Delorme for obstructed defecation: a non-randomized prospective study.

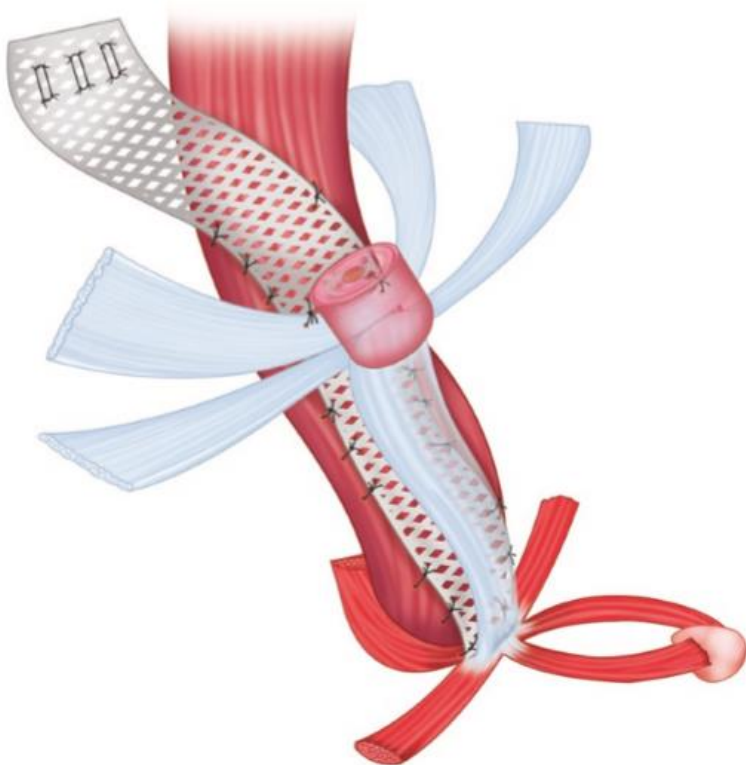
Ohazuruike NL<sup>1</sup>, Martellucci J, Menconi C, Panicucci S, Toniolo G, Naldini G.

### Author information

### Abstract

Obstructed defecation syndrome due to internal intussusception and rectocele is a common disease, and various transanal surgical techniques have been proposed. Aim of the present study was to compare the internal Delorme (ID) and the stapled transanal rectal resection (STARR) results in the treatment of patients with obstructed defecation syndrome. From September 2011 to May 2012, 23 patients were operated with STARR procedure and 12 patients with Delorme's procedure for obstructed defecation syndrome. All patients underwent preoperative assessment: clinical evaluation (Altomare ODS score, Wexner constipation scoring system), proctoscopy, defecography, anorectal manometry and endoanal ultrasonography. Surgery was proposed with: failure of medical therapy, incomplete defecation, and unsuccessful attempts with long periods spent in bathroom, defecation with digital assistance, use of enemas and defecography findings of rectoanal intussusception and rectocele. The average operative time was 28 min (range 15-65) for the STARR group and 56 min (range 28-96) for the ID group with a mean hospital stay of 2 days for both the procedures. The Wexner score significantly fell postoperatively from 17 to 4, 7 in STARR group and from 15.3 to 3.3 in the ID group. The Altomare score postoperatively fell from 18.2 to 5.5 for STARR group and from 16.5 to 5.3 for ID group. No statistically significant differences were observed between the two procedures considering the outcomes parameters and the complications. Both ID and STARR procedure seem to be effective in the treatment of ODS.

# Laparoscopic Ventral Mesh recto(colpo)pexy



## *Technique*

Surg Endosc (2006) 20: 1919–1923  
DOI: 10.1007/s00464-005-0485-y

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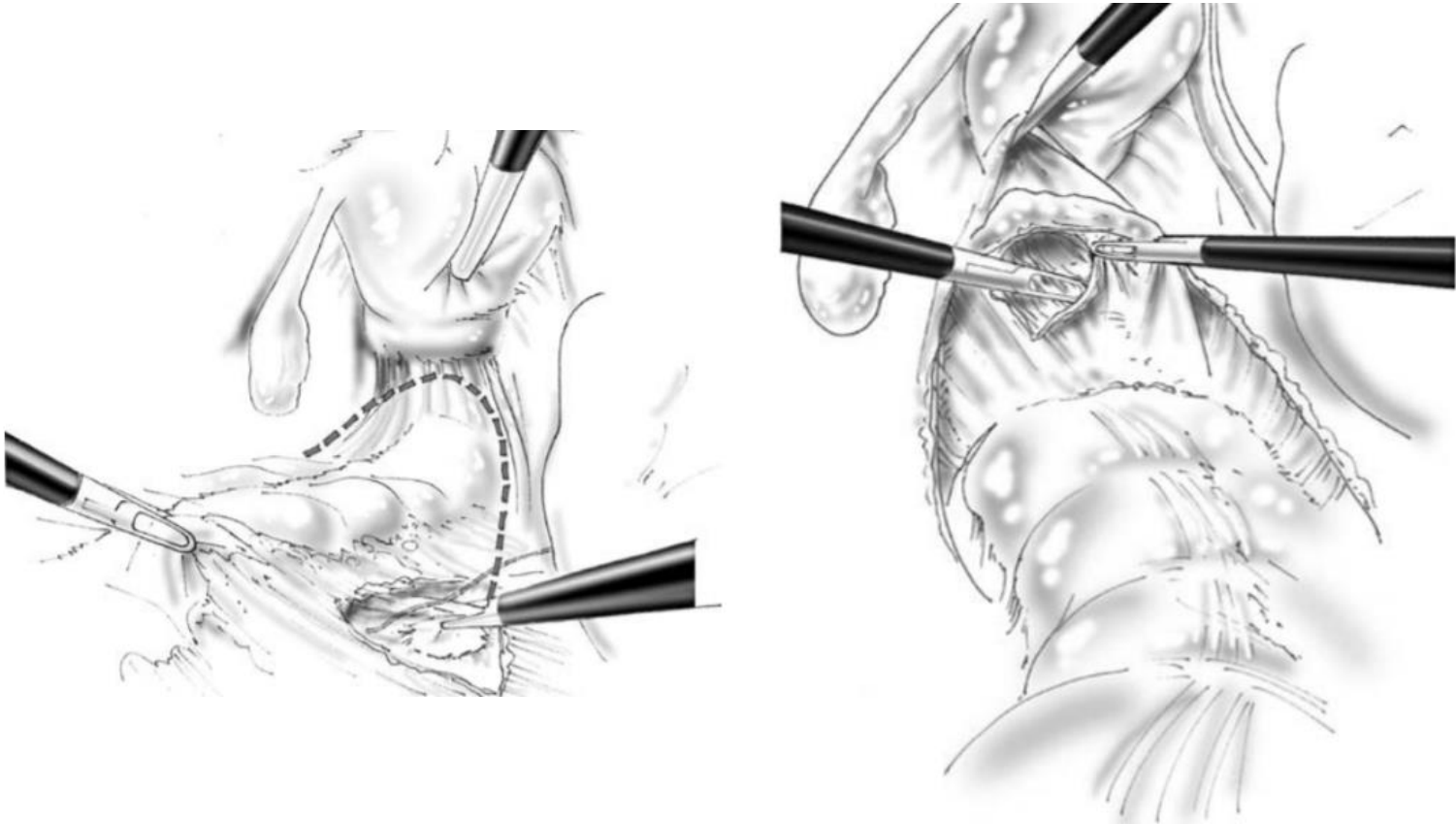
and Other Interventional Techniques

## Laparoscopic ventral recto(colpo)pexy for rectal prolapse: surgical technique and outcome for 109 patients

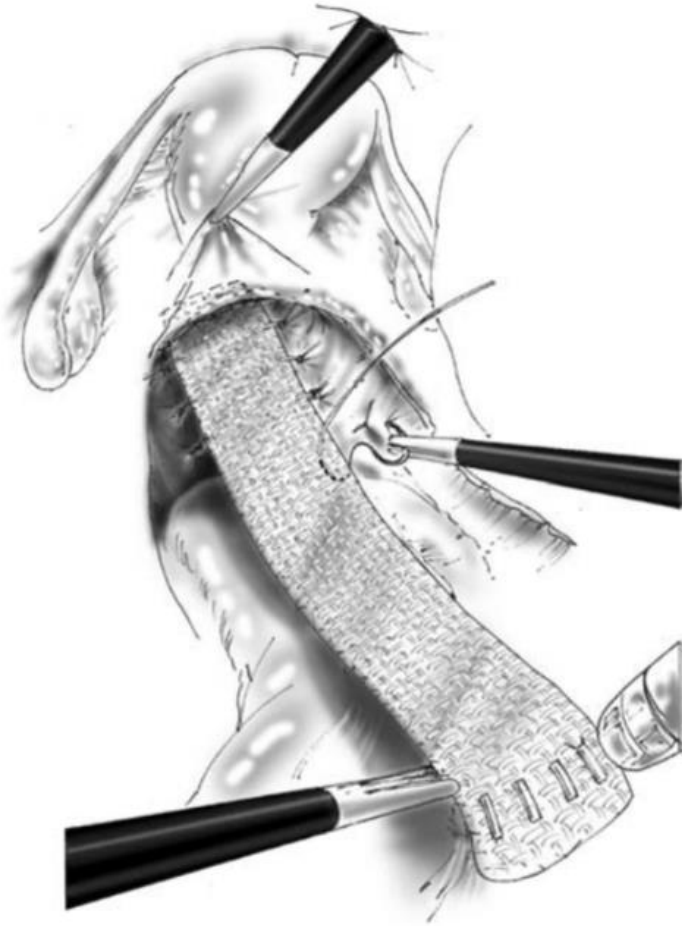
A. D'Hoore, F. Penninckx

Department of Abdominal Surgery, University Hospital Gasthuisberg, Herestraat 49, 3000 Leuven, Belgium

# LVMR



# LVMR



# LVMR

- 80% επιτυχία σε μακρόχρονο f.u
- Ασθενείς με ορθικό εγκολεασμό και συμπτώματα ακράτειας έχουν τα ίδια υψηλά ποσοστά επιτυχίας με τους ασθενείς με (low take off) εξωτερική πρόπτωση
- Παρόμοια βελτίωση αποφρακτικής δυσχεσίας σε ασθενείς με εσωτερική και εξωτερική πρόπτωση
- Να προηγείται του SNS σε ακράτεια

Gosselink MP et al. Dis Colon Rectum 2013

Prapasvivorakul S et al Int J Colorectal Dis 2015

Collinson R et al. Colorectal Dis 2007

# LVMR

**Table 12.2** Outcome data for laparoscopic ventral mesh rectopexy

Author	Patients (N)	Indication	FU (m)	OD (% improvement)	FI (% improvement)	Recurrence (%)
Auguste (2006)	54	ERP	12	70	72.4	7.4
Samaranaya (2009) (review)	223	ERP/IRP	3–61	66–90.3	69–90	
Collinson (2009)	75	IRP	12	86	85	
Wong (2011)	84	IRP	29	37	3.5	
Laurette (2012)	30	ERP ( <i>n</i> = 2) IRP ( <i>n</i> = 28)	30	57.9 76.9	76.2 65.4	3.3
Maggiori (2013)	33	ERP	42	72	90	6
Gosselink (2014)	91	ERP ( <i>n</i> = 41) IRP ( <i>n</i> = 50)	12		50 48	2.3
Rondall (2104)	190	ERP	29		93	3.2
MacKenzie (2014)	636	ERP ( <i>n</i> = 149) IRP (487)	21	56.7	89.7	
D’Hoore A Consten E (2015) (accepted)	919	ERP ( <i>n</i> = 242) IRP ( <i>n</i> = 687)	44.3	70.5	80.2	8.2

*FU* follow-up, *OD* obstructed defecation, *FI* fecal incontinence, *ERP* external rectal prolapse, *IRP* internal rectal prolapse

# LVMR

Submit a Manuscript: <http://www.wjgnet.com/esps/>  
Help Desk: <http://www.wjgnet.com/esps/helpdesk.aspx>  
DOI: 10.3748/wjg.v22.i21.4977

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REVIEW

## Current status of laparoscopic and robotic ventral mesh rectopexy for external and internal rectal prolapse

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**Author contributions:** van Iersel JJ and Paulides TJC designed the study, performed the research, analysed the data and drafted the article; Verheijen PM, Lumley JW, Broeders IAMJ and Consten ECJ critically reviewed and revised the manuscript; all authors read and approved the final version of the manuscript.

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### Abstract

External and internal rectal prolapse with their affiliated rectocele and enterocele, are associated with debilitating symptoms such as obstructed defecation, pelvic pain and faecal incontinence. Since perineal procedures are associated with a higher recurrence rate, an abdominal approach is commonly preferred. Despite the description of greater than three hundred different procedures, thus far no clear superiority of one surgical technique has been demonstrated. Ventral mesh rectopexy (VMR) is a relatively new and promising technique to correct rectal prolapse. In contrast to the abdominal procedures of past decades, VMR avoids posterolateral rectal mobilisation and thereby minimizes the risk of postoperative constipation. Because of a perceived acceptable recurrence rate, good functional results and low mesh-related morbidity in the short to medium term, VMR has been popularized in the past decade. Laparoscopic or robotic-assisted VMR is now being progressively performed internationally and several articles and guidelines propose the procedure as the treatment of choice for rectal prolapse. In this

# UK recommendations

Systematic review

doi:10.1111/codi.13773

## Surgery for constipation: systematic review and practice recommendations

### Results II: Hitching procedures for the rectum (rectal suspension)

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### Abstract

**Aim** To assess the outcomes of rectal suspension procedures (forms of rectopexy) in adults with chronic constipation.

**Method** Standardised methods and reporting of benefits and harms were used for all CapaCiTY reviews that closely adhered to PRISMA 2016 guidance. Main conclusions were presented as summary evidence statements with a summative Oxford Centre for Evidence-Based Medicine (2009) level.

**Results** Eighteen articles were identified, providing data on outcomes in 1238 patients. All studies reported only on laparoscopic approaches. Length of procedures ranged between 1.5 to 3.5 h, and length of stay between 4 to 5 days. Data on harms were inconsistently reported and heterogeneous, making estimates of harm tentative and imprecise. Morbidity rates ranged between 5–15%, with mesh complications accounting for 0.5% of patients overall. No mortality was reported after any procedures in a total of 1044 patients. Although

inconsistently reported, good or satisfactory outcome occurred in 83% (74–91%) of patients; 86% (20–97%) of patients reported improvements in constipation after laparoscopic ventral mesh rectopexy (LVMR). About 2–7% of patients developed anatomical recurrence. Patient selection was inconsistently documented. As most common indication, high grade rectal intussusception was corrected in 80–100% of cases after robotic or LVMR. Healing of prolapse-associated solitary rectal ulcer syndrome occurred in around 80% of patients after LVMR.

**Conclusion** Evidence supporting rectal suspension procedures is currently derived from poor quality studies. Methodologically robust trials are needed to inform future clinical decision making.

**Keywords** Rectopexy, chronic constipation, laparoscopic ventral mesh rectopexy (LVMR), robotic ventral mesh rectopexy (RVMR), laparoscopic resection rectopexy (LRR), open rectopexy (OR)

# Stapled Transanal Rectal Resection

## STARR

- Διορθική διόρθωση με αφαίρεση πλεονάζοντος βλεννογόνου εσωτερικής πρόπτωση και ορθοκήλης
- Λιγότερο επεμβατική
- Day case
- Ενθαρρυντικά αποτελέσματα
- Τεχνική εμπειρία/επιπλοκές
- Τεινεσμός/ακράτειες
- CCS-30 Transtar

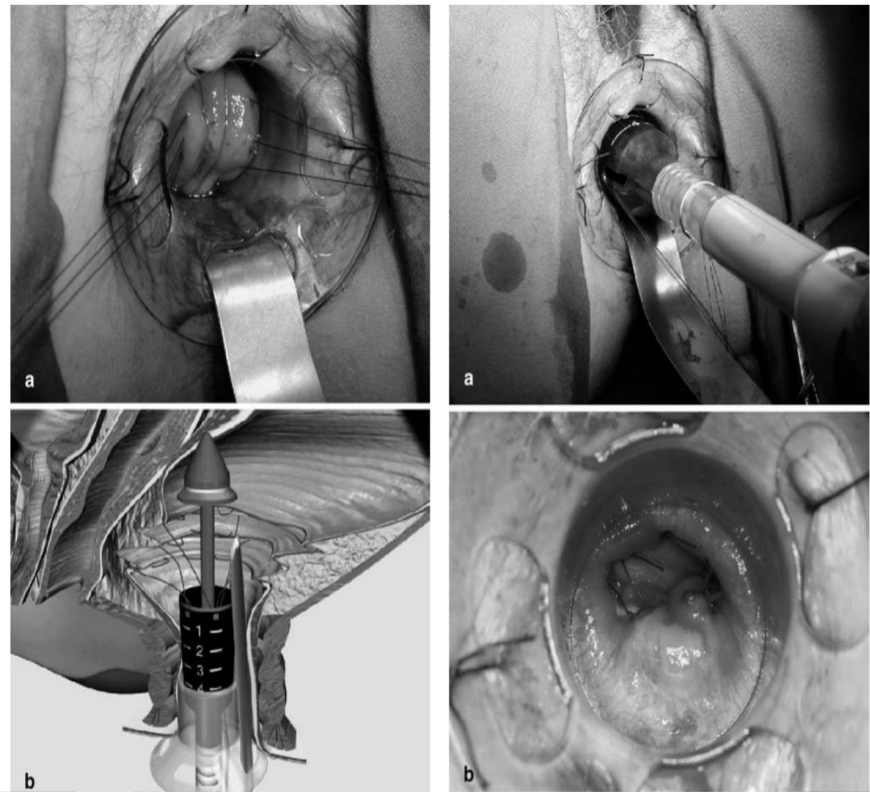
# STARR

Int J Colorectal Dis (2004) 19:359–369  
DOI 10.1007/s00384-003-0572-2

ORIGINAL ARTICLE

Paolo Boccasanta  
Marco Venturi  
Giovanni Salamina  
Bruno Mario Cesana  
Francesco Bernasconi  
Giancarlo Roviato

**New trends in the surgical treatment  
of outlet obstruction: clinical  
and functional results  
of two novel transanal stapled techniques  
from a randomised controlled trial**



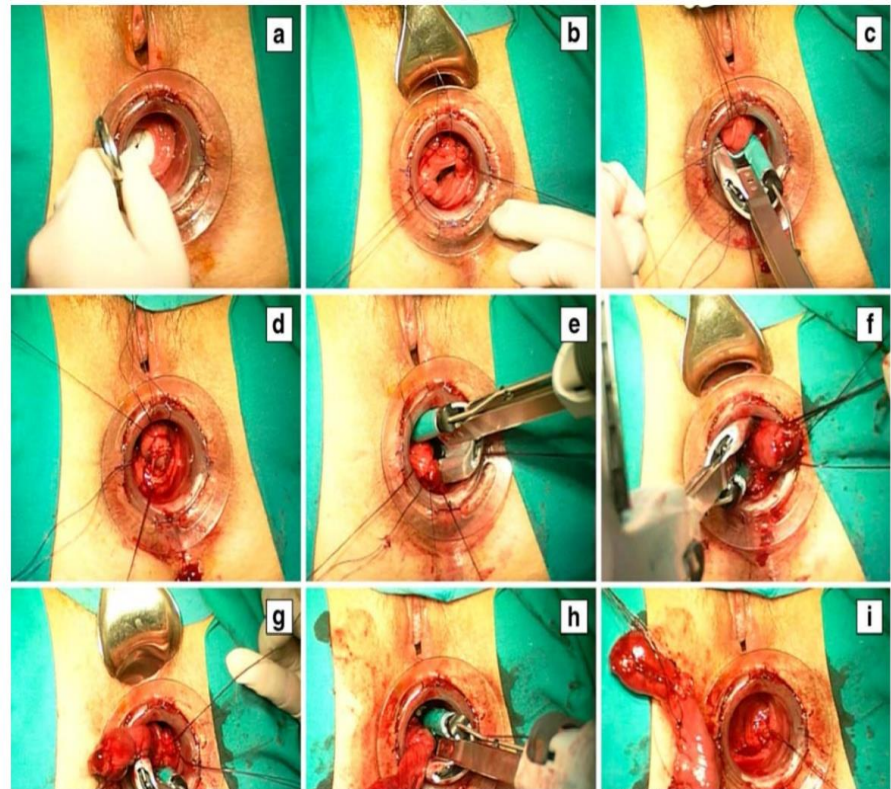
# Transtar modification

Int J Colorectal Dis (2008) 23:999–1005  
DOI 10.1007/s00384-008-0522-0

ORIGINAL ARTICLE

**Stapled trans-anal rectal resection (STARR) by a new dedicated device for the surgical treatment of obstructed defaecation syndrome caused by rectal intussusception and rectocele: early results of a multicenter prospective study**

Adolfo Renzi · Pasquale Talento · Cristiano Giardiello ·  
Giovanni Angelone · Domenico Izzo ·  
Giandomenico Di Sarno



# European TRANSTAR registry

[Int J Colorectal Dis.](#) 2014 May;29(5):611-22. doi: 10.1007/s00384-014-1836-8. Epub 2014 Feb 21.

## **STARR with CONTOUR® TRANSTAR™ device for obstructed defecation syndrome: one-year real-world outcomes of the European TRANSTAR registry.**

[Ribarić G<sup>1</sup>](#), [D'Hoore A](#), [Schiffhorst G](#), [Hempel E](#); [TRANSTAR Registry Study Group](#).

✚ Collaborators (22)

✚ Author information

### **Abstract**

**PURPOSE:** Stapled transanal rectal resection (STARR) in patients with obstructive defecation syndrome (ODS) is limited by the capacity of the circular stapler used. This prospective cohort study was conducted to assess real-world clinical outcomes of STARR with the new CONTOUR® TRANSTAR™ device, shortly named TRANSTAR, at 12 months postoperatively.

**METHODS:** From January 2009 to January 2011, consecutive patients who underwent TRANSTAR in 22 European colorectal centers were enrolled in the study. Functional outcomes and quality of life were assessed by the changes in a number of scoring systems (Knowles-Eccersley-Scott-Symptom (KESS) score, ODS score, St. Mark's score, Euro Quality of Life-5 Dimension (EQ-5D) score, and Patient Assessment of Constipation-Quality of Life (PAC-QoL) score), at 12 months as compared to baseline. All complications were recorded and analyzed.

**RESULTS:** A total of 100 patients (98% female), mean age 60 years, were entered in the study. Statistically significant improvements were seen in the KESS (median 18 vs. 6;  $p < 0.01$ ), ODS (median 15 vs. 4;  $p < 0.01$ ), and PAC-QoL scores (median 2.10 vs. 0.86;  $p < 0.01$ ). St. Mark's and EQ-5D scores improved nonsignificantly. Complications were reported in 11 % of patients, including bleeding (5%), staple line complications (3%), urinary retention (2%), and persistent pain (1%). No major complications or mortality occurred.

**CONCLUSION:** TRANSTAR facilitated a tailored, real circumferential full-thickness rectal resection, leading to improved patient functional and quality of life outcomes at 12 months postoperatively. It represents a safe and effective treatment for ODS in local clinical practice, although the sustainability of real-world results needs to be proven in the long-term follow-up.

# ODS study group

[Dis Colon Rectum](#). 2008 Nov;51(11):1611-8. doi: 10.1007/s10350-008-9378-1. Epub 2008 Jul 19.

## **Outcomes of stapled transanal rectal resection vs. biofeedback for the treatment of outlet obstruction associated with rectal intussusception and rectocele: a multicenter, randomized, controlled trial.**

[Lehur PA](#)<sup>1</sup>, [Stuto A](#), [Fantoli M](#), [Villani RD](#), [Queralto M](#), [Lazorthes F](#), [Hershman M](#), [Carriero A](#), [Pigot F](#), [Meurette G](#), [Narisetty P](#), [Villet R](#); [ODS II Study Group](#).

### **Author information**

### **Erratum in**

[Dis Colon Rectum](#). 2008 Nov;51(11):1739. Narisetty, Prashanty [corrected to Narisetty, Prashanthi].

### **Abstract**

**PURPOSE:** This study was designed to assess the safety and outcomes achieved with stapled transanal rectal resection vs. biofeedback training in obstructed defecation patients.

**METHODS:** A total of 119 women patients who suffered from obstructed defecation with associated rectocele and rectal intussusception were randomized to stapled transanal rectal resection or biofeedback training. Stapled transanal rectal resection was performed by using two circular staplers to produce transanal full-thickness rectal resection. Primary outcome was symptoms of obstructed defecation resolution at 12 months; secondary outcomes included safety, change in quality of life score, and anatomic correction of rectocele and rectal intussusception.

**RESULTS:** Fourteen percent (8/59) stapled transanal rectal resection and 50 percent (30/60) biofeedback training patients withdrew early. Eight (15 percent) patients treated with stapled transanal rectal resection and 1 (2 percent) biofeedback patient experienced adverse event. One serious adverse event (bleeding) occurred after stapled transanal rectal resection. Scores of obstructed defecation improved significantly in both groups as did quality of life (both  $P < 0.0001$ ). Successful treatment was observed in 44 (81.5 percent) stapled transanal rectal resection vs. 13 (33.3 percent) evaluable biofeedback training patients ( $P < 0.0001$ ). Functional benefit was observed early and remained stable during the study.

**CONCLUSIONS:** In this controlled trial, stapled transanal rectal resection was well tolerated, was more effective than biofeedback training for the resolution of obstructed defecation symptoms, and improved quality of life, with minimal risk of impaired continence. Thus, stapled transanal rectal resection offers a new treatment alternative for obstructed defecation after failure of conservative measures including biofeedback training, a noninvasive approach.

# ODS/STARR

Acta Chir Belg. 2014 May-Jun;114(3):189-97.

## **Relief of obstructed defecation syndrome after stapled transanal rectal resection (STARR): a meta-analysis.**

Van Geluwe B, Stuto A, Da Pozzo F, Fieuws S, Meurette G, Lehur PA, D'Hoore A.

### **Abstract**

**OBJECTIVES:** Stapled transanal rectal resection (STARR) is a promising new treatment for obstructed defecation syndrome (ODS) associated with rectal intussusception and/or rectocele. The aim of this work was to assess the efficacy of STARR to treat ODS.

**METHODS:** Outcome data after STARR for ODS were pooled according to the used constipation score. As different types of constipation scores were reported, and standardized effect sizes were calculated before performing a meta-analysis.

**RESULTS:** Twenty-six publications were identified with a median follow-up of 12 months (range: 3-42). In total 1298 patients were included. Six different scoring systems were used. In total 43 estimates of the effect STARR were analyzed. All studies showed a significant improvement in ODS yielding a combined standardized effect size of 3.8 (95% CI : 3.2-4.5). Although a very high degree of heterogeneity between effect sizes has been observed ( $I^2 = 93.3\%$ ), suggesting an overestimation of this improvement. This is partially due to the use of various instruments, but largely originating from (unmeasured) study characteristics.

**CONCLUSIONS:** The consistent finding of a decrease in the various ODS-scores confirms that STARR can reduce ODS but the effect is overestimated. This meta-analysis clearly highlights some methodological shortcomings in published data. Heterogeneity in ODS scoring implies the need for standard effect size calculation to compare published results, and underlines the urgent need for a more uniform and accurate data reporting.

# ASCRS practise guidelines

## CLINICAL PRACTICE GUIDELINES

### The American Society of Colon and Rectal Surgeons' Clinical Practice Guideline for the Evaluation and Management of Constipation

Ian M. Paquette, M.D. • Madhulika Varma, M.D. • Charles Ternent, M.D.  
Genevieve Melton-Meaux, M.D. • Janice F. Rafferty, M.D. • Daniel Feingold, M.D.  
Scott R. Steele, M.D.

*4. Transrectal stapled repair of rectoceles and rectal intussusception are typically not recommended because of the high rate of complications. Grade of Recommendation: Weak recommendation based on moderate-quality evidence, 2B*

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# UK Recommendations

Systematic review

doi:10.1111/codi.13772

## Surgery for constipation: systematic review and practice recommendations

### Results III: Rectal wall excisional procedures (Rectal Excision)

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\*Queen Elizabeth Hospital, Gateshead NHS Trust, Gateshead, UK, †National Bowel Research Centre, Blizard Institute, Queen Mary, University London, London, UK, ‡Hospital Germans Trias i Pujol, Barcelona, Spain, §University of Warwick, Coventry, UK, ¶National Institute for Health Research: Chronic Constipation Treatment Pathway, London, UK and \*\*Affiliate section of the Association of Coloproctology of Great Britain and Ireland

### Abstract

**Aim** To assess the outcomes of rectal excisional procedures in adults with chronic constipation.

**Method** Standardised methods and reporting of benefits and harms were used for all CapaCiTY reviews that closely adhered to PRISMA 2016 guidance. Main conclusions were presented as summary evidence statements with a summative Oxford Centre for Evidence-Based Medicine (2009) level.

**Results** Forty-seven studies were identified, providing data on outcomes in 8340 patients. Average length of procedures was 44 min and length of stay (LOS) was 3 days. There was inadequate evidence to determine variations in procedural duration or LOS by type of procedure. Overall morbidity rate was 16.9% (0–61%), with lower rates observed after Contour Transtar procedure (8.9%). No mortality was reported after any procedures in a total of 5896 patients. Although inconsistently

reported, good or satisfactory outcome occurred in 73–80% of patients; a reduction of 53–91% in Longo scoring system for obstructive defecation syndrome (ODS) occurred in about 68–76% of patients. The most common long-term adverse outcome is faecal urgency, typically occurring in up to 10% of patients. Recurrent prolapse occurred in 4.3% of patients. Patients with at least 3 ODS symptoms together with a rectocele with or without an intussusception, who have failed conservative management, may benefit from a rectal excisional procedure.

**Conclusion** Rectal excisional procedures are safe with little major morbidity. It is not possible to advise which excisional technique is superior from the point of view of efficacy, peri-operative variables, or harms. Future study is required.

**Keywords** surgery, constipation, rectal excision, STARR, TRANSTAR

ΕΥΧΑΡΙΣΤΩ ΠΟΛΥ