

Persistierende Inkontinenz nach proktologischen Eingriffen

Was kommt danach?

Chirurgische Sicht: PD Dr. Daniel Steinemann
Gastroenterol. Sicht: Dr. Stephan Baumeler



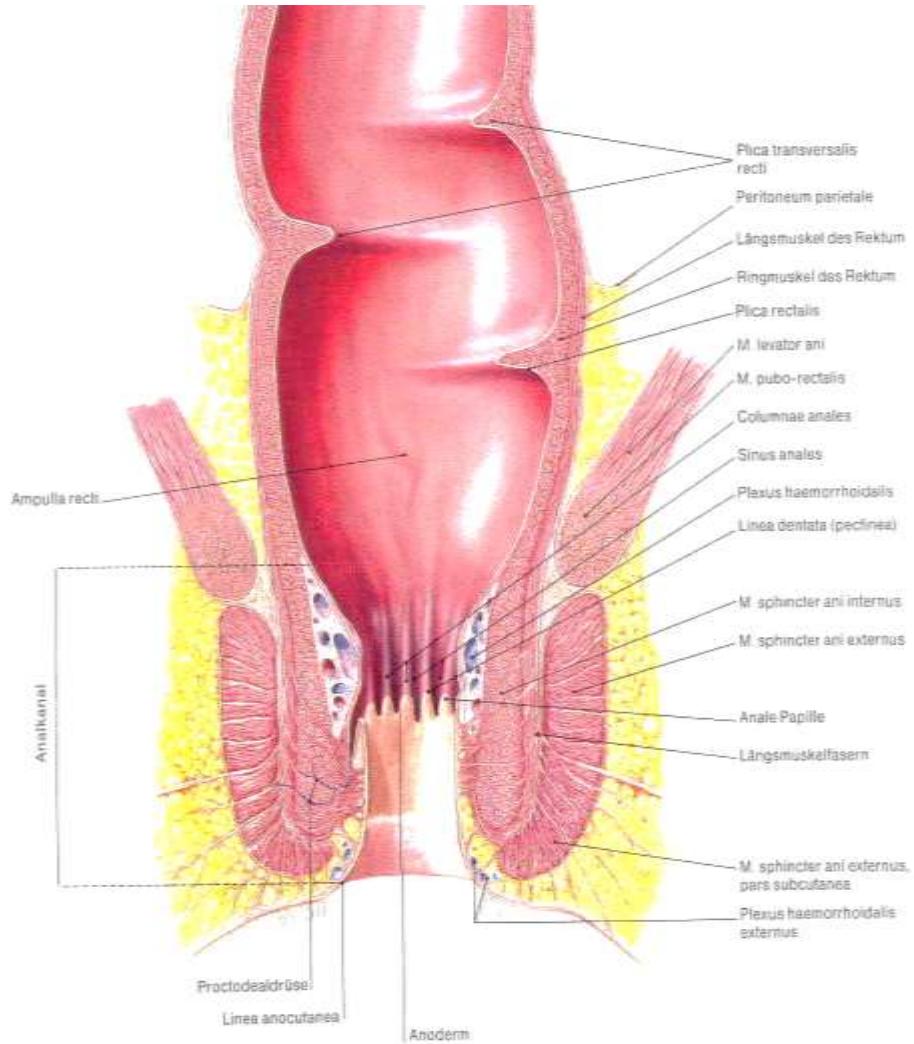
Kontinenz

Motorisch

- Innerer Schliessmuskel
- Äusserer Schliessmuskel
- Beckenboden, Ligamente, Organe
- Ruhedruck:
 - 27% willkürlich
 - 53% unwillkürlich
 - 20% haemorrhoidaler Plexus

Sensorisch

- Sensibles Anoderm
- Rektumvolumen
- Neurologische Faktoren
- Psychologische Faktoren



Haemorrhoidektomie



LigaSure® Haemorrhoidektomie

69 jähriger Mann

- Rezividerende Blutungen
- Hämorrhoiden Grad III 4, 7, 11 Uhr SSL
- Xarelto bei kardialen Arrhythmien
- St.n. 3x tiefer Venenthrombose



LigaSure® Haemorrhoidektomie

Status nach partieller Internussphincterotomie vor 40 Jahren im Rahmen einer Hämorrhoidektomie

- Stuhlvorwarnzeit 30 min
- Narbe bei 6 Uhr SSL
- Ileokolonoskopie mit Polypektomie im Coecum und Rektum

Ligasure-Hämorrhoidektomie

bei 4,7, und 11 Uhr SSL 12/2016



Inkontinenz nach Haemorrhoiden-OP

Kurzfristig

TABLE 4. Incidence of Complications During the Follow-up Period

Complications	SH (%)	MM (%)	P
Fecaloma	1 (1.9)	8 (14.0)	0.033
Continence problems	6 (11.5)	5 (8.8)	0.632
Postoperative bleeding	1 (1.9)	0	0.477
Stenosis involving hospitalization	0	1 (1.8)	1.000
Urine retention	1 (1.9)	3 (5.2)	0.620
Hemorrhoidal thrombosis	7 (12.7)	0	0.006
Anal fissure	2 (3.8)	0	0.225
Total	14 (25.5)	14 (24.1)	0.871

SH indicates stapled hemorrhoidopexy; MM, Milligan-Morgan.

Nach 1 Jahr

TABLE 5. Adverse Effects of Surgery on Anorectal Function After 1 Year

New Symptoms	SH Versus MM	Total (%)
Urgency	7 versus 4 P = 0.524	11/94 (12)
Anal incontinence	2 versus 6 P = 0.290	8/79 (10)
Tenesmus	1 versus 2 P = 1.000	3/89 (3)
Discrimination problems	1 versus 2 P = 0.610	3/97 (3)

SH indicates stapled hemorrhoidopexy; MM, Milligan-Morgan.

Meistens nur gelegentlich ohne soziale Beeinträchtigung

1 Patient mit Einlagen, 2 Patienten mit Inkontinenz für festen Stuhl (1 MM, 1 SH)

Gravié JF: Stapled hemorrhoidopexy versus Miligan-Morgan Hemorrhoidectomy (RCT). Ann Surg 2005

Haemorrhoiden-OP

- Anale Retraktion – Sphinkter Dilatation
- Durchtrennung von Schliessmuskelfasern
- Sekundäre Wundheilung – verminderte Sensibilität
- Verminderte Fähigkeit der rektoanale Diskriminierung
- Verlust des haemorrhoidalen Plexus (verminderter Ruhedruck)

Johannsson HÖ, et al. Dis Colon Rectum 2013

Table 3 Continence disorders after conventional haemorrhoidectomy (review of literature)

Author	Year	Number	Follow-up	Procedure	Continence disorder
Read et al. [80]	1982	24	6–12 weeks	Milligan	4%
McConnell and Khubchandani [81]	1983	441	1–7 years	Parks	12.9% (transitory) 0.5% (permanent)
Athanasiadis et al. [29]	1986	167	2–10 years	Milligan	I ⁰ 4%, II ⁰ 4%
Konsten and Baeten					(effect of internal sphincter)
Ho et al. [31]					
Kirsch et al. [82]					0
Johannsson et al. [83]	2002	418	2–11 (6) years	Milligan	20% (I ⁰ 52%, II ⁰ 40%, III ⁰ 8%)
Ebert and Meyer [30]	2002	30	54 months	Milligan	11% (I ⁰ 3%, II ⁰ 10%)
Hetzer et al. [84]	2002	20	12 months	Ferguson	0

Haemorrhoidektomie: 0 – 20%

Table 4 Continence disorders after stapled haemorrhoidopexy (review of literature)

Author	Year	Number	Follow-up	Procedure	Continence disorder
Ho et al. [31]	2000	57	3 months	Longo	0
Kirsch et al. [82]	2001	150	3–6 months	Longo	0
Beattie and Loudon [85]	2001			Longo	0
Altomare et al. [86]	2001			Longo	0 (1× urge incontinence)
Fantin et al. [87]	2002			Longo	0 (manometry =)
Hetzer et al. [84]	2002	20	1 year	Longo	0
Ebert and Meyer [30]	2002	72	14 months	Longo	28% (I ⁰ 18%, II ⁰ 10%)
Jongen et al. [88]	2006	654	16 months	Longo	1.5%
Kanellos et al. [32]	2006	126	61.5 months	Longo	I ⁰ 5.8% (up to 6 weeks postoperative)

Longo: 0 – 28%

Ommer A, Wenger FA, Walz MK. Int J Colorectal Dis 2008

LigaSure® Haemorrhoidektomie

- 5 Wochen p.o.: noch **Schmerzen** beim Stuhlgang, unter Metamucil regelmässig
- 5 Monate p.o.: persistierende **Urgesymptomatik**, Vorwarnzeit von 1-2 Minuten, Inkontinenz für flüssigen Stuhl, teilweise **schwierige Stuhlentleerungen** mit langem Warten und Pressen, keine Schmerzen **Initial** nach der OP **starke Schmerzen**.
- 6 Monate p.o.: **Manometrie**: Ruhedruck 59 mmHg, starker Klemmdruck 220 mmHg
- **MR Defaekographie**: Anismus mit nicht entspannendem Musculus puborectalis.
- 8 Monate p.o.: **Verbesserung**, weniger Stuhldrang, Empfehlung zur Beckenbodenphysiotherapie.

Reasons for fecal incontinence

Hypokapazitives
Rektum

Hyposensitives
Rektum

Sphinkter
Funktionsstörung

Sphinkter Defekt

Inkomplette
Evakuierung

Kombinierte
Problematik

Reasons for fecal incontinence

Hypokapazitives
Rektum

Hyposensitives
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Sphinkter
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Evakuierung

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Problematik

Anorektale Manometrie
Sensibilitäts Testung
Barostat

Reasons for fecal incontinence

Hypokapazitives
Rektum

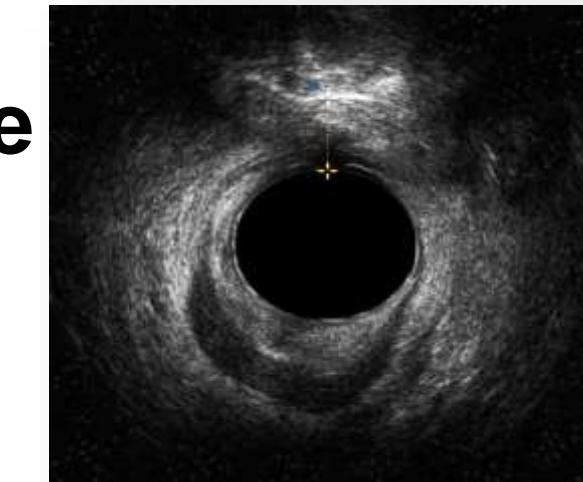
Hyposensitives
Rektum

Sphinkter
Funktionsstörung

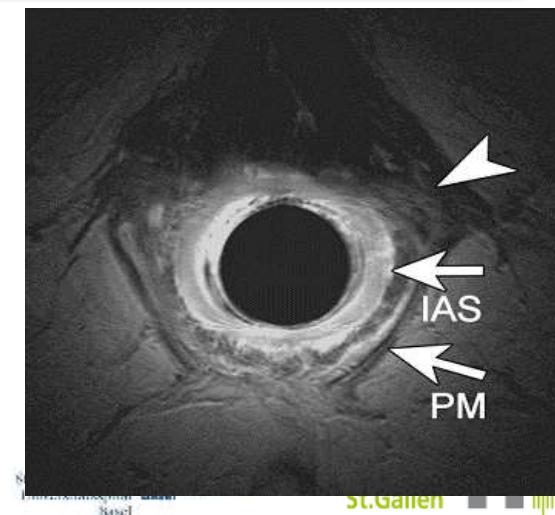
Sphinkter Defekt

Inkomplette
Evakuierung

Kombinierte
Problematik



Endosonografie
MRI



Reasons for fecal incontinence

Hypokapazitives
Rektum

Hyposensitives
Rektum

Sphinkter
Funktionsstörung

Sphinkter Defekt

Inkomplette
Evakuierung

Kombinierte
Problematik



MR Defäkografie
Endopskopie/Anoskopie
Manometrie

Faser Therapie

konservativ

Fiber supplement

Stuhl modifizierende
Medikamente

Muskeltraining

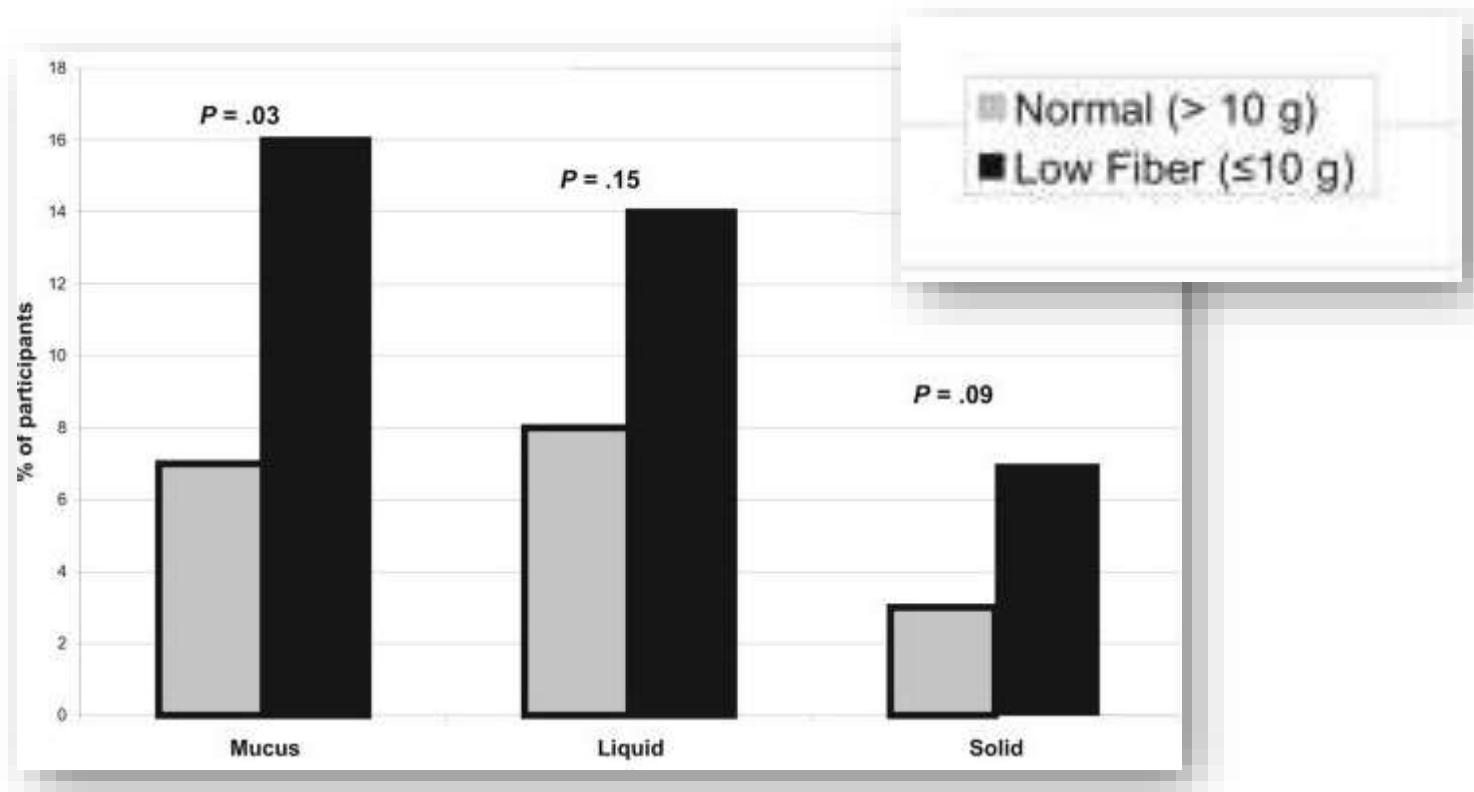
Anal Plugs

Irrigationssysteme

P TNS



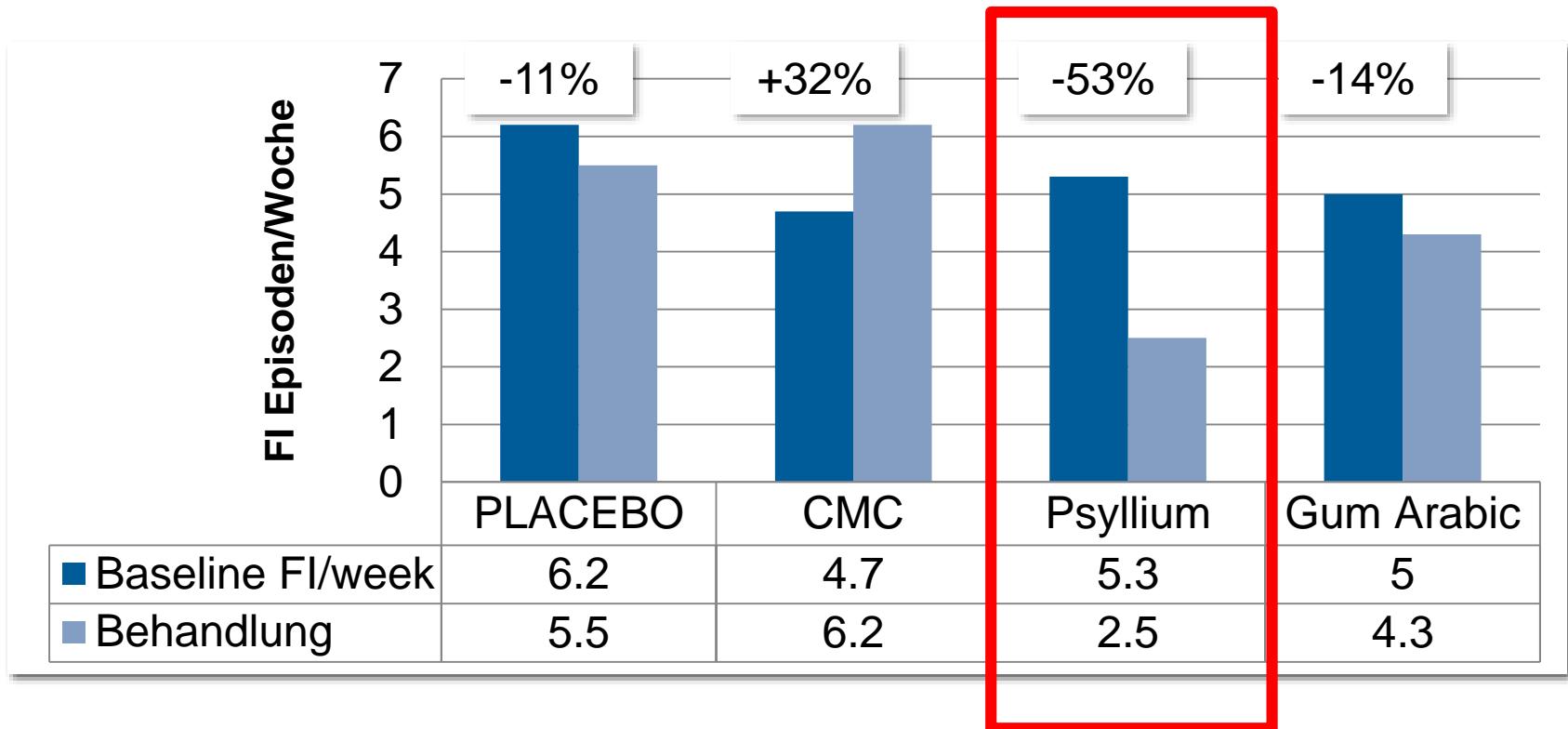
Fibers for fecal incontinence



Prevalence of fecal incontinence by type and fiber intake

Markland A.D. et al. Am J Obstet Gynecol. 2009

Fiber supplementation for fecal incontinence



CMC: Carboxy Methyl Cellulose

Psyllium: Flohsamenpulver z.B. Metaucil

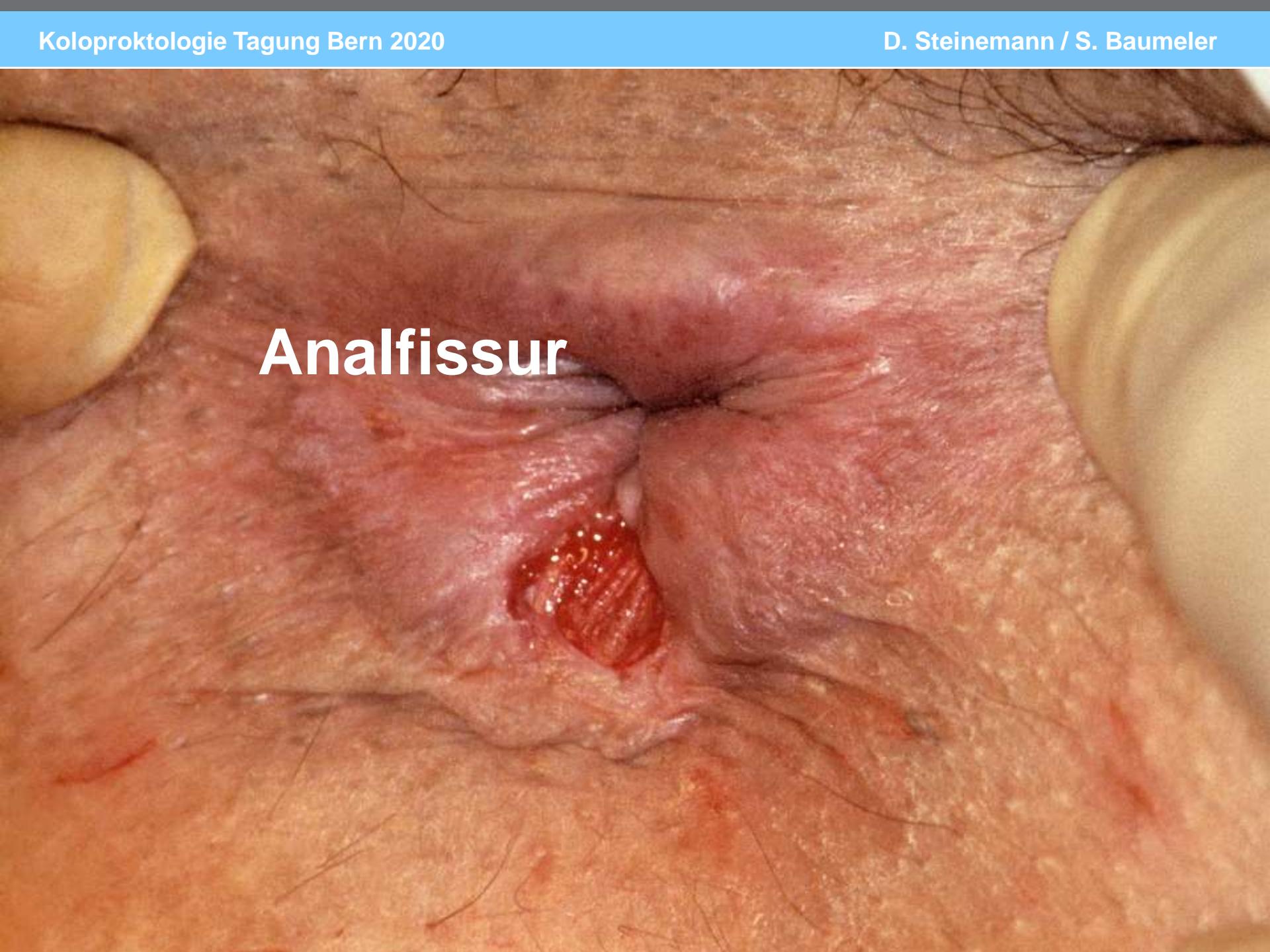
Gum Arabic: z.B. Normacol

Bliss DZ et al. Res Nurs Health. 2014

LigaSure® Haemorrhoidektomie

- 
- 5 Wochen p.o.: noch **Schmerzen** beim Stuhlgang, unter Metamucil regelmässig
 - 5 Monate p.o.: persistierende **Urgesymptomatik**, Vorwarnzeit von 1-2 Minuten, Inkontinenz für flüssigen Stuhl, teilweise **schwierige Stuhlentleerungen** mit langem Warten und Pressen, keine Schmerzen **Initial** nach der OP **starke Schmerzen**.
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Analfissur



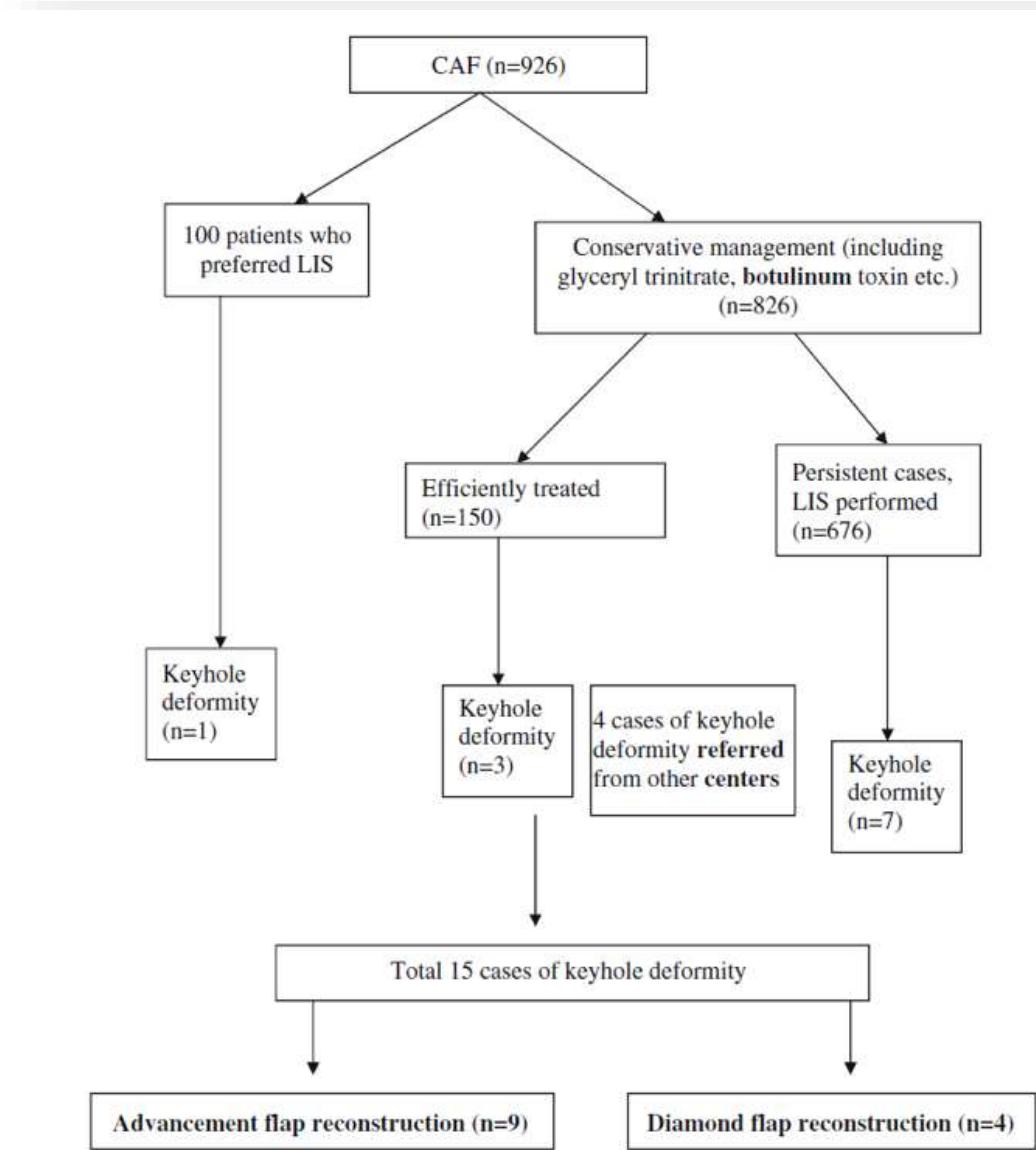
V-Y-Flap

50-Jähriger Patient

- 1 Jahr nach V-Y-Flap bei Analfissur
 - Partiell sekundäre Wundheilung
 - **Schlüssellochdeformität**
-
- **Soiling**
 - **Schleimabgänge**



Re-Adaptation Internus



CAF: Chronic anal fissure
LIS: Lateral internal sphincterotomy

Yüksel O et al. J Gastrointest Surg 2008

Anale Dilatation

Table 1 Continence disorders after dilatation of anal canal (review of literature)

Author	Year	Number	Follow-up	Continence disorder
Bachmann Nielsen et al. [70]	1993	32	4 years	12.5% (65% sphincter defect)
Farouk et al. [71]	1998	21	6–8 months	10%
Nelson [11]	1999	Meta-analysis		0–27%
Konsten and Baeten [72]	2000	44	1 year 17 years	20% 50%
Babor et al. [73]	2003	45	15.5 years	4% (recurrence of fissure-in-ano 24%)

Digital anal dilatation (Lord)

- 27% incontinence in meta-analysis
- **Internal sphincter defects in 75% in endosonography**
- 24% external sphincter defects
- Obsolete

Ommer A et al. Int J Colorectal Dis 2008

Laterale Sphinkterotomie

Table 2 Continence disorders after lateral sphincterotomy (review of literature)

Author	Year	Number	Follow-up	Continence disorder
Khubchandani and Reed [18]	1989	1,355	?	I ⁰ 35%; II ⁰ 37%; III ⁰ 28%
Blessing [74]	1992	75	13–66 months	I ⁰ 33%; II ⁰ 33%; III ⁰ 34%
Pfeifer et al. [75]	1994	28	6–73 (40) months	I ⁰ 36%; II ⁰ 27%; III ⁰ 37%
Pernikoff et al. [76]	1994	500		I ⁰ 27%; II ⁰ 16%; III ⁰ 57%
Garcia-Aguilar et al. [19]	1998			I ⁰ 20%
Garcia-Granero et al. [27]				45% (53% women, 33% men; I ⁰ 31%, II ⁰ 39%, III ⁰ 23%)
Sharp [77]				3% impairment of quality of life
Farouk et al. [71]				21% (I ⁰ 7.2%, II ⁰ 9.6%, III ⁰ 4.3%)
Nelson [11]				7.2% (I ⁰ 4.4%, II ⁰ –III ⁰ 2.8%)
Nyam and Pemberton [78]				1.2% (deterioration of quality-of-life-index)
Hasse et al. [20]	2005	209	>12 weeks	
Casillas et al. [79]	2005	298	4.3 years	
Mentes et al. [54]	2005	244	12 months	



Ommer A et al. Int J Colorectal Dis 2008

Medikamentöse Therapie

konservativ



Stuhl modifizierende Medikamente



2013

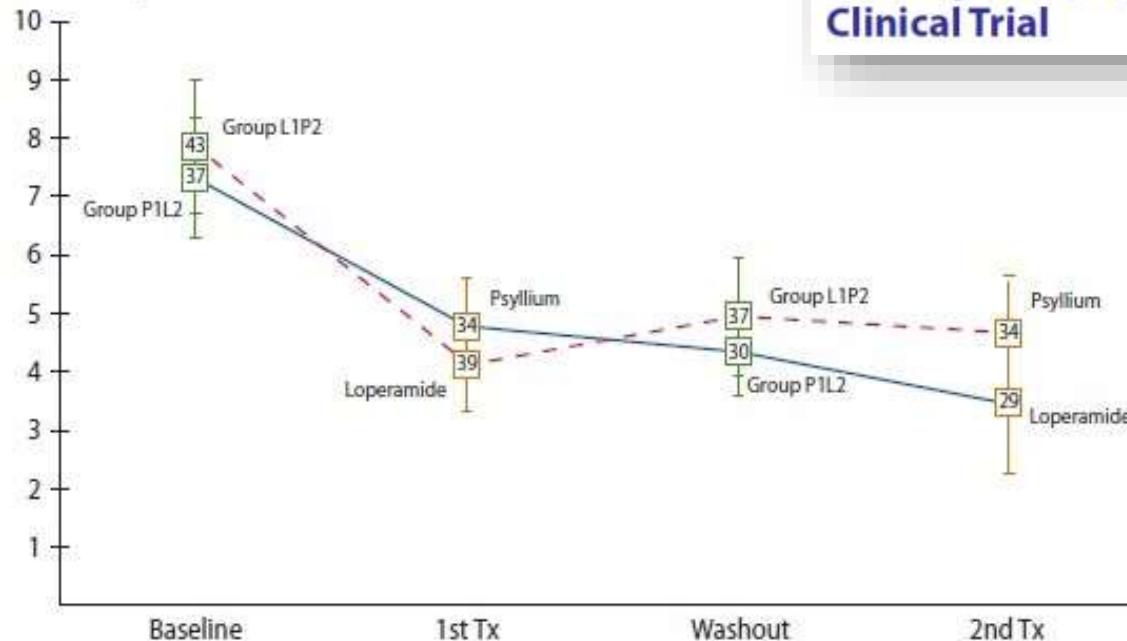
There was **limited evidence** that antidiarrhoeal drugs and drugs that enhance anal sphincter tone may reduce faecal incontinence in patients with liquid stools.

Low-dose **loperamide** (starting at 2 mg to 4 mg) titrated to the patient's symptoms **is considered to be effective** in patients with faecal incontinence and normal stool consistency

Omar MI, Alexander CE, Cochrane Database of Systematic Reviews 2013

Loperamide Versus Psyllium Fiber for Treatment of Fecal Incontinence: The Fecal Incontinence Prescription (Rx) Management (FIRM) Randomized Clinical Trial

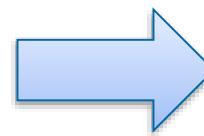
A No. of FI episodes



Loperamid und Psyllium (Flohsamen) verbessern beide Stuhlinkontinenz
Loperamid mit mehr Nebenwirkungen (29% vs 10%)

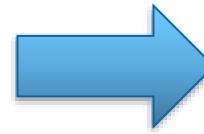
Markland AD. et al, Dis Colon Rectum 2015

Obstructed
Defecation



No
Loparamid

Constipation



Reduced rectal
capacity

No Psyllium

Stool modifying drugs

Loperamide, n/N (%)	Loperamide, n/N (%)	Placebo, n/N (%)	Adjusted odds ratio (95% CI)
Patient Global Impression of Improvement (a little better, much better, or very much better)	127/146 (87%)	84/105 (80%)	1.2 (1.0-1.5); p=0.099
50% reduction in leaks per day*	101/139 (73%)	73/102 (72%)	1.0 (0.8-1.2); p=0.83

THE LANCET
Gastroenterology & Hepatology
Volume 4, Issue 9, September 2019, Pages 696-710



Articles

Controlling faecal incontinence in women by performing anal exercises with biofeedback or loperamide: a randomised clinical trial

... we were unable to find evidence against the null hypotheses that loperamide is equivalent to placebo.

Jelovsek, J E et al. The Lancet Gastroenterology & Hepatology 2019



Articles

Controlling faecal incontinence in women by performing anal exercises with biofeedback or loperamide: a randomised clinical trial

Loperamide			Placebo			Model-estimated difference (95% CI)
N	Adjusted mean (SD) or mean (95% CI)	N	Adjusted mean (SD) or mean (95% CI)			
Maximum anal canal pressure (rest), mmHg						
Week 0	159	48.1 (17.3)	113	49.4 (20.5)	..	
Week 24	145	46.7 (43.1 to 50.2)	104	47.2 (42.5 to 51.8)	-0.5 (-6.2 to 5.2); p=0.8659	
Maximum anal canal pressure (squeeze), mmHg						
Week 0	159	71.6 (32.1)	113	74.2 (34.9)	..	
Week 24	143	75.1 (68.9 to 81.2)	104	73.7 (65.6 to 81.7)	1.4 (-8.4 to 11.2); p=0.7788	

No significant effect on sphincter pressure

What are the benefits of loperamide?



Analfistel



Status nach Fistulotomie

- 70 Jähriger Mann
- St. n. Fistulotomie bei transssphinktärer Analfistel vor 50 Jahren
- Langjähriger M. Crohn, ED 1962
- Chronische Diarrhoe mit V.a. Gallensäurenverlustsyndrom, mit Imodium kompensiert.
- Schwere Stuhlinkontinenz
 - Stuhlschmieren
 - Vorwarnzeit unter 20 Sekunden
 - regelmässigen Inkontinenzepisoden
 - klaffender After, Narbe nach Fistulotomie, kaum wahrnehmbarer Ruhetonus. Der Kontraktionstonus ist leicht spürbar

Status nach Fistulotomie

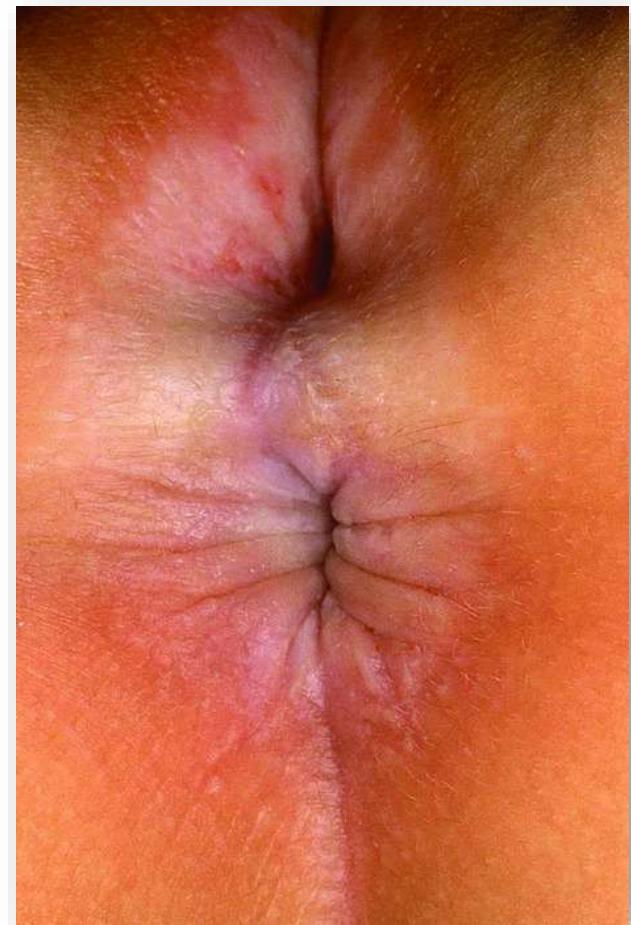
Teststimulation mit
Tined-lead-Elektrodeneinlage
S4 rechts 05/2017

Sakraler Neuromodulation mit
definitiver Implantation des
Stimulators 06/2017



Perianalabszess

- Abdeckelung **Perianalabszess** 12-1 Uhr
SSL, 02/18
- **Fistulektomie mit Naht**
Vaginahinterwand und Rektum 03/2018
- **Rektovaginale Fistel**
- **Sphincterrekonstruktion**, Vaginalnaht,
Rektumnaht und Sigmoideostoma
04/2018
- MRI: persistierende rektovaginale Fistel
06/2018
- **Erneute Sphincterrekonstruktion**, Naht
Rektum + Vagina 06/2018

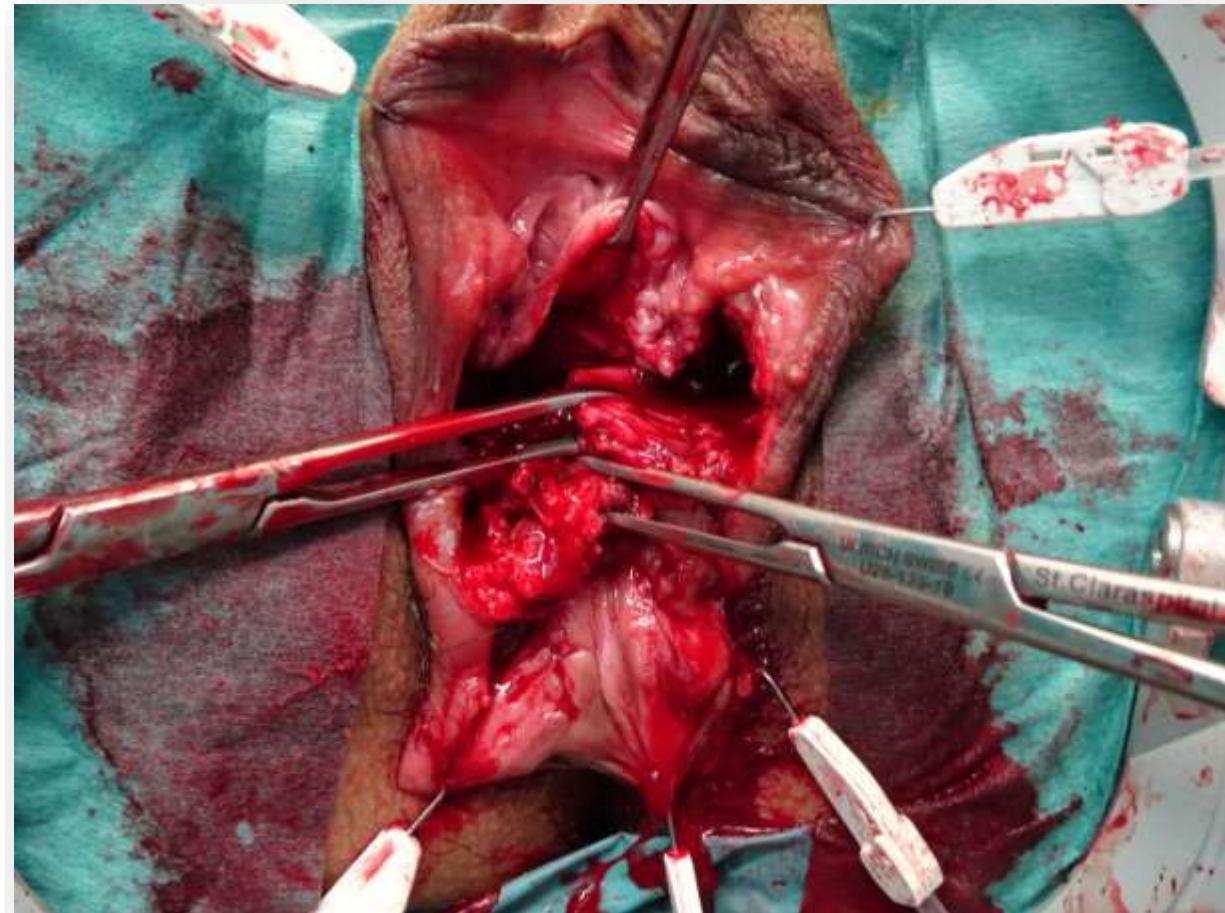


Narkoseuntersuchung 11/2018



Rekonstruktion

Septum rectovaginale,
Sphincterrekonstruktion,
Interpositions Surgisis
Biomesh 12/2018



Inkontinenz nach Fistel-OP

Tab. 23 Gesamtdarstellung der Literatur anhand der vorhergehenden Tabellen

Verfahren	Anzahl Studien	Anzahl Patienten	Heilung Median (%)	Rezidiv Median (%)	Inkontinenz Median (%)
Spaltung	34 (1966–2015)	4278	96	2	26 (0–82)
Loser Faden	17 (1976–2014)	1393	80	k. A.	26 (0–63)
Two-stage-Fistulektomie	12 (1976–2014)	928	96		6 (0–98)
„Cutting seton“	43 (1966–2015)	2369	100		14 (0–92)
Direkte Naht	5 (1993–2012)	419			13 (0–55)
Mukosa-Flap	43 (1983–2015)				13 (0–43)
Rektumwand-Flap	24 (1988–2015)				12 (0–71)
Anoderm-Flap	10 (1988–2015)				0 (0–30)
Spaltung/Rekonstruktion	11 (1976–2015)				12 (4–21)
LIFT	30 (1993–2015)				0 (0–31)
Fibrinkleber	39 (1993–2015)				k. A.
KollagenInjektion	3 (2010–2015)				k. A.
Autologe Stammzellen	7 (2009–2015)				k. A.
Fistelplug (Surgisis®)	35 (2006–2015)		48	37	k. A.
Fistel-Plug (Gore®)	7 (2011–2015)	233	49	k. A.	0
Laseranwendung	4 (2011–2015)	223	77	k. A.	0
VAAFT	5 (2011–2014)	870	84	k. A.	0
OTSC-Klemme	3 (2012–2015)	38	50	k. A.	

0 - 26%

Inkontinenz nach Fistel-OP

n=26, follow-up 25 Monate

präoperativ	nach advancement flap
48% normale Kontinenz	18% Stuhlschmieren 18% Stuhlverlust/-inkontinenz
52% verminderte Kontinenz	17% zusätzliche Verschlechterung der Kontinenz

Zimmerman DDE. Dis Colon Rectum 2001

Sphinkterläsionen nach proktologischen Operationen

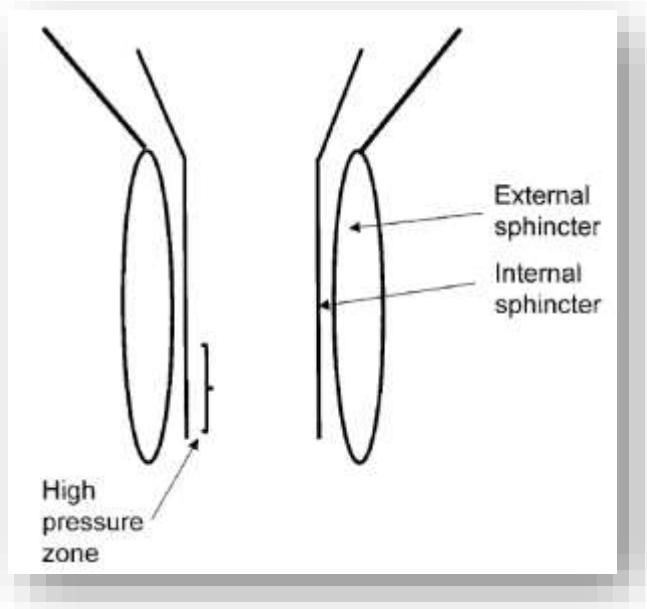


Table 2.
Ultrasonographic Anal Sphincter Injuries

Surgery	N	Internal Injury n (%)	External Injury n (%)	Obstetric Injury n (%)
Manual anal dilation	27	27 (100)	8 (30)	10 (77)
Lateral internal sphincterotomy	17	17 (100)	4 (24)	8 (89)
Fistulotomy	20	20 (100)	12 (60)	3 (38)
Hemorrhoidectomy	29	27 (93)	7 (24)	12 (80)
Total	93	91 (98)	31 (33)	33 (73)

Median resting pressure	65 mmHg (7-145)
Normal range in	82%
Median high pressure zone resting pressure	24 mmHg (0-89)
Distal resting pressure gradient <1 in	89%

Lindsey I, Mortensen NJ. Dis Colon Rectum 2004

Physiotherapy/Biofeedback

konservativ

Fiber supplement

Stuhl modifizierende
Medikamente

Muskeltraining

Anal Plugs

Irrigationssysteme

P TNS

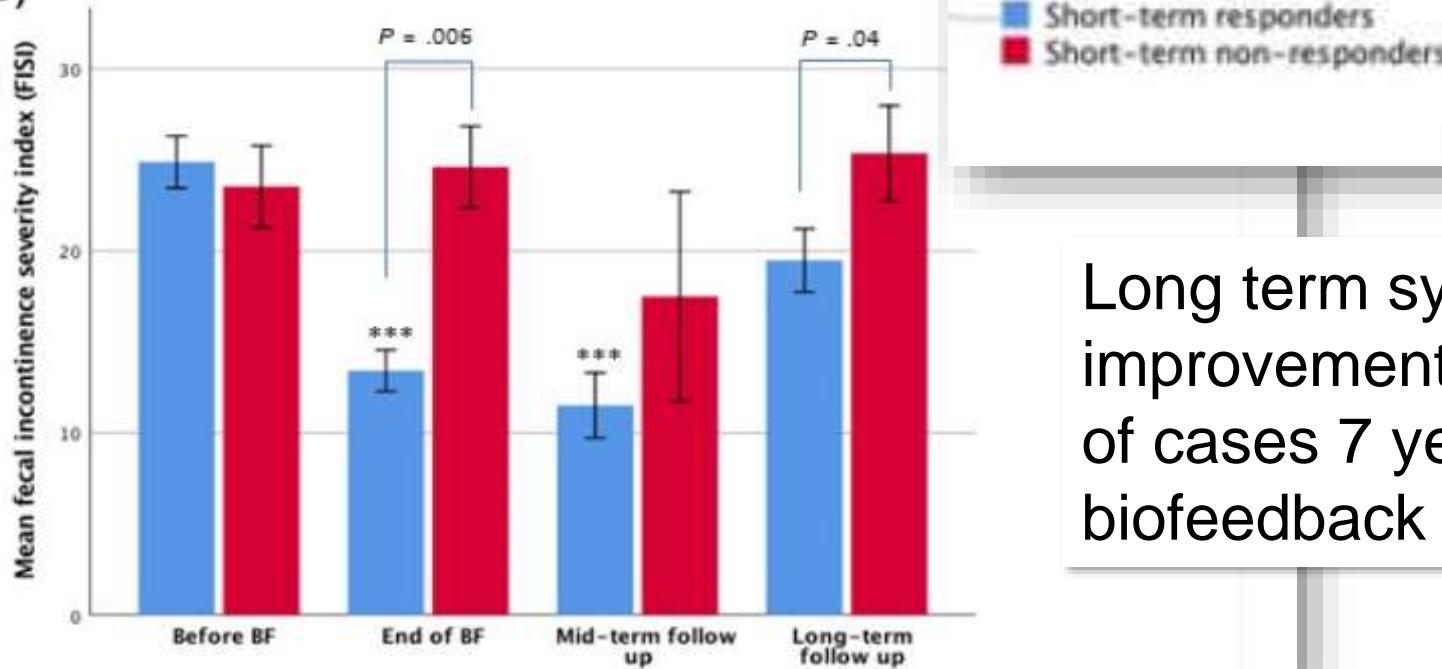


ORIGINAL ARTICLE

WILEY Neurogastroenterology & Motility NGM

Long-term outcome of anorectal biofeedback for treatment of fecal incontinence

(D)



Long term symptom improvement in > 50% of cases 7 years after biofeedback

Mazor Y et al. Neurogastroenterology & Motility. 2018



SCHWEIZERISCHE ARBEITSGRUPPE FÜR KOLOPROKTLOGIE
GROUPE SUISSE D'ÉTUDES COLOPROCTOLOGIQUES
GRUPPO SVIZZERO DI STUDIO PER LA COLOPROCTOLOGIA
SWISS STUDY GROUP FOR COLOPROCTOLOGY
www.coloproct.ch



Clarunis
Universitäres
Bauchzentrum
Basel



Adjuvant biofeedback following anal sphincter repair: a randomized study

Table 4. A summary of the continence and patient satisfaction visual analogue (VA) scores within the biofeedback and control groups

Time	Continence scores (range: 0–20)		VA scores (range: 0–10)	
	Control (n = 17)	Biofeedback (n = 14)	Control (n = 17)	Biofeedback (n = 14)
3 months (baseline status), mean (s.d.)	9.71 (4.70)	8.43 (5.05)	6.35 (3.41)	6.32 (3.36)
6 months, mean (s.d.)	9.47 (4.08)	7.21 (4.87)	6.17 (2.98)	7.96 (2.45)
12 months, mean (s.d.)	9.11 (4.90)	7.36 (4.60)	6.41 (2.92)	8.00 (2.48)
Mean change (s.d.) between 3 and 12 months within the groups	-0.59 (4.43) (CI: -1.69 to 2.87) <i>P</i> = NS (0.60)*	-1.07 (3.23) (CI: -0.79 to 2.94) <i>P</i> = NS (0.23)	0.29 (3.23) (CI: -1.28 to 1.16)	1.32 (3.34) (CI: -3.76 to 0.42) <i>P</i> = NS (0.92)

Biofeedback vs. control group

No difference after 3, 6 and 12 months

- fecal incontinence score
- VAS

Davis KJ, et al. *Aliment Pharmacol Ther.* 2004

Anal Plugs

konservativ

Fiber supplement

Stuhl modifizierende
Medikamente

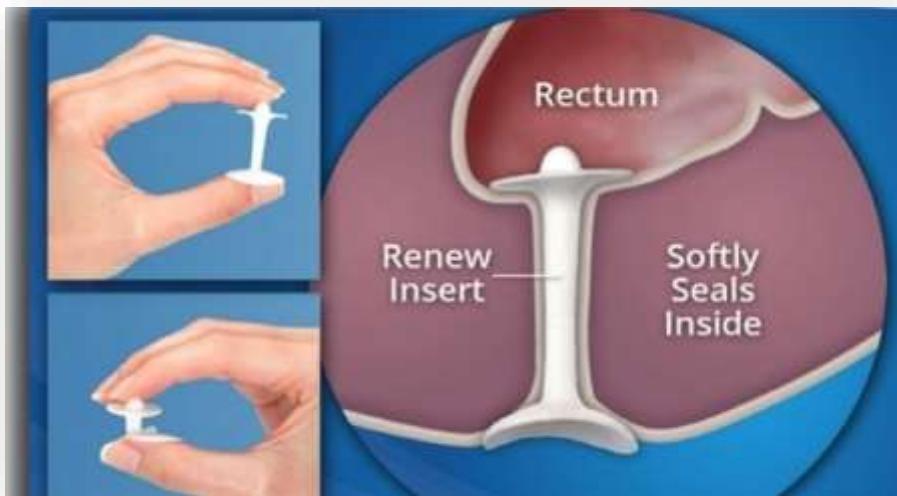
Muskeltraining

Anal Plugs

Irrigationssysteme

P TNS

Anal plugs or anal rampons....

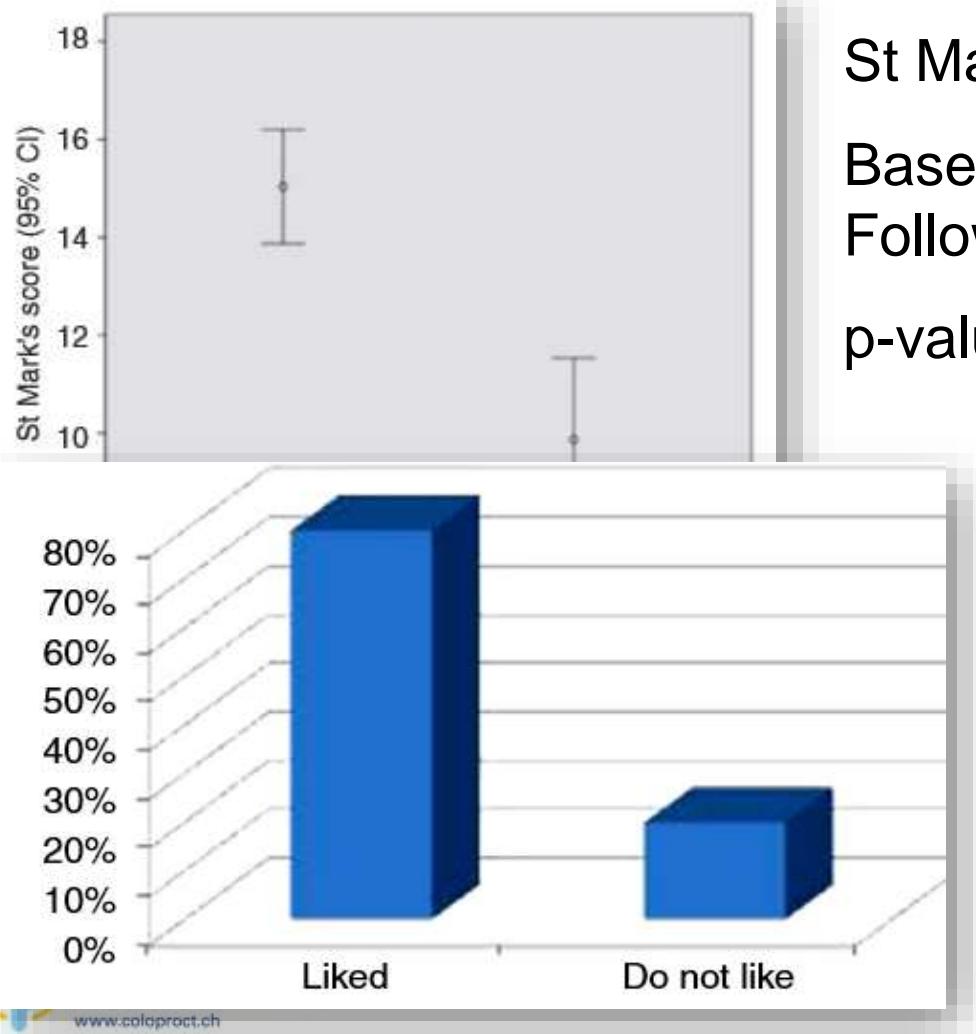


Renew® Anal Plug



Peristeen® Anal-Tampon

The Renew® anal insert for passive faecal incontinence: a retrospective audit of our use of a novel device



St Mark's Incontinence Score

Baseline: 15 (7–18)
Follow-up: 10 (2–18)

p-value < 0.0001



Leo CA, et al. Colorectal Disease 2019

Irrigation Systems

konservativ

Fiber supplement

Stuhl modifizierende
Medikamente

Muskeltraining

Anal Plugs

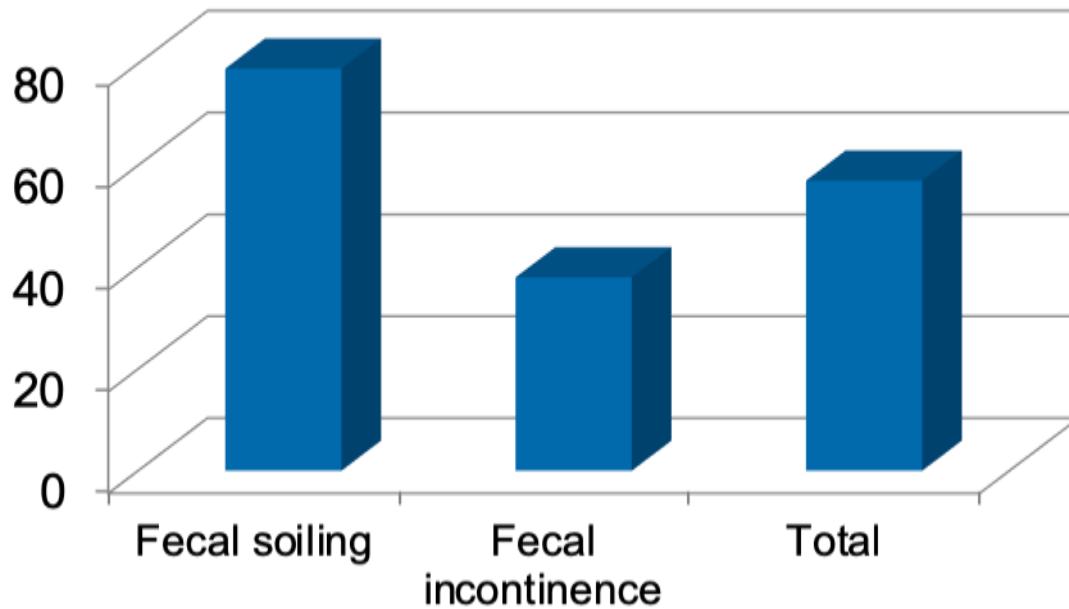
Irrigationssysteme

P TNS



Irrigation Systems

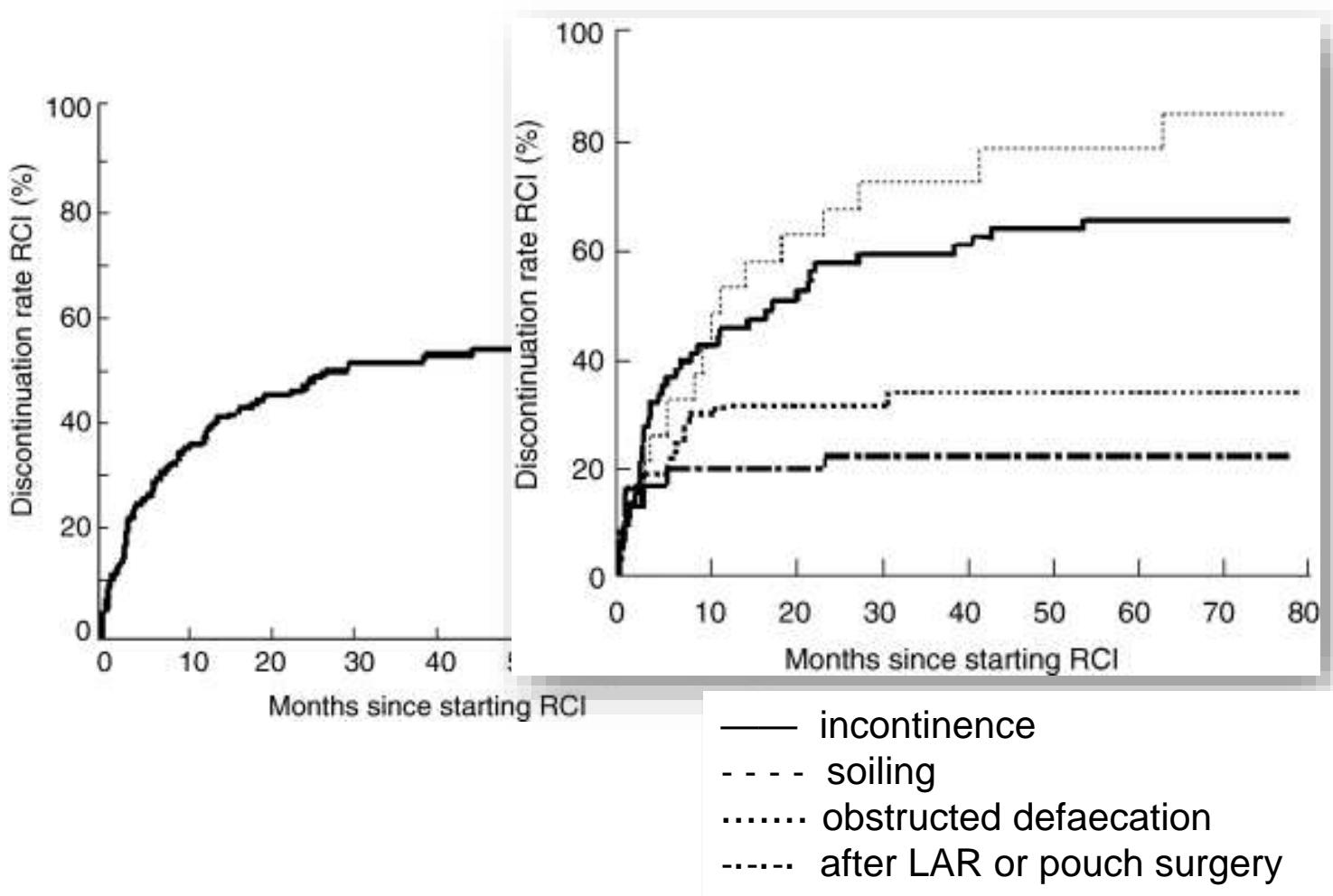
Success Rate %



Soiling 79%
Fecal Incontinence 38%
Total 57%

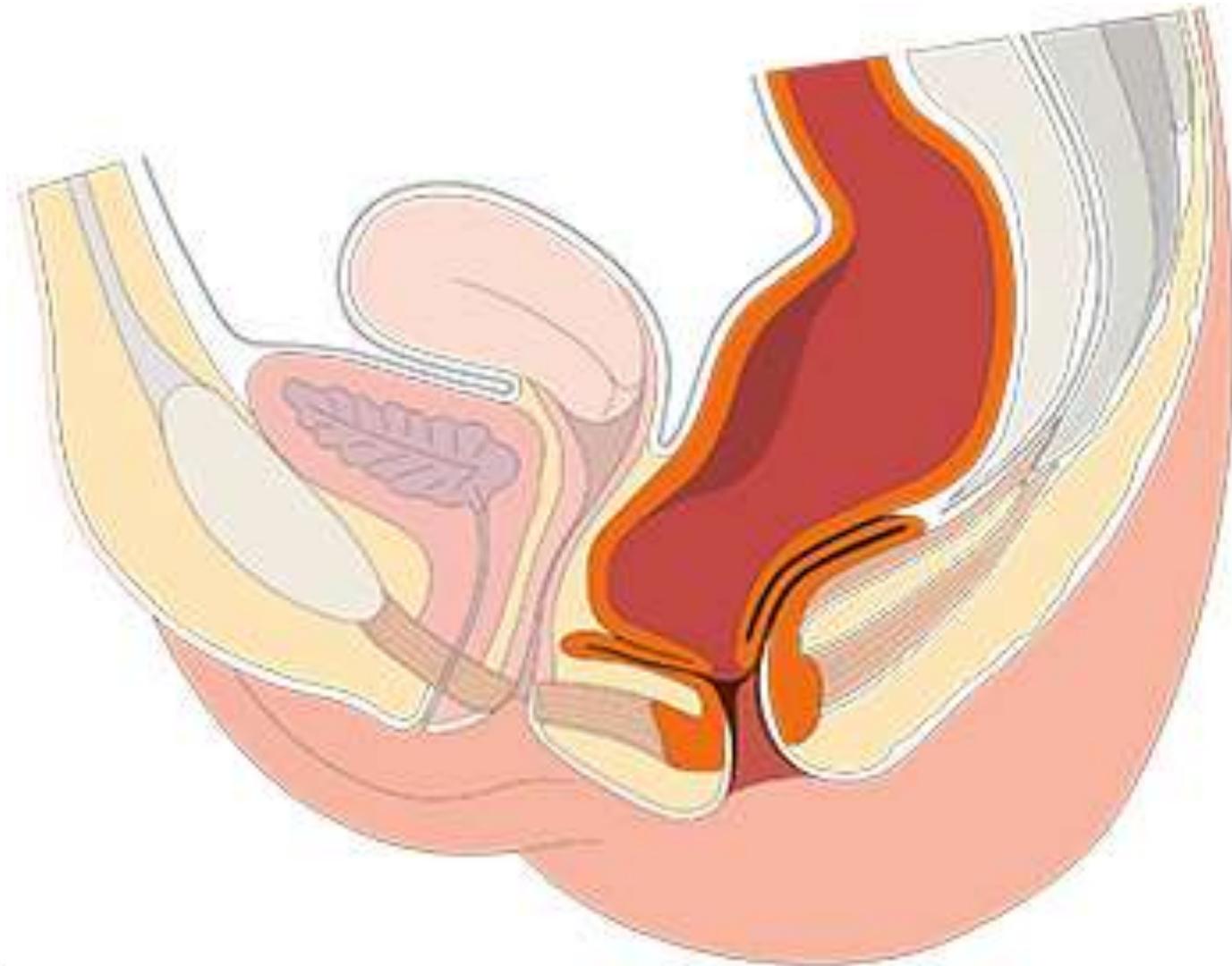
Briel JW, et al. Dis Colon Rectum. 1997

Irrigation as a long-term option?



Grosselink MP et al. Colorectal Disease 2004

Stuhlinkontinenz nach Senkungsoperationen



STARR

54-jährige Patientin

- Stuhlinkontinenz seit 1 Jahr
- Stuhlentleerungsstörung, inkomplette Entleerung
- 4 vaginale Geburten

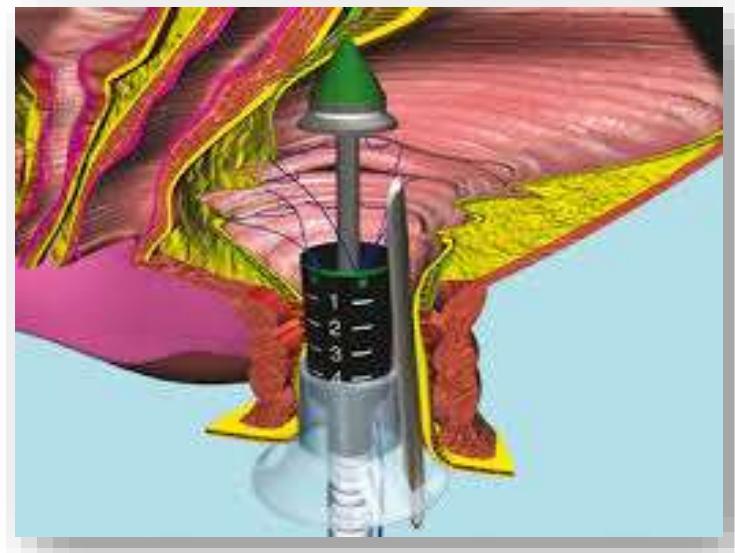
MR Defaekographie 02/2014: anteriore Rektocoele

Anorektale Manometrie 03/2014:

- Ruhedruck 68mmHg
- max. Kontraktionsdruck 151 mmHg

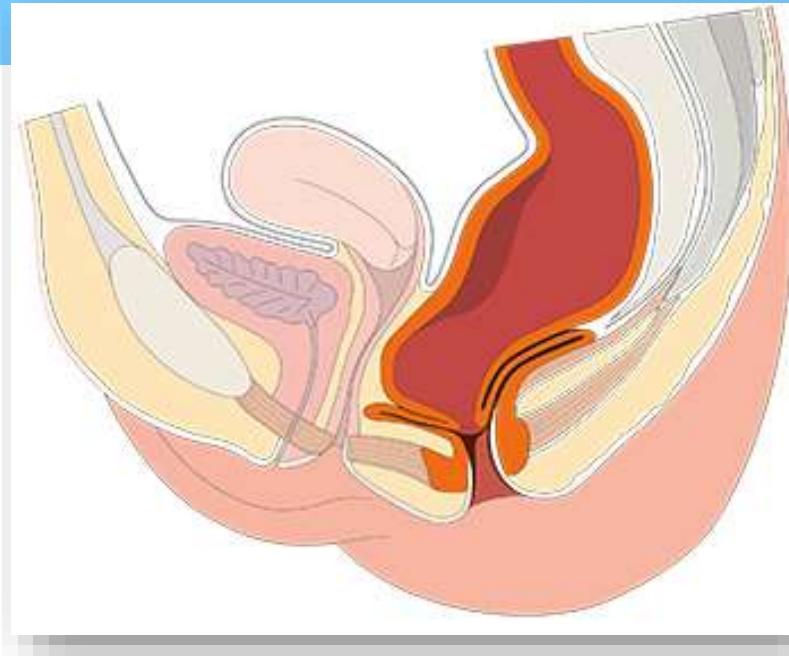
STARR

- 07/2014 STARR OP (PPH01)
- Postoperativ persistierende Urge-Inkontinenz
- MR Defaecographie 03/2015: mittelgradige **anteriore Rektocoele** mit inkompletter Entleerung.



Nach STARR

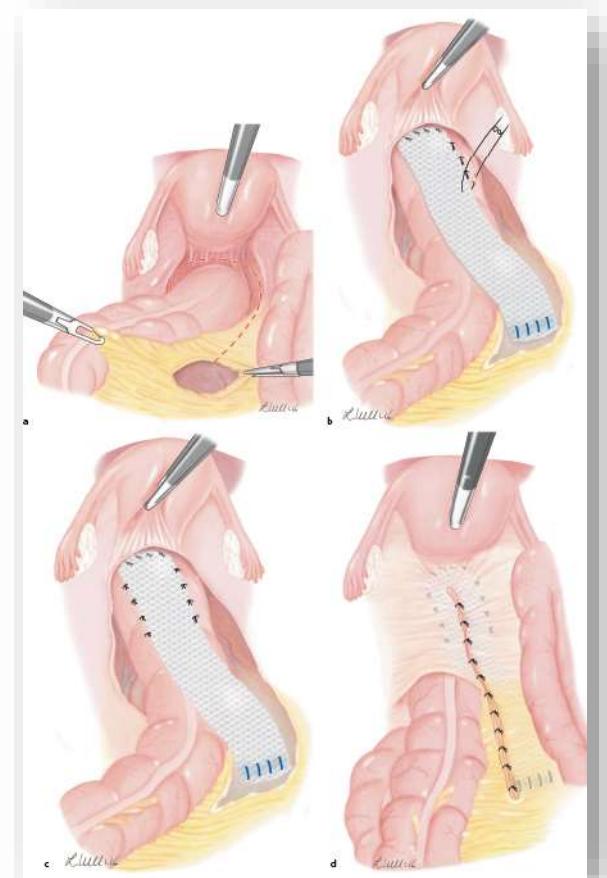
- 11/2017: persistierende schwere Inkontinenz, unkontrollierter Stuhlverlust morgens, urge
- Anorektale Manometrie 12/2017
Ruhedruck 68 mmHg
max. Kontraktionsdruck 102mmHg
Sensibilität intakt
- MR Defaekographie (**sitzend**) 06/2019
Rektoanale Intussusception
Oxford IV,
anteriore Rektocele 4cm



Nach STARR

Laparoskopische ventrale Netzrektopexie 09/2019

- Anhaltende Verbesserung Kontinenz
- Kein ODS mehr



Percutaneous tibial nerve stimulation - pTNS

konservativ

Fiber supplement

Stuhl modifizierende
Medikamente

Muskeltraining

Anal Plugs

Irrigationssysteme

pTNS



Percutaneous tibial nerve stimulation - RCT

Study/Reference	Outcome	Results
CONSORT/ Leroi et al.	FIQL Score	No sig. difference
	Anorectal manometry	No sig. difference
George et al.	St. Mark's FI Score	No sig. difference
	FIQL Score	No sig. difference
CONFIDEnT/ Knowles et al.	> 50% reduction FI	No sig. difference
	FI episodes/week	No sig. difference
	St. Mark's FI Score	No sig. difference
	FIQL	No sig. difference
	Urge	sig. difference , p=0.02

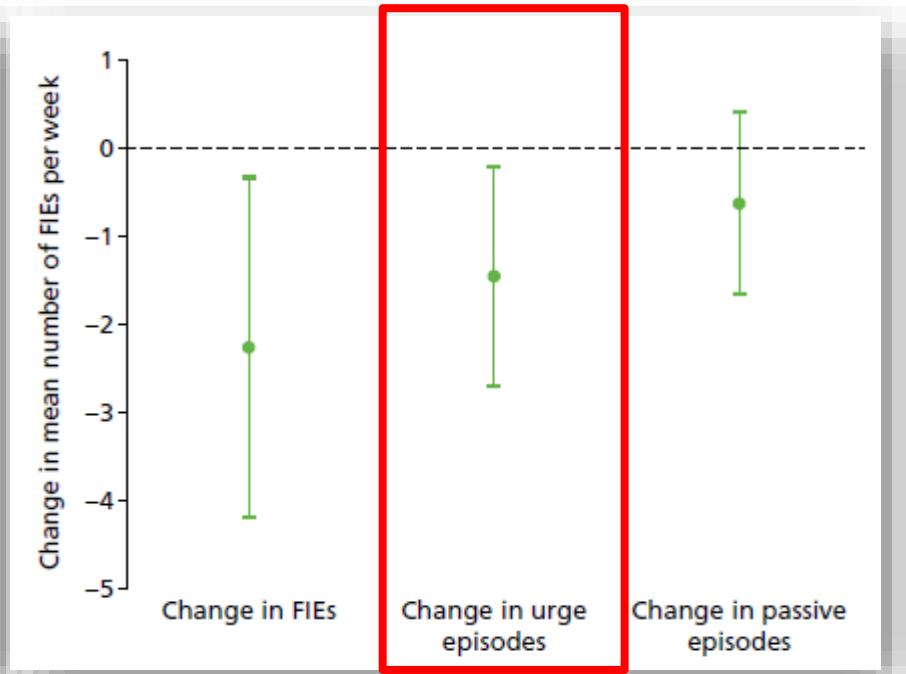
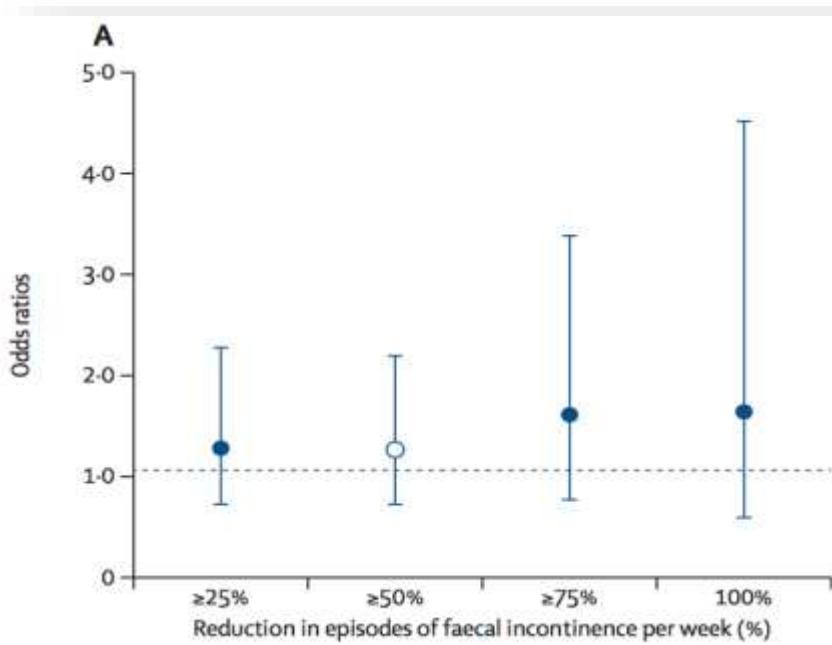
Leroi AM et al. Am J Gastroenterol. 2012
 George AT et al. Br J Surg. 2013
 Knowles C.H. et al., Lancet 2015

CONFIDeNT Studie

Knowles C.H. et al., Lancet 2015

pTNS nicht signifikant wirksam

Subgruppenanalyse



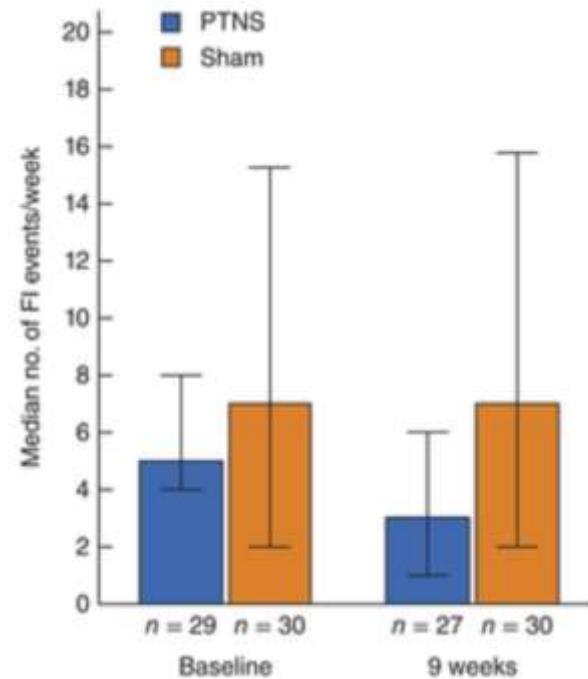
Whats new



Randomized clinical trial | Full Access

Randomized clinical trial of percutaneous tibial nerve stimulation *versus* sham electrical stimulation in patients with faecal incontinence

PTNS (13 of 29) sham (6 of 30) showed a reduction of > 50% number of FI episodes/week
IRR 2·40, $p = 0\cdot028$



PTNS may offer a **small advantage** in the clinical management of FI The **key challenge** will be to **identify patients who may benefit most** from this minimally invasive surgical procedure.

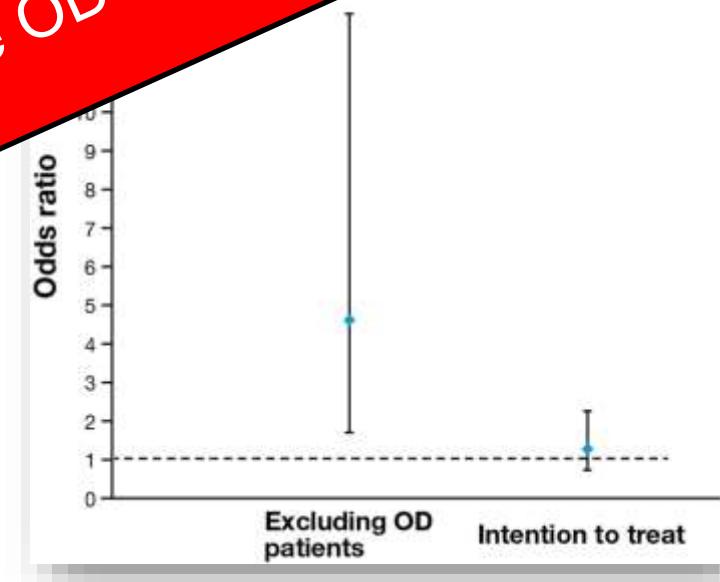
Van der Wilt AA et al. BJS 2017

... identify patients who may benefit most

Factors Associated With Efficacy of Percutaneous Tibial Nerve Stimulation for Fecal Incontinence, Based on Post-Hoc Analysis of Data From a Randomized Trial

Re-analysis of the primary outcome excluding patients with constipation resulted in a significant increase of PTNS compared to sham 48.9% vs 18.2% response rate (odds ratio 2.62)

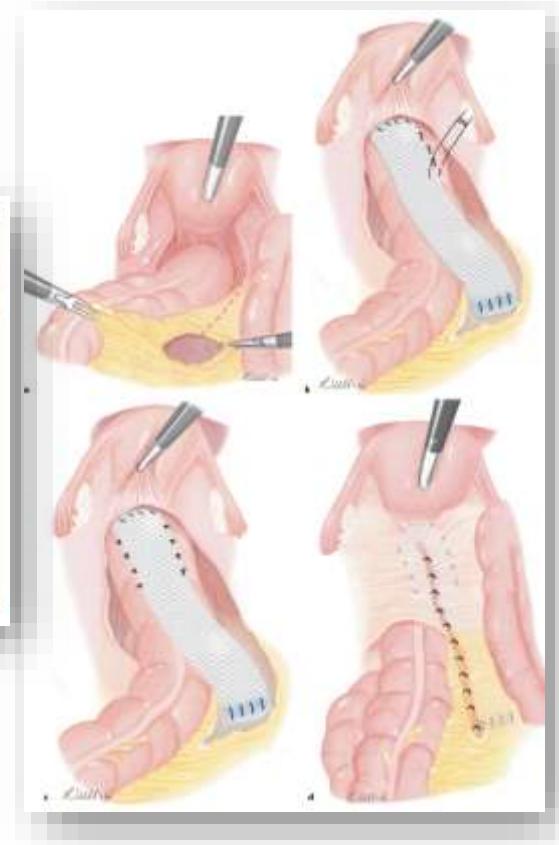
pTNS nur bei Patienten ohne ODS sinnvoll



Horrocks, E, Wexner SD, Knowles CH. Clinical Gastroenterology and Hepatology 2017

Ventrale Netzrektopexie bei Intussusception

	Preoperative	After LVR	P-value
FISI	40 (31–61)	19 (0–59)	< 0.01
Wexner	11.1 (0–21)	7.6 (0–18)	< 0.01
GIQLI	76 (39–106)	100 (54–129)	< 0.01



Mishra A, Cunningham C, Matzel KE, Lindsey I. Colorectal Dis 2015

SNM nach Intussusception

- High grade internal prolapse + faecal incontinence
- Laparoscopic ventral rectopexy
- Persisting faecal incontinence in **10-44%**

- Persistent faecal incontinence in 52 pts
- **SNM test successful in 94%**



Mishra A, Cunningham C, Matzel KE, Lindsey I. Colorectal Dis 2015

Nach SNM

	Preoperative	After SNM	P-value
FISI	34 (28–59)	19 (0–49)	< 0.01
Wexner	10.4 (0–25)	8.0 (0–21)	< 0.01
GIQLI	78 (31–107)	96 (55–129)	< 0.01

Mishra A, Cunningham C, Matzel KE, Lindsey I. Colorectal Dis 2015

Fazit gastroenterologische Sicht



Viele konservative Optionen



Wenig Evidenz

Fazit gastroenterologische Sicht

- **Funktions-Diagnostik und Bildgebung** helfen die optimale Therapie zu finden
- Oft ist ein **kombinierter Ansatz** sinnvoll
- Therapie Planung im multidisziplinären Team sinnvoll
MDT: multidisciplinary team meetings

Fazit chirurgische Sicht

- Kontinenzstörungen nach proktologischer Chirurgie sind **nicht selten**
- Die Ätiologie ist **multifaktoriell**
- Präoperative Abklärung ist wichtig (**Prophylaxe**)
- Therapieoptionen sind beschränkt und von **Fall zu Fall** abzuwägen

Daniel Steinemann

Stephan Baumeler



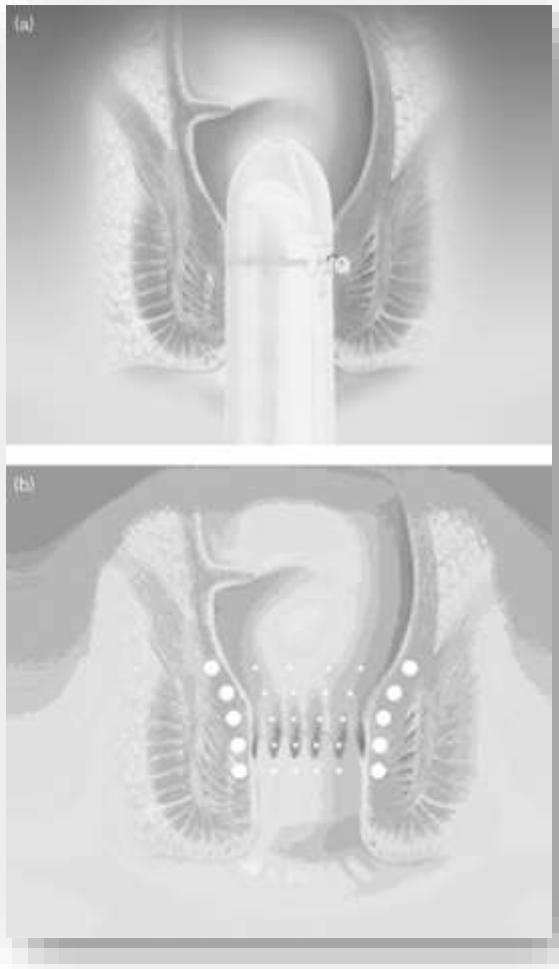
Danke für die Aufmerksamkeit

Additional Slides

Risikofaktoren



RFA Sphincter Remodeling - SECCA procedure



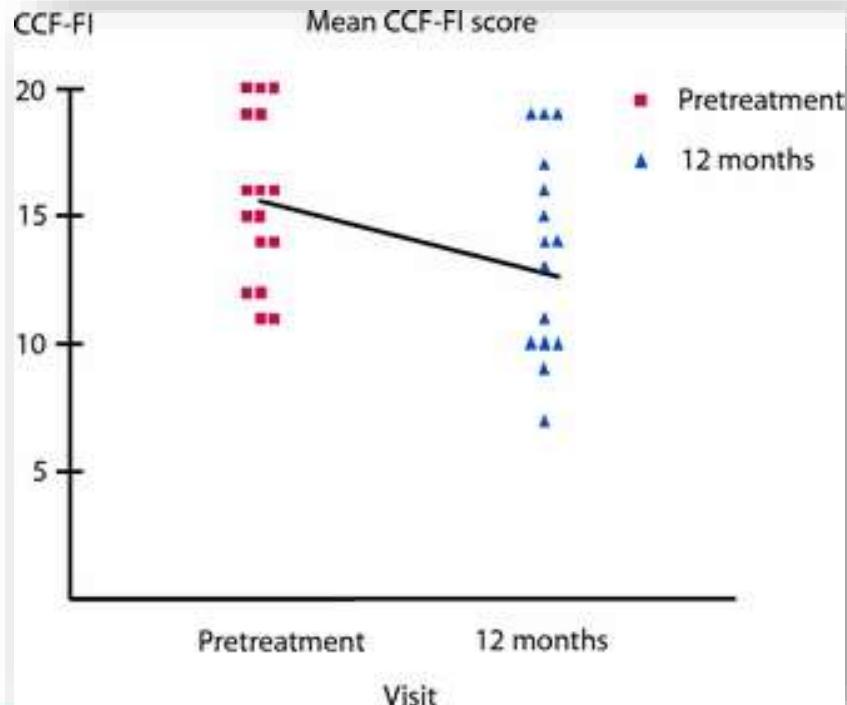
Anoscopic barrel with four nickel-titanium curved needle electrodes



RFA Sphincter Remodeling - SECCA procedure

ORIGINAL CONTRIBUTION

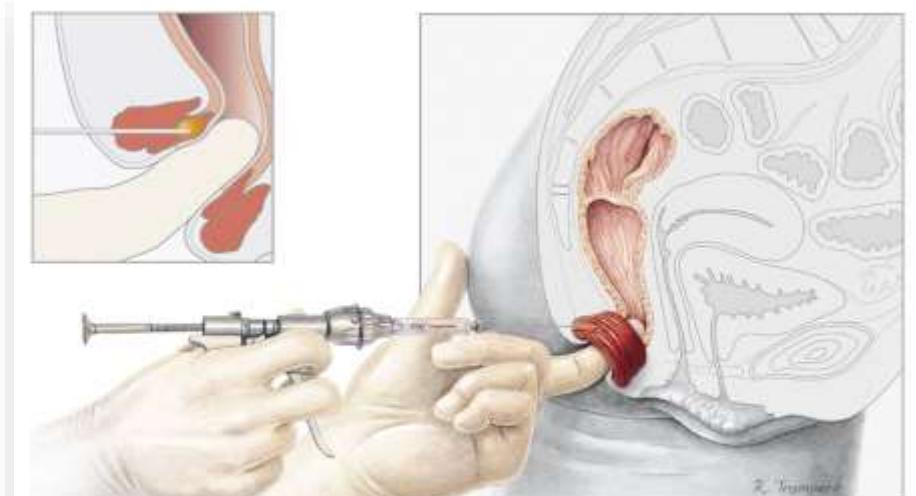
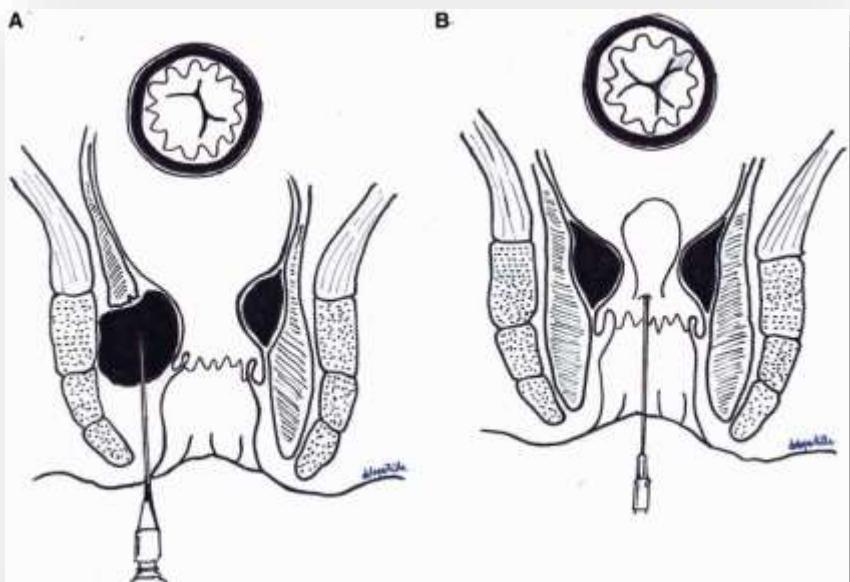
Does the Radiofrequency Procedure for Fecal Incontinence Improve Quality of Life and Incontinence at 1-Year Follow-Up?



Initial CCF-FI score: $15.6 +/ - 3.2$
improved to: $12.9 +/ - 4.5$
 $p = 0.035$ at 12 months

Ruiz D, Wexner SD et al. Dis Colon Rectum 2010

Bulking agents



Bulking agents

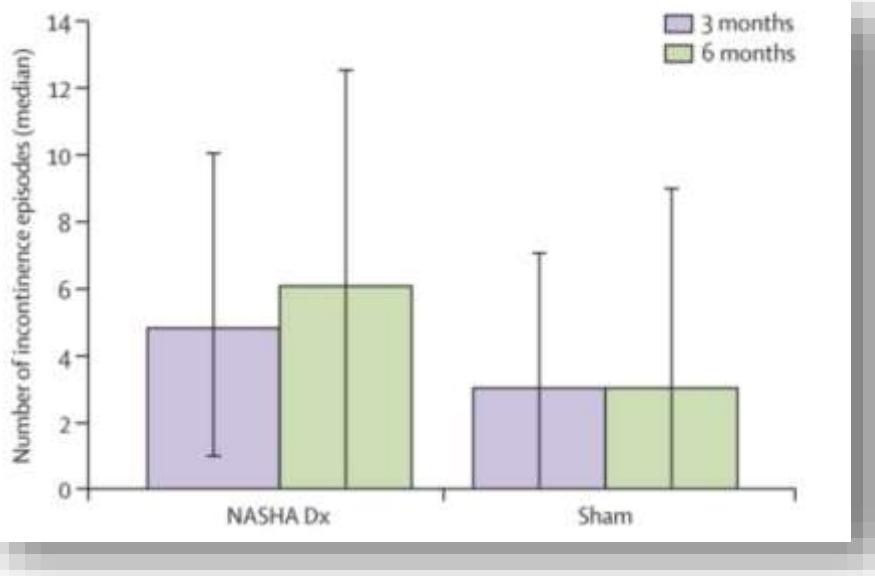
n = 206

THE LANCET
Volume 377, Issue 9770, 19–25 March 2011, Pages 997–1003



Articles

Efficacy of dextranomer in stabilised hyaluronic acid for treatment of faecal incontinence: a randomised, sham-controlled trial



71 (52%) patients with NASHA Dx had > 50% reduction in the number of FI episodes compared with 22 (31%) patients who received sham treatment

OR 2.36
95% CI 1.24–4.47
p=0.0089

Graf W. et al. Lancet 2011



Group 1 = patients with incontinence after MM
 Group 2 = patients without incontinence after MM
 Group 3 = population control

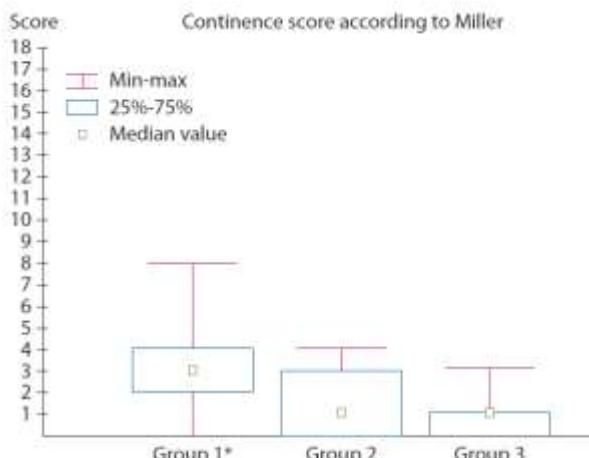


FIGURE 1. The Miller incontinence score in the 3 groups ($p = 0.00002$; Kruskal-Wallis test). Group 1 differs from groups 2 and 3 ($p = 0.003$ and $p = 0.001$; Mann-Whitney U test). * Difference between group 1 and groups 2 and 3.

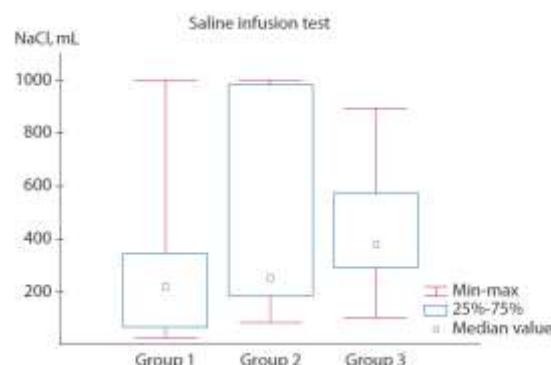


FIGURE 3. The volume of tempered, rectally infused saline that it is possible to contain without leakage. The patients reported when leakage had occurred. Data show the difference among the 3 groups ($p = 0.02$; Kruskal-Wallis test). Group 1 differs from group 3 ($p = 0.004$, Mann-Whitney U test). Values are median interquartile range and range.

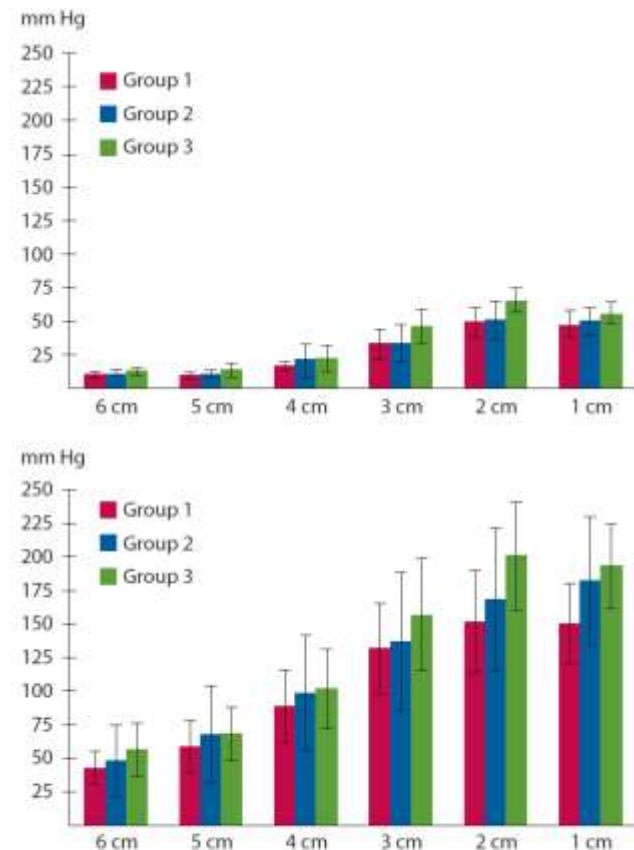


FIGURE 2. Results of anorectal manometry at rest (above) and squeeze (below). Distances are from the anal verge. Values are means and 95% confidence interval. Differences were assessed with 1-way ANOVA test.

Johannsson HÖ, et al. Dis Colon Rectum 2013

Kutane Lappenplastik bei fehlendem kutanem Damm 04/2019



Intussusception

74 -jährige Patientin

- 6-8 Stuhlentleerung mit Urge (Vorwarnzeit 30 sec)
 - Gelegentlich unkontrollierter Stuhlverlust
-
- Unauffällige Kolonoskopie inkl. unauffälligen Biopsien
 - Mukosaprolapssyndrom mit rezidivierenden Gummibandligaturen
 - St. n. vaginalen Geburten(1967, 1971), Episiotomie bei der ersten Geburt
 - St. n. Hysterektomie und Adnexektomie

Intussusception

Anorektale Manometrie

- **schwacher Ruhedruck** des M. sphincter ani internus
 - 40 mmHg (Normal > 40 mmHg)
- M. sphincter ani externus
 - **Druckanstieg 70 mmHg** (Normal > 40 mmHg) über mehr als 20 Sekunden
- Rektale Sensibilität des Enddarms ist erhalten
 - Wahrnehmung 50 ml
 - Stuhlgang 100 ml
 - max. toleriertes Volumen 160 ml

Intussusception

Mono-STARR OP 04/2017

Weder Verbesserung noch Verschlechterung

**Elektrodeneinlage für sakrale Neuromodulation (tinead lead)
zur Teststimulation S3 rechts am 06/2017**

- Implantation definitiver Neurostimulator InterStim II 07/2017
- Deutliche Verbesserung, Stuhlfrequenz 4x täglich
- Keine Stuhlverlust mehr, kein Urge und kein Schmieren

