Conflits d'intérêt

- Norgine
  - Coordination essai thérapeutique multicentrique 2012
- B Braun
  - Conseil 2011
- Coloplast
  - Orateur symposium 2011
- Medtronic
  - Orateur symposium 2011

rééducations

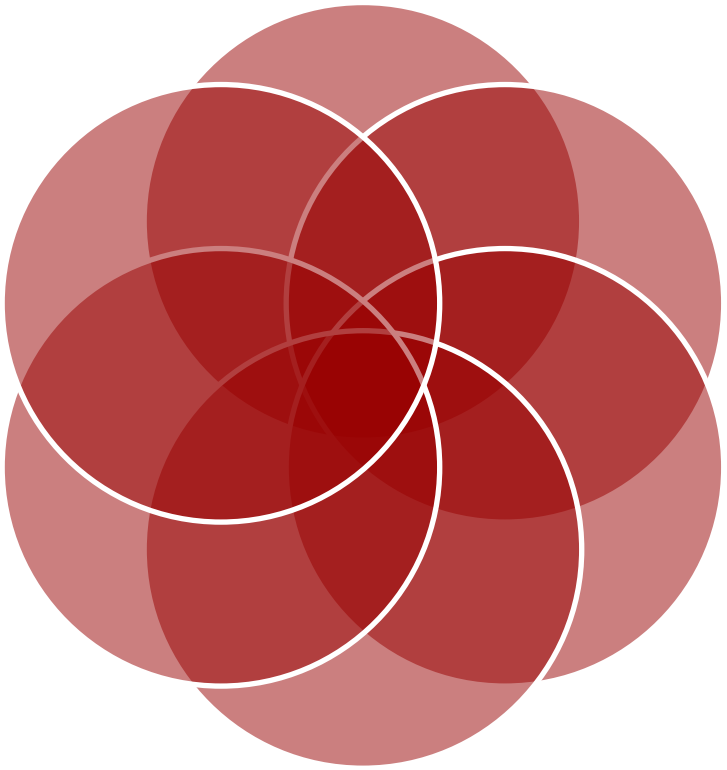
Troubles fonctionnels anorectaux

Définition I

méthodes et conseils comportementaux

sensibilité viscérale à la distension

exercices musculaires



coordination des muscles du pelvis

stimulation électrique (ou électrostimulation)

rééducation proprioceptive

Définition II

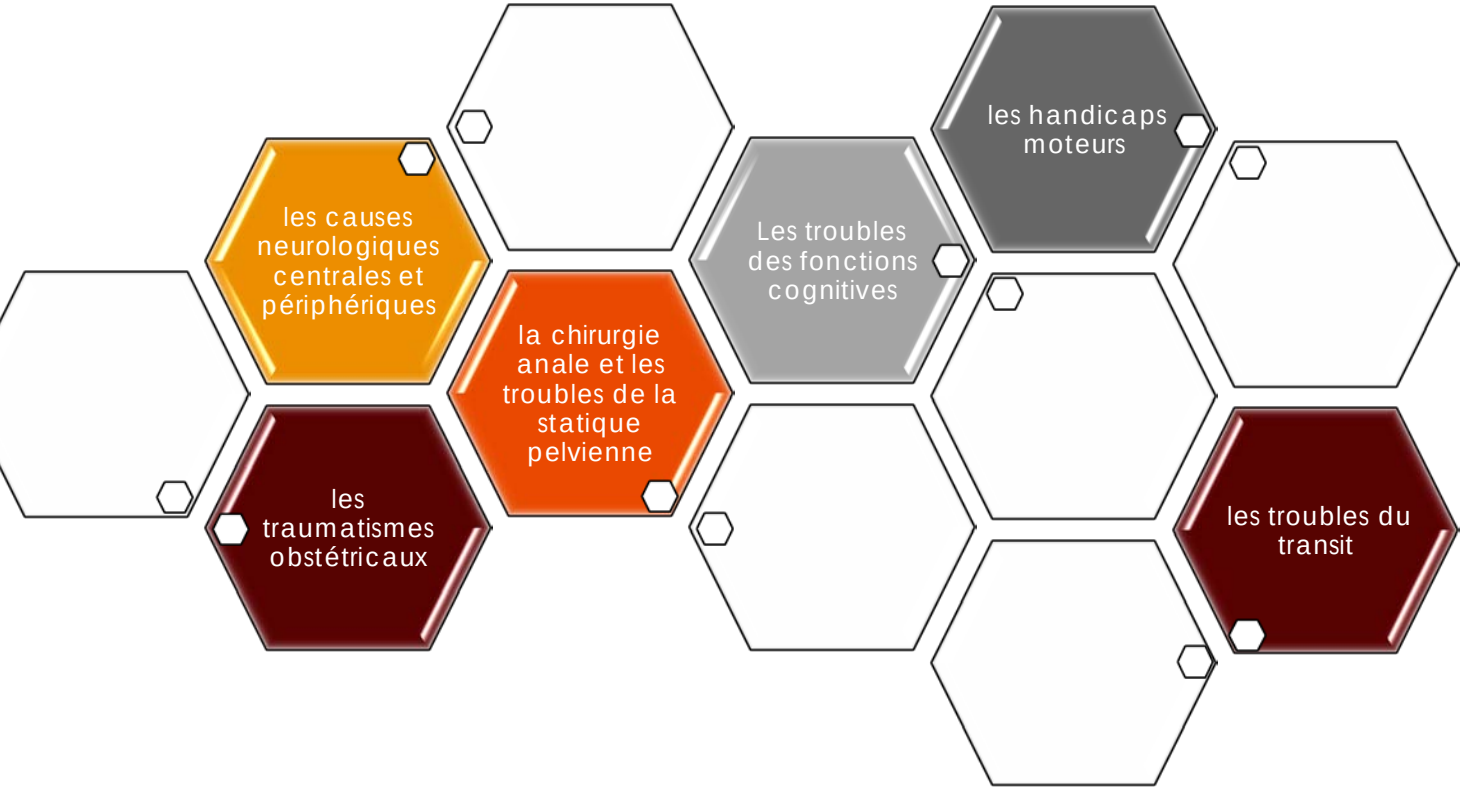
capacités fonctionnelles des muscles striés

sensibilité rectale à la distension

procédés physiques de renforcement

troubles de continence
troubles de l'évacuation
troubles du post partum
…

troubles de continence
troubles de l'évacuation
troubles du post partum
…



Incontinence fécale

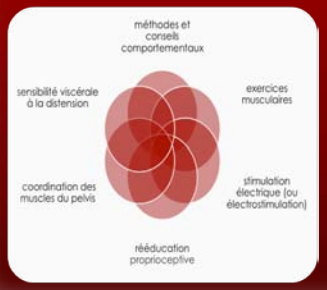
perte per anale involontaire d'une partie du contenu intestinal (gaz, mucus, selles liquides, selles solides)

données physiologiques : diminutions

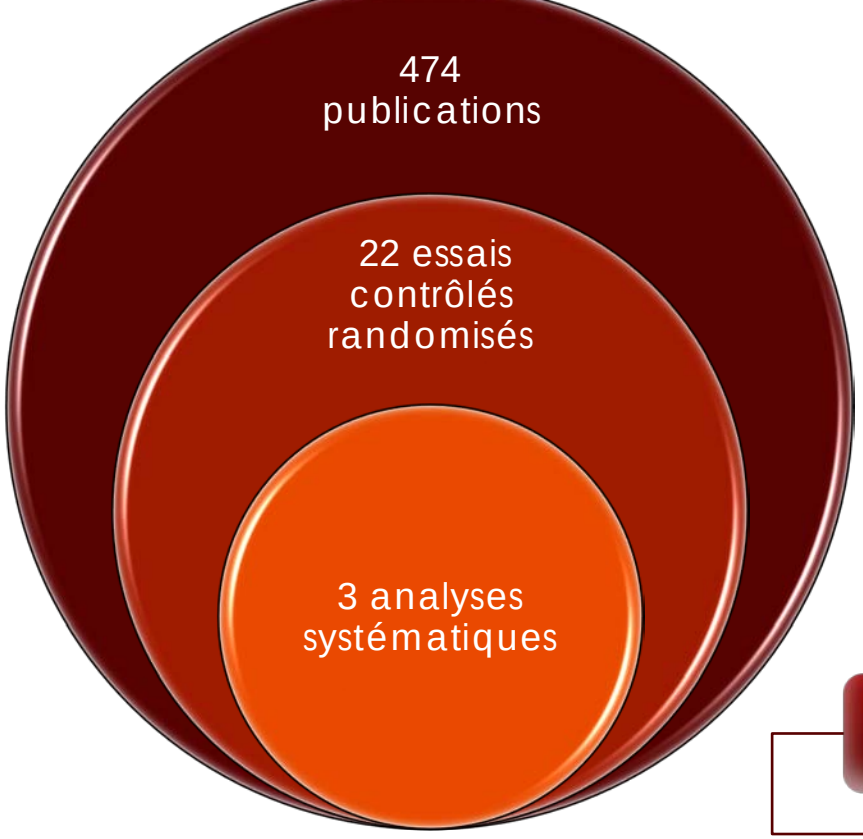
- pressions de repos du canal anal
- contraction volontaire du canal anal
- compliance rectale
- sensibilité à la distension isovolumique du rectum

régularisation du transit et de la consistance des selles

amélioration de la qualité de l'évacuation rectale



méthodes comportementales de type rééducation



- contractions musculaires
- le biofeedback
- la rééducation sensitive du rectum
- stimulation électrique sphinctérienne

contractions musculaires

- commande contractile des muscles striés en amplitude et en durée

le biofeedback

- une information visuelle et auditive facilitatrice

la rééducation sensitive du rectum

- abaisser les seuils de sensation & meilleure coordination en situation de réplétion rectale

stimulation électrique sphinctérienne

- contractile passive impliquant la musculature striée et lisse

C. fréquence intermédiaire (MF) couplé à un biofeedback par méthode électromyographique

3T pour « triple target » permet de stimuler

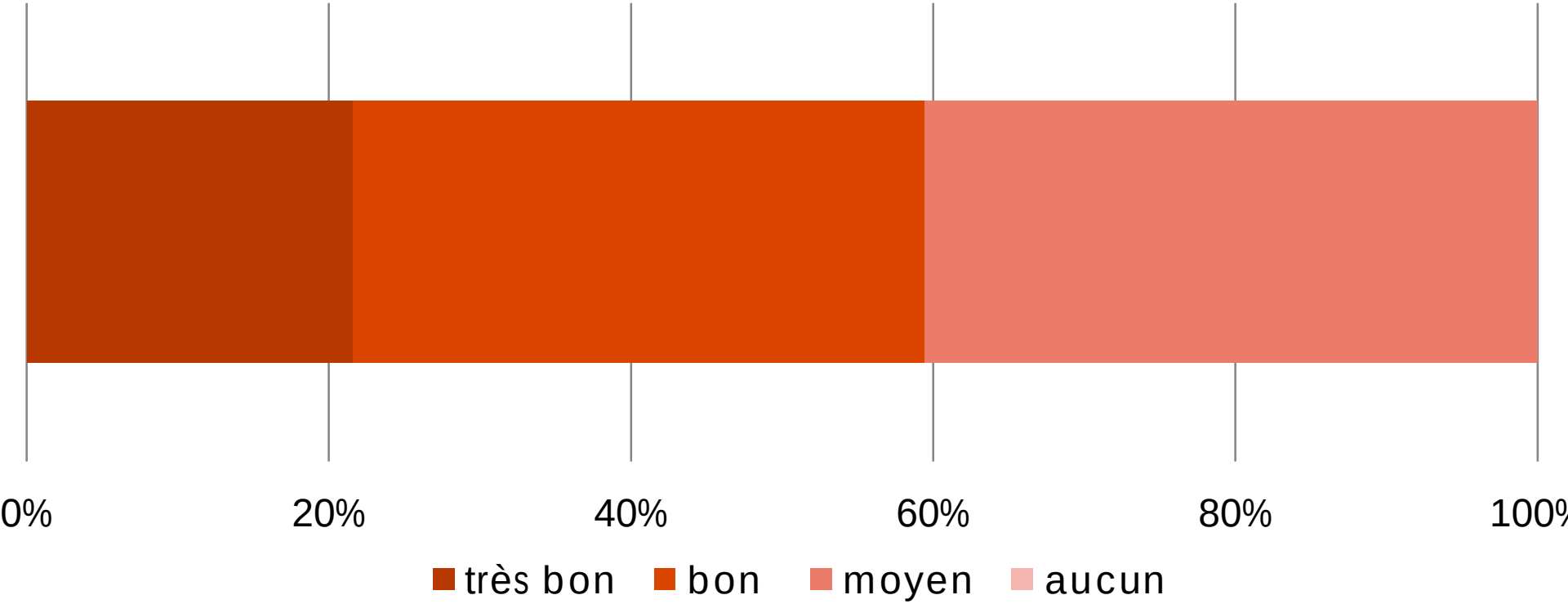
les fibres lentes ou toniques

les fibres rapides

leur contrôle neurologique central et périphérique

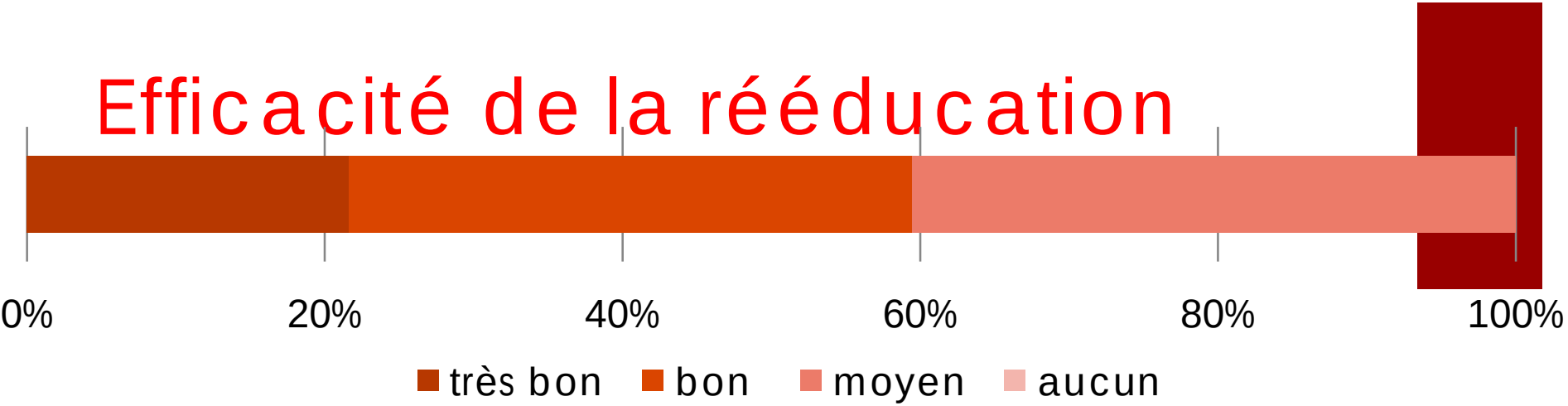
Efficacité de la rééducation

N= 39 malades suivis 44 mois (12-59 mois) après rééducation



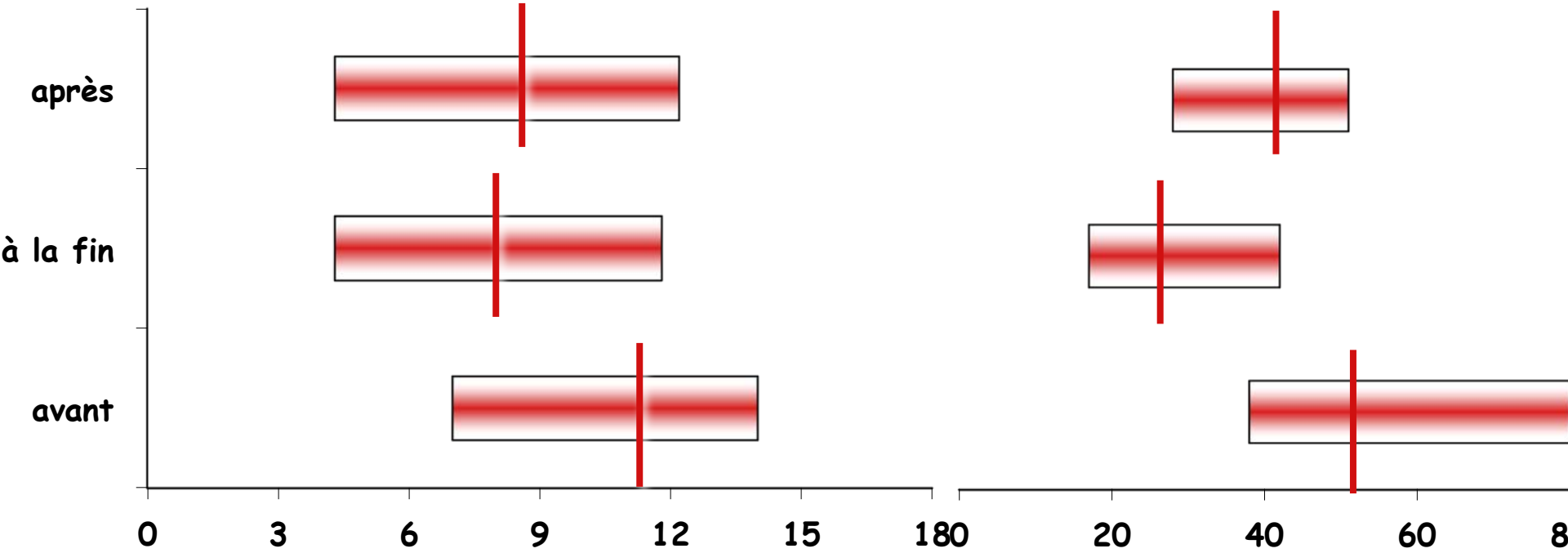
Ryn AK, Morren GL, Hallböök O, Sjödahl R. Long tem results of EMG biofeedback training for fecal incontinence. Dis Colon Rectum 2000 ;'43 :1262-6

Efficacité de la rééducation



Score symptomatique

EVA d 'insatisfaction



Ryn AK, Morren GL, Hallböök O, Sjödahl R. Long tem results of EMG biofeedback training for fecal incontinence. Dis Colon Rectum 2000 ;'43 :1262-6

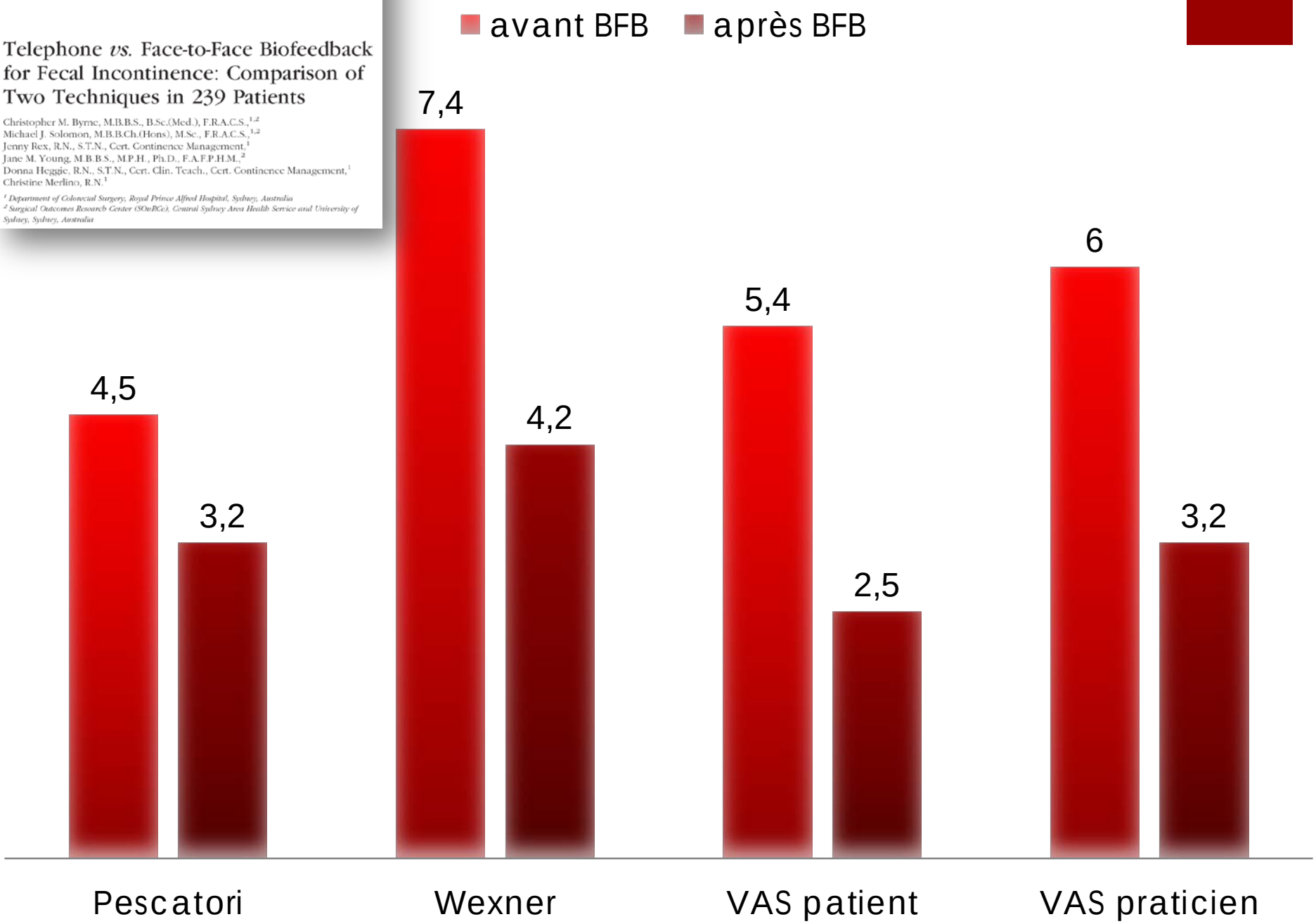
Quantification du bénéfice

Diseases of the Colon & Rectum

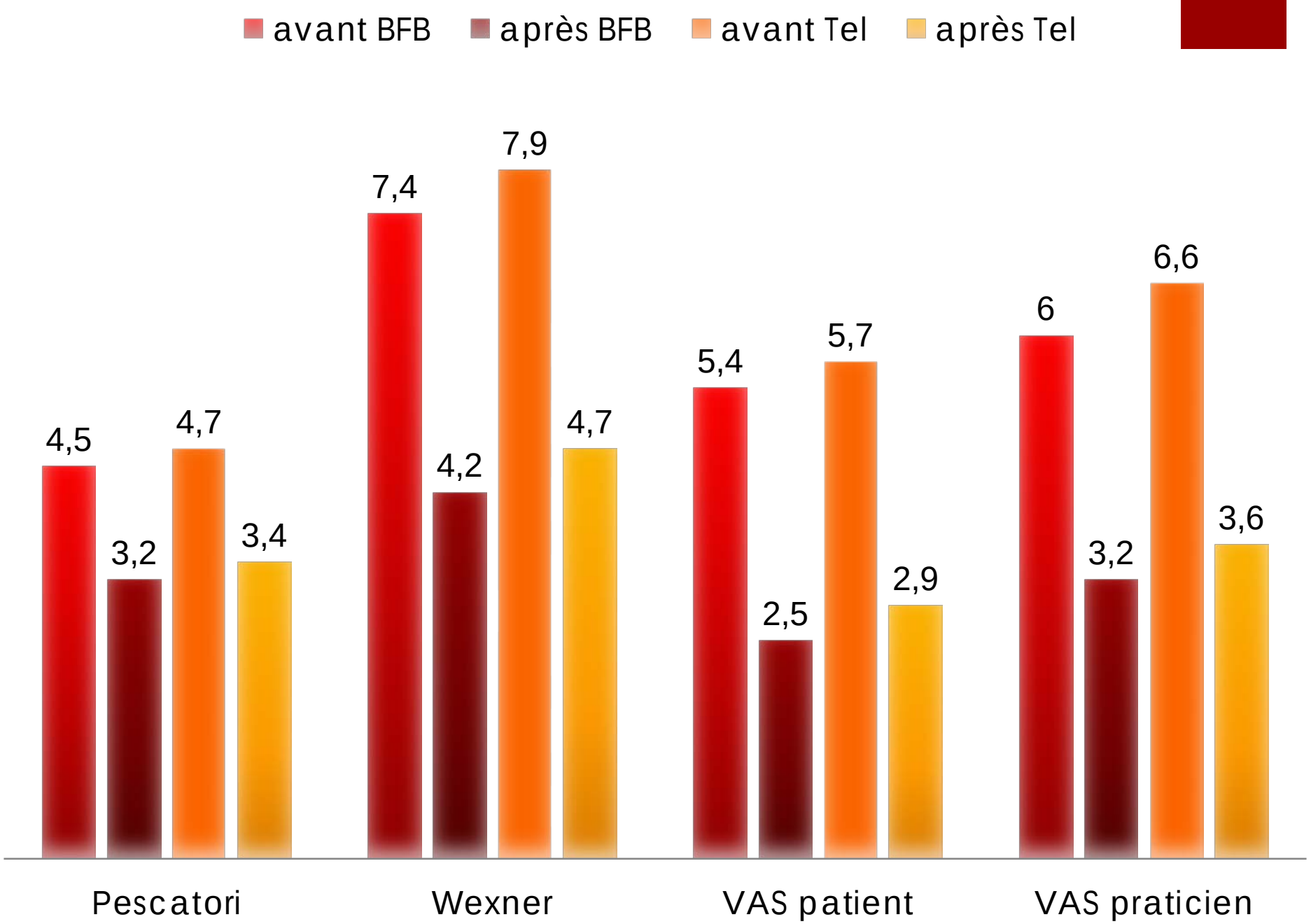
Telephone *vs.* Face-to-Face Biofeedback for Fecal Incontinence: Comparison of Two Techniques in 239 Patients

Christopher M. Byrne, M.B.B.S., B.Sc.(Med.), F.R.A.C.S.,[1,2]
Michael J. Solomon, M.B.B.Ch.(Hons), M.Sc., F.R.A.C.S.,[1,2]
Jenny Rex, R.N., S.T.N., Cert. Continence Management,[1]
Jane M. Young, M.B.B.S., M.P.H., Ph.D., F.A.F.P.H.M.,[2]
Donna Heggie, R.N., S.T.N., Cert. Clin. Teach., Cert. Continence Management,[1]
Christine Merlino, R.N.[1]

[1] *Department of Colorectal Surgery, Royal Prince Alfred Hospital, Sydney, Australia*
[2] *Surgical Outcomes Research Center (SOuRCe), Central Sydney Area Health Service and University of Sydney, Sydney, Australia*



Quantification du bénéfice



GASTROENTEROLOGY 2003;125:1320–1329

Randomized Controlled Trial of Biofeedback for Fecal Incontinence

CHRISTINE NORTON,*,† SONYA CHELVANAYAGAM,* JENIFER WILSON–BARNETT,† SALLY REDFERN,† and MICHAEL A. KAMM*
*St. Mark's Hospital, Harrow, England; and †Florence Nightingale School of Nursing, King's College, London, England

Comportemental & hygiène

Gr1 N=29

Exercices musculaires

Gr2 N=32

BFB

Gr3 N=44

BFB intensif

Gr4 N=35

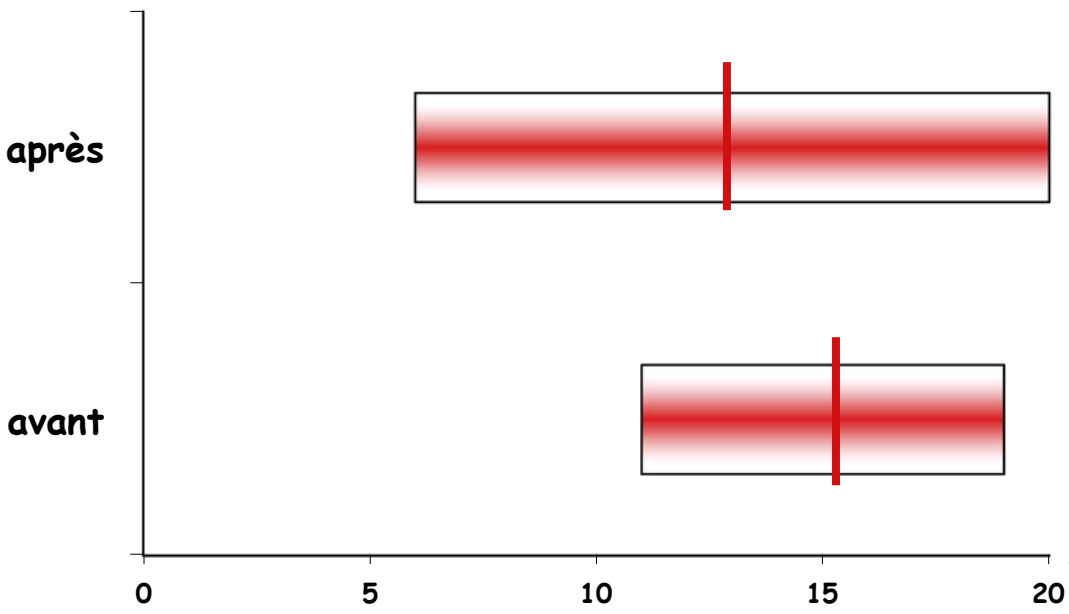
N=171

GASTROENTEROLOGY 2003;125:1320–1329

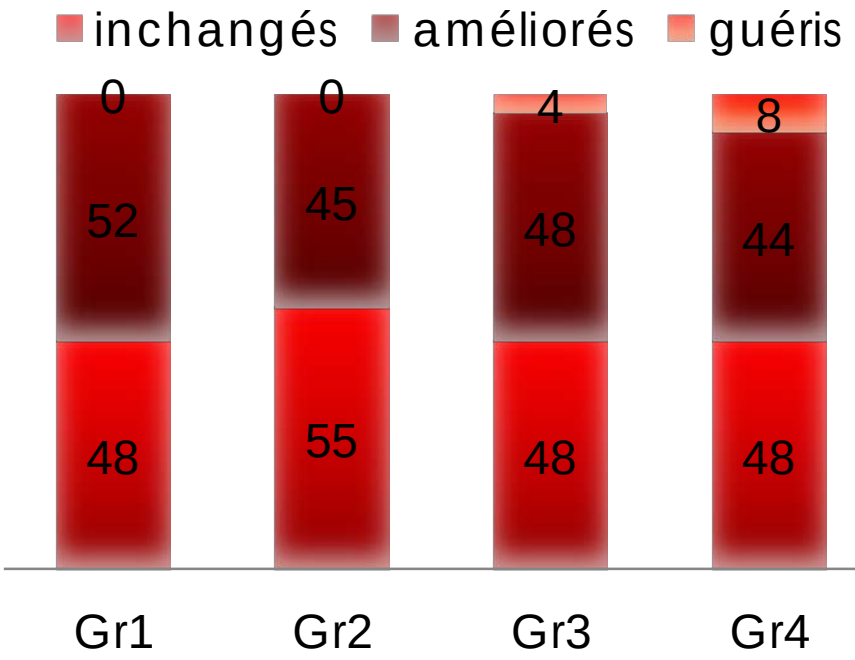
Randomized Controlled Trial of Biofeedback for Fecal Incontinence

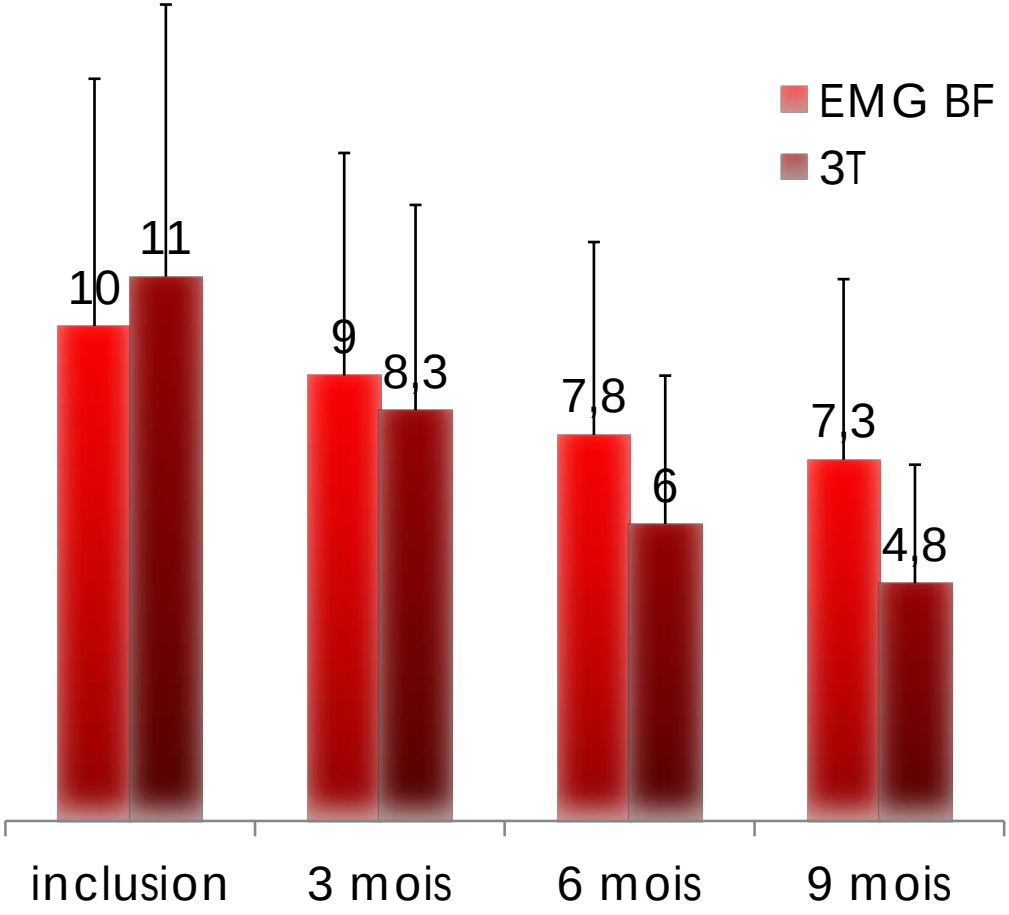
CHRISTINE NORTON,*,† SONYA CHELVANAYAGAM,* JENIFER WILSON–BARNETT,† SALLY REDFERN,† and MICHAEL A. KAMM*
*St. Mark's Hospital, Harrow, England; and †Florence Nightingale School of Nursing, King's College, London, England

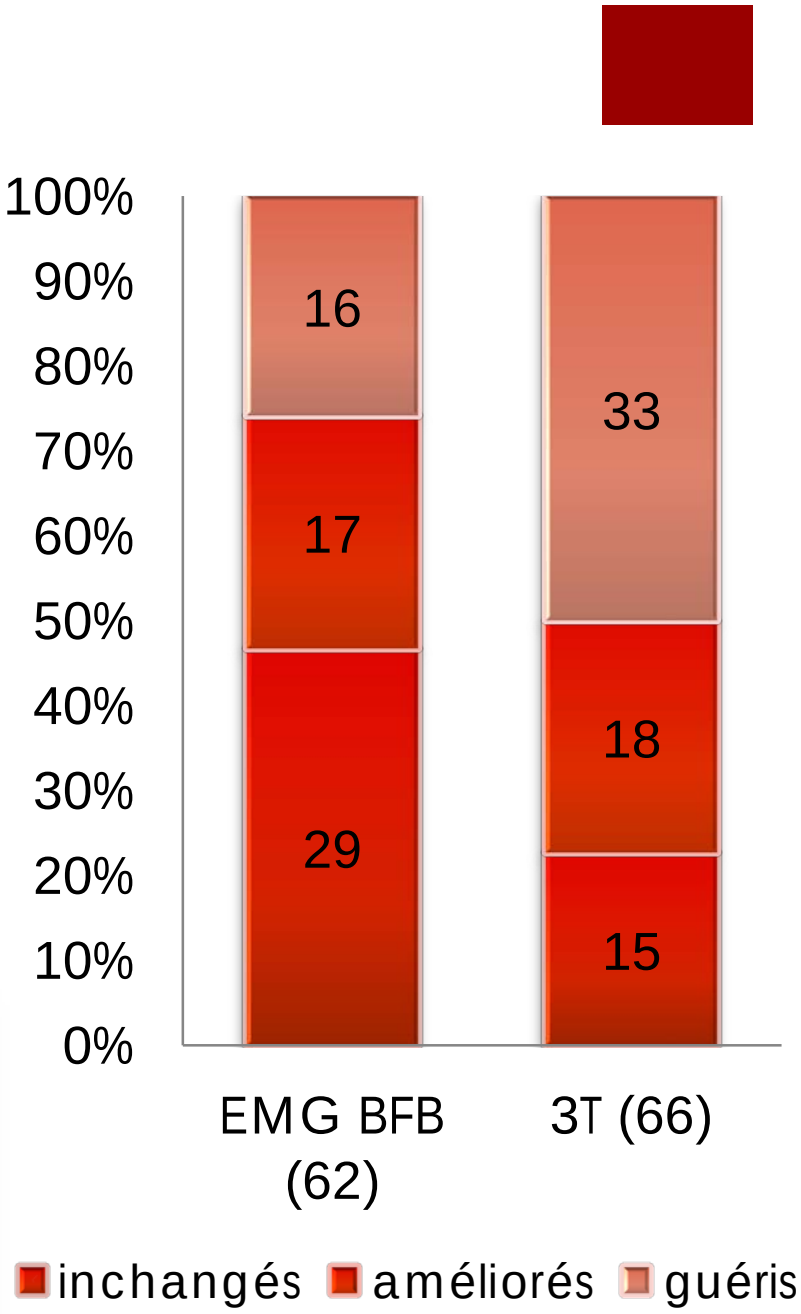
Score médian (IQ)	G1	G2	G3	G4	Total
Avant	16.4 (3.7)	14.4 (4.3)	15.1 (3.7)	14.8 (4.0)	15.1 (4.0)
Après	13 (6.5)	11 (6)	13 (7)	14 (11)	13 (7)



Bénéfice symptomatique







ORIGINAL CONTRIBUTION

Triple Target Treatment (3T) Is More Effective Than Biofeedback Alone for Anal Incontinence: The 3T-AI Study

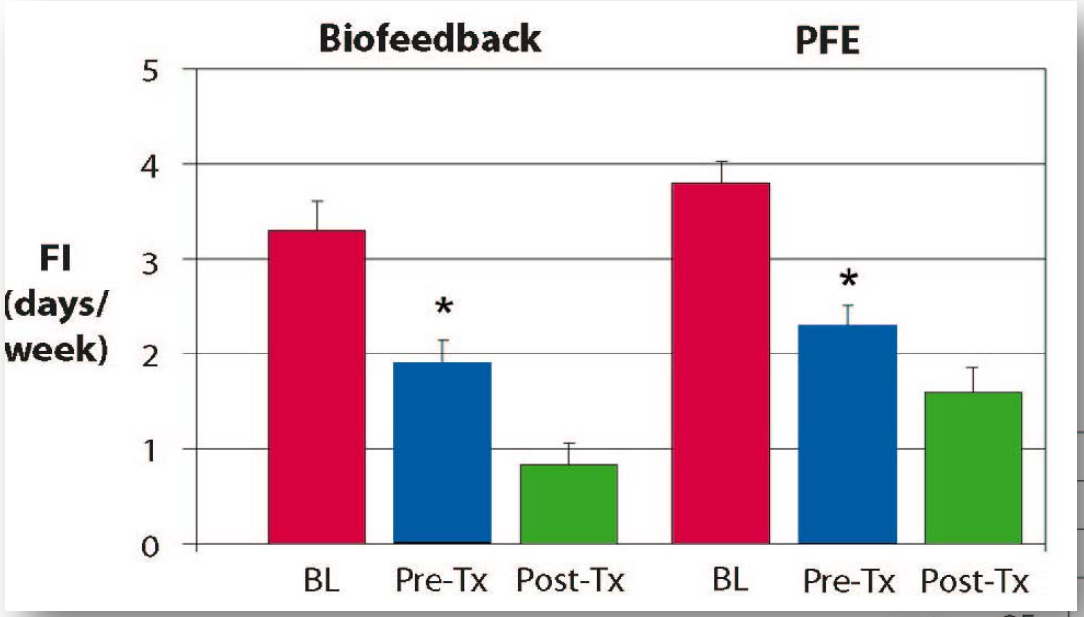
Thilo Schwandner, M.D.[1] • Inke R. König, Ph.D.[2,3] • Tankred Heimerl[1]
Walter Kierer, M.D.[4] • Michael Roblick, M.D.[1] • Ralf Bouchard, M.D.[5]
Thorsten Unglaube, M.D.[6] • Philipp Holch, M.D.[7] • Andreas Ziegler, Ph.D.[2,3]
Gerd Kolbert, M.D.[8]

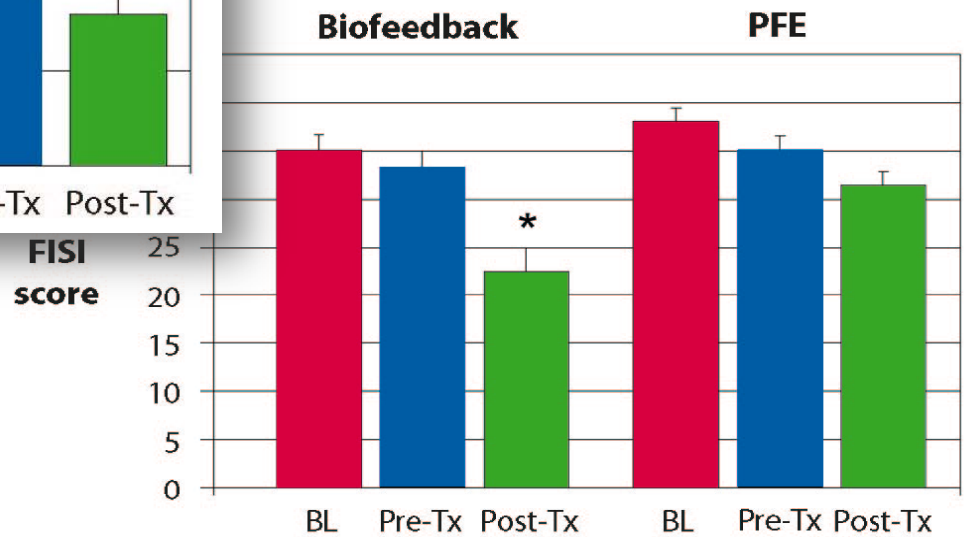
ORIGINAL CONTRIBUTION

Randomized Controlled Trial Shows Biofeedback to be Superior to Pelvic Floor Exercises for Fecal Incontinence

Steve Heymen, Ph.D. • Yolanda Scarlett, M.D. • Kenneth Jones, Ph.D.
Yehuda Ringel, M.D. • Douglas Drossman, M.D. • William E. Whitehead, Ph.D.

Department of Medicine (Division of Gastroenterology and Hepatology) and Center for Functional Gastrointestinal and Motility Disorders, University of North Carolina, Chapel Hill, North Carolina





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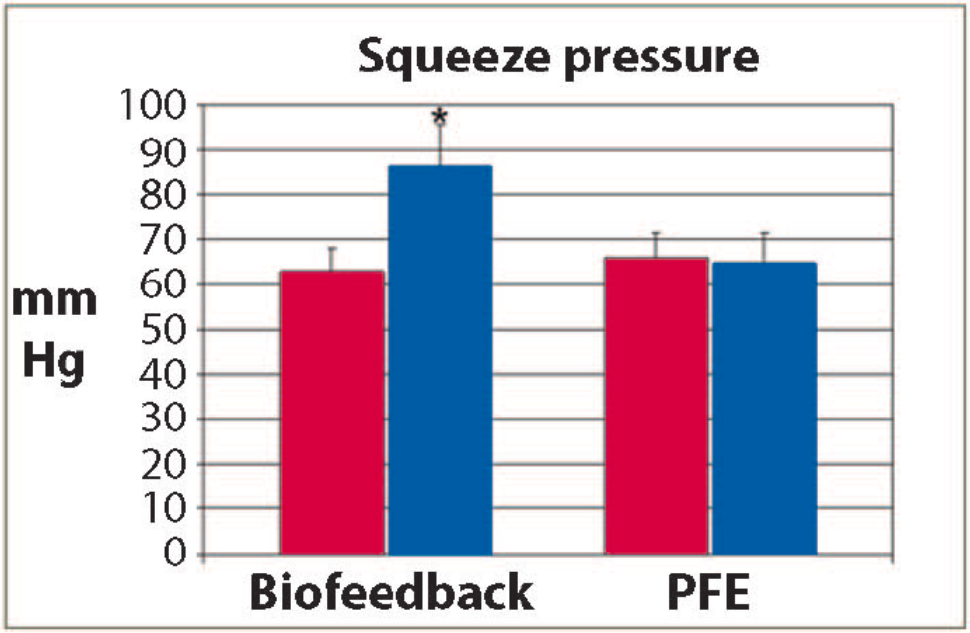
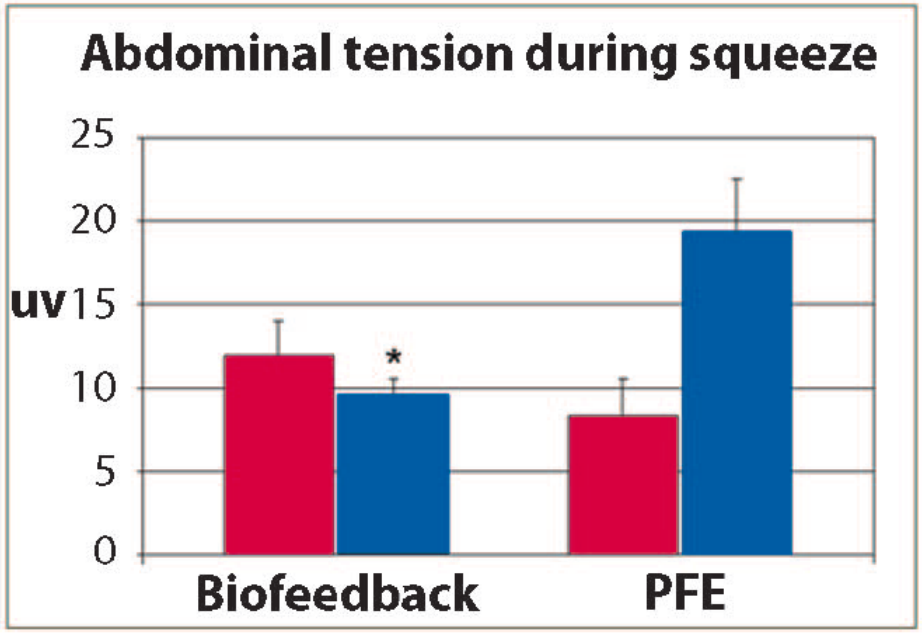


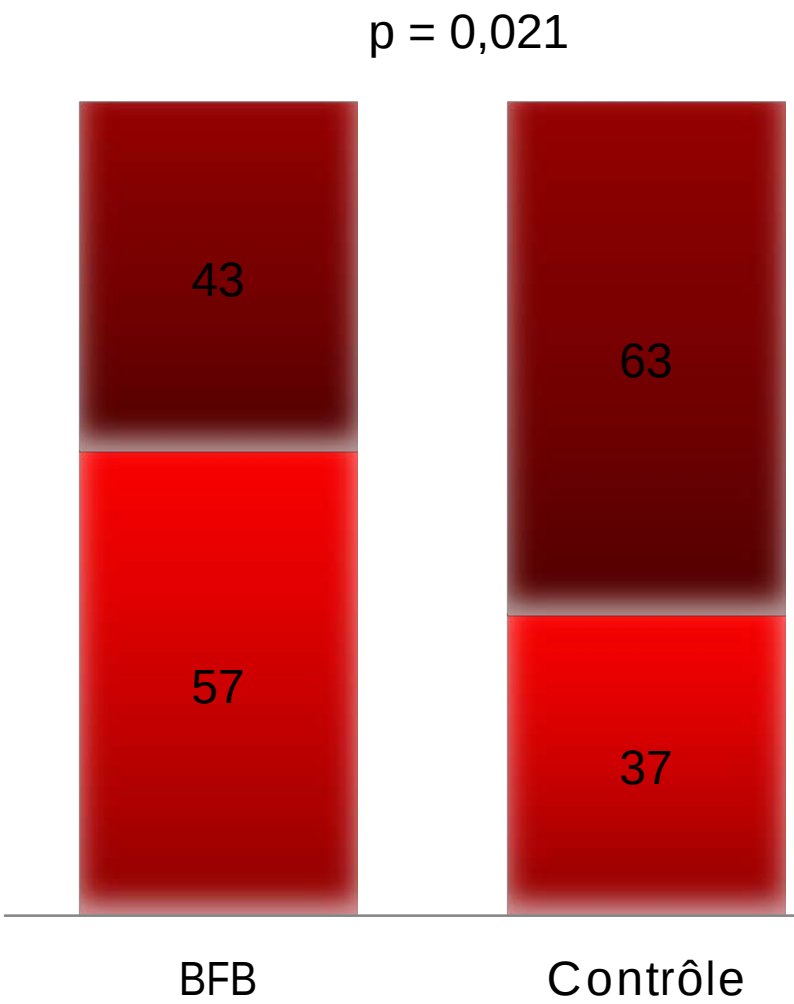


Essai ORALIA

	Contrôles (n=80)	Rééducation (n=77)	p
Clinique			
Score de J&W	11 ± 3	11 ± 3	0,796
Dyschésie	25 (32%)	24 (32%)	0,951
Constipation	15 (19%)	19 (25%)	0,387
Incontinence Urinaire	36 (47%)	38 (51%)	0,572
Echographie endo-anale			
Présence de Défect	29 (38%)	27 (36%)	0,881
Etendue Défect (en degrés)	63 ± 34	70 ± 44	0,819
Manométrie AR			
P repos (cm H2O)	50 ± 26	60 ± 61	0,792
Durée CV (sec)	30 ± 54	19 ± 15	0,027*
Amplitude CV (H2O)	63 ± 49	50 ± 47	0,045*

JFHOD 15-18 MARS PARIS 2012

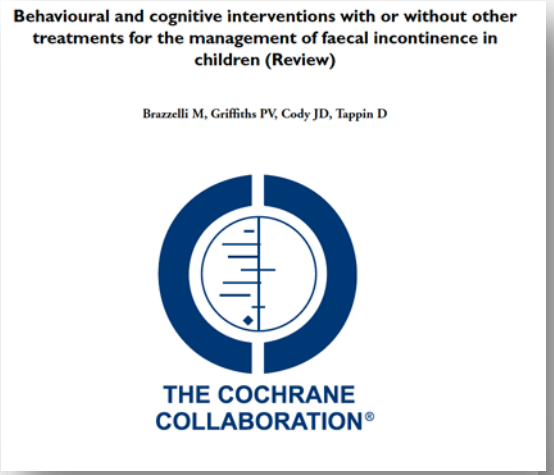
Score ≥ 3



	Contrôles (n=75)		Rééducation (n=67)		p
	M0	M4	M0	M4	
Score J&W	12 ± 3	10 ± 4	12 ± 4	10 ± 4	0,643
Score KESS	14 ± 6	15 ± 5	11 ± 8	12 ± 7	0,355
UDI-6 (Urinaire)	6 ± 5	7 ± 5	6 ± 4	6 ± 4	0,182
Qualité de vie					
FIQL (Mode de vie)	3 ± 1	3 ± 1	3 ± 1	3 ± 1	0,882
Score anxiété	10 ± 4	9 ± 4	9 ± 5	9 ± 4	0,743
Score dépression	6 ± 5	6 ± 4	6 ± 5	6 ± 5	0,987

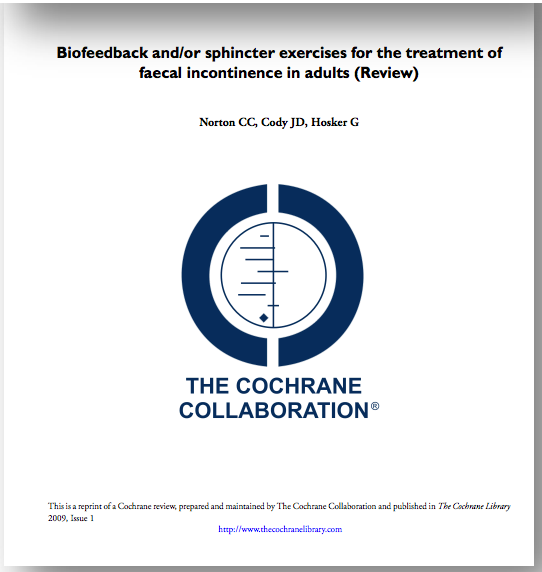
Aggravation — Pas de changement — Guérison

Message 1


Behavioural and cognitive interventions with or without other treatments for the management of faecal incontinence in children (Review)

Brazzelli M, Griffiths PV, Cody JD, Tappin D

THE COCHRANE COLLABORATION®


Biofeedback and/or sphincter exercises for the treatment of faecal incontinence in adults (Review)

Norton CC, Cody JD, Hosker G

THE COCHRANE COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2009, Issue 1

http://www.thecochranelibrary.com

La rééducation peut améliorer les troubles de la continence:

- ✓ sélection des malades;
- ✓ rigueur de réalisation de la rééducation;
- ✓ niveau d'amélioration discutable.

Incontinence fécale.

troubles de continence
troubles de l'évacuation
troubles du post partum
…

biofeedback par électromyographie

- électrodes de contact muscles du périnée ou canal anal

biofeedback par manométrie

- pressions du canal anal, reflet indirect de l'activité contractile

biofeedback sensitif

- stimulation rectale par ballonnet. Synergie abdominopelvienne à partir de ces perceptions sensitives

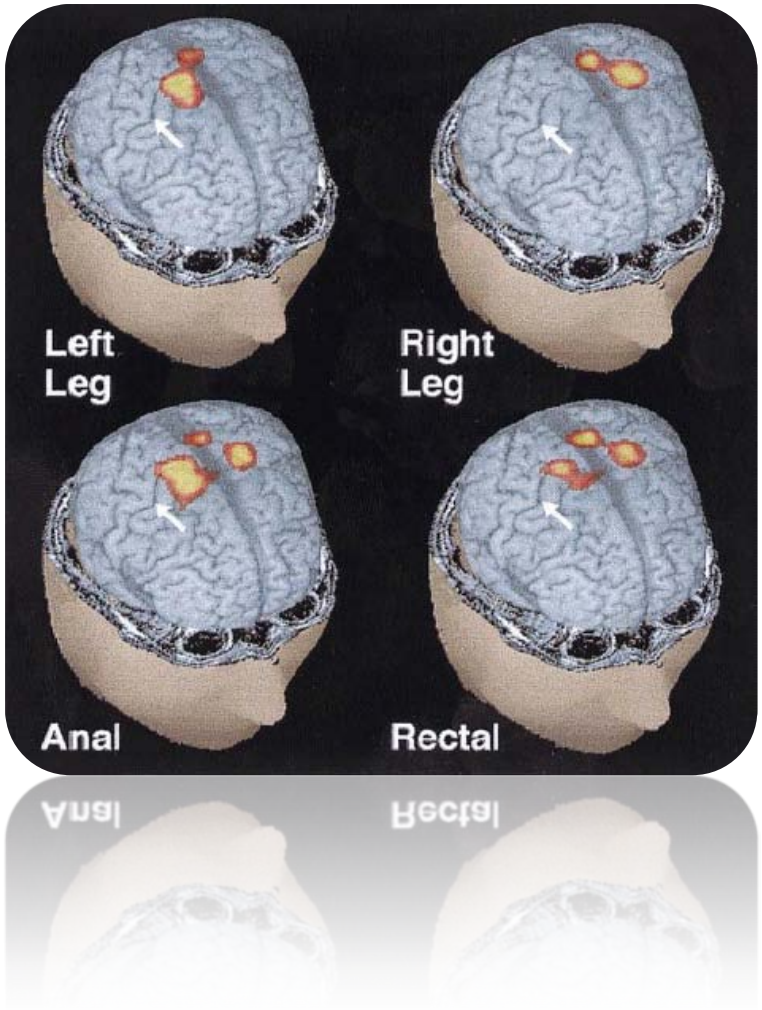
Protocoles de BFB

Coordonner:

- Relaxation musculaire périnéale
- Valsalva

Utiliser

- Pression anale
- EMG endocanalaire
- EMG péri anal



GASTROENTEROLOGY 1999;117:32–39

The Cortical Topography of Human Anorectal Musculature

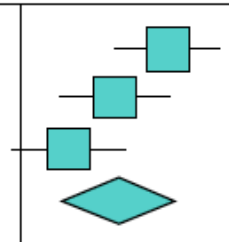
GEOFFREY K. TURNBULL,* SHAHEEN HAMDY,‡ QASIM AZIZ,‡ KRISHNA D. SINGH,§ and DAVID G. THOMPSON‡

Systematic review

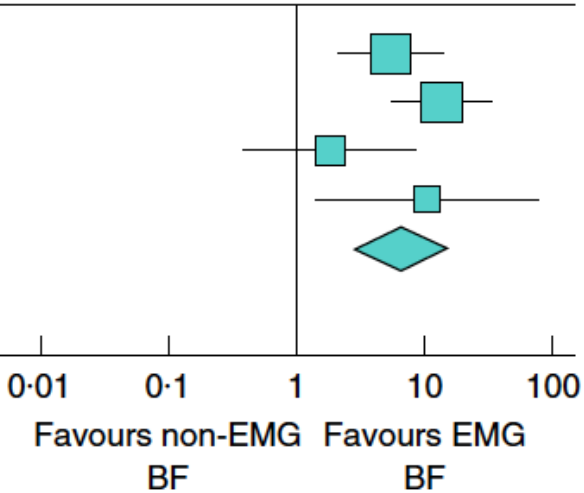
Systematic review of randomized controlled trials of the effectiveness of biofeedback for pelvic floor dysfunction

C. E. Koh[1], C. J. Young[2], J. M. Young[1,3] and M. J. Solomon[1,2]

Reference	Odds ratio	Z	P
Chiarioni *et al.*[40]	14·008 (5·577, 35·180)	5·618	< 0·001
Heymen *et al.*[42]	5·542 (2·090, 14·694)	3·442	0·001
Rao *et al.*[41]	2·444 (0·878, 6·806)	1·711	0·087
Overall	5·861 (2·175, 15·794)	3·497	< 0·001



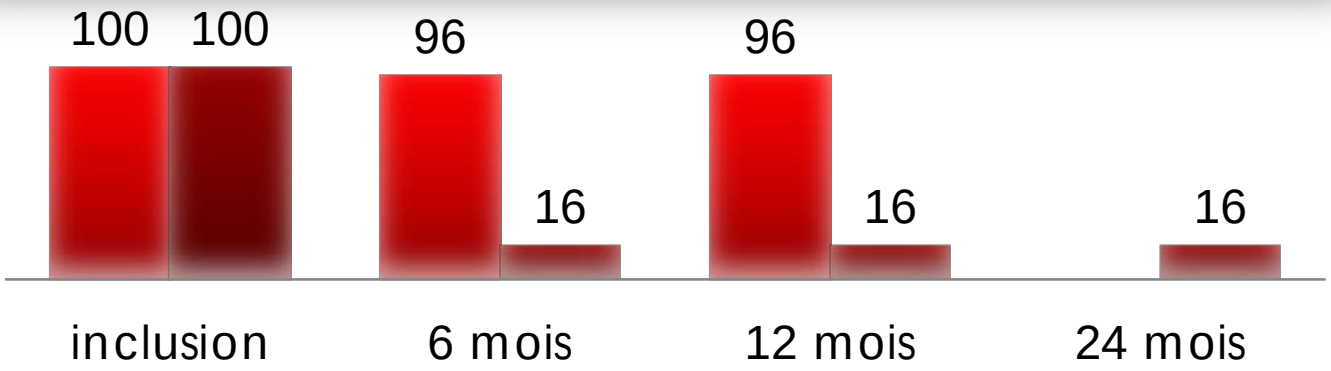
Reference	Odds ratio	Z	P
Heymen *et al.*[42]	5·542 (2·090, 14·694)	3·442	0·001
Chiarioni *et al.*[40]	14·008 (5·577, 35·180)	5·618	< 0·001
Glia *et al.*[38]	1·867 (0·392, 8·894)	0·784	0·433
Bleijenberg *et al.*[36]	10·667 (1·387, 82·033)	2·274	0·023
	6·738 (2·914, 15·580)	4·461	< 0·001

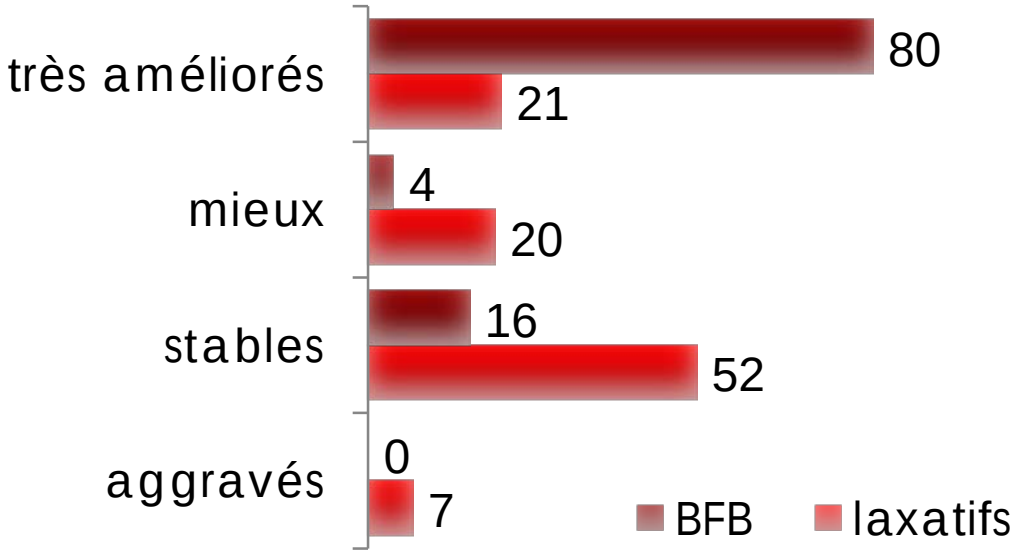


GASTROENTEROLOGY 2006;130:657–664

Biofeedback Is Superior to Laxatives for Normal Transit Constipation Due to Pelvic Floor Dyssynergia

GIUSEPPE CHIARIONI,* WILLIAM E. WHITEHEAD,† VINCENZO PEZZA,§ ANTONIO MORELLI,‖ and GABRIO BASSOTTI‖





Constipation réfractaire (Rome II)

- 238 constip
  - 11 non constip.
- 227 TTC
  - 61 constipation de transit
- 166 MAR
  - 61 sans anisme
  - 4 exclus
- 109 randomisés

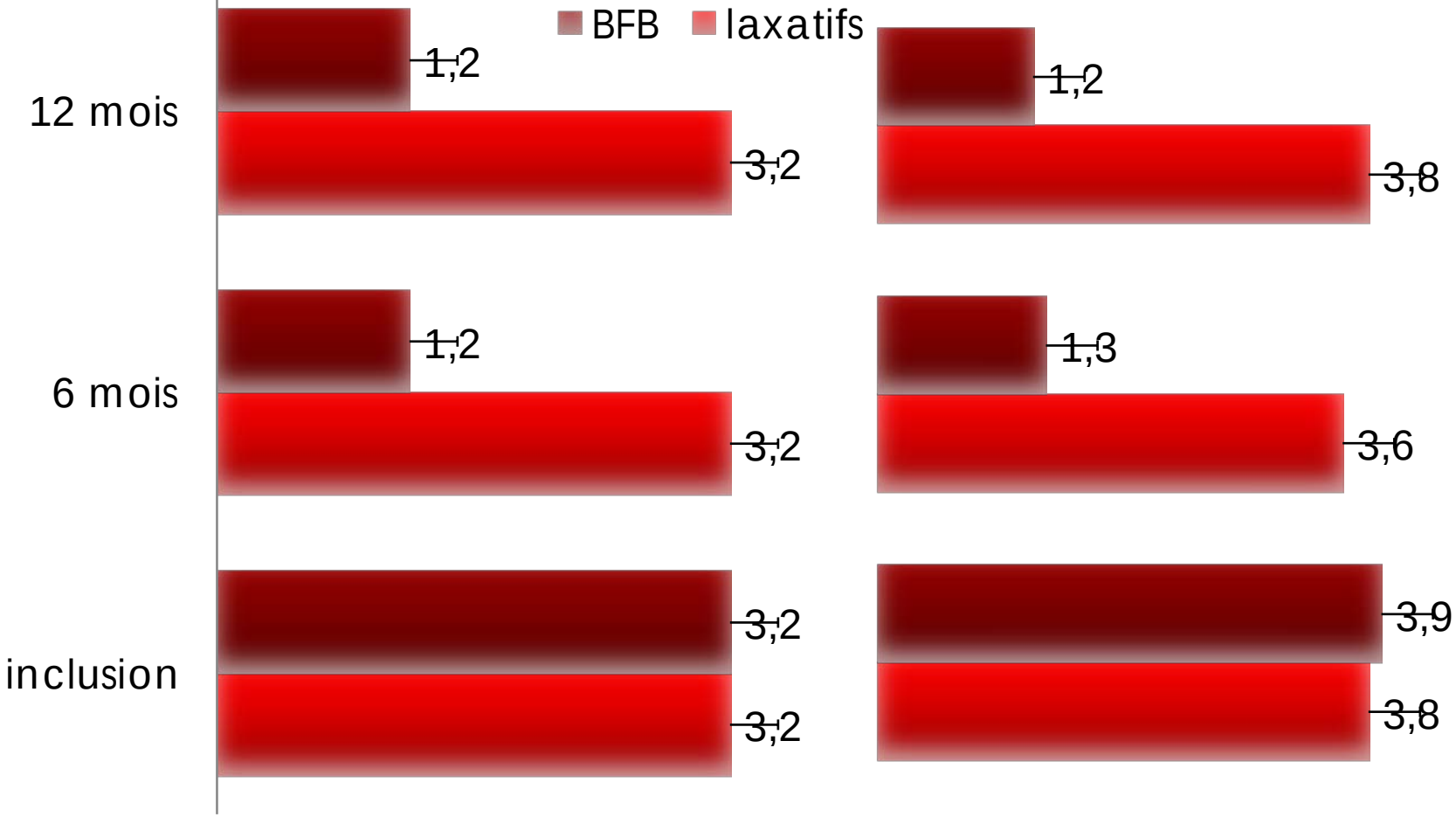
GASTROENTEROLOGY 2006;130:657–664

Biofeedback Is Superior to Laxatives for Normal Transit Constipation Due to Pelvic Floor Dyssynergia

GIUSEPPE CHIARIONI,* WILLIAM E. WHITEHEAD,† VINCENZO PEZZA,§ ANTONIO MORELLI,‖ and GABRIO BASSOTTI‖

Impression d'évacuation incomplète **effort de poussée**

exprimés en nombre de selles par semaine

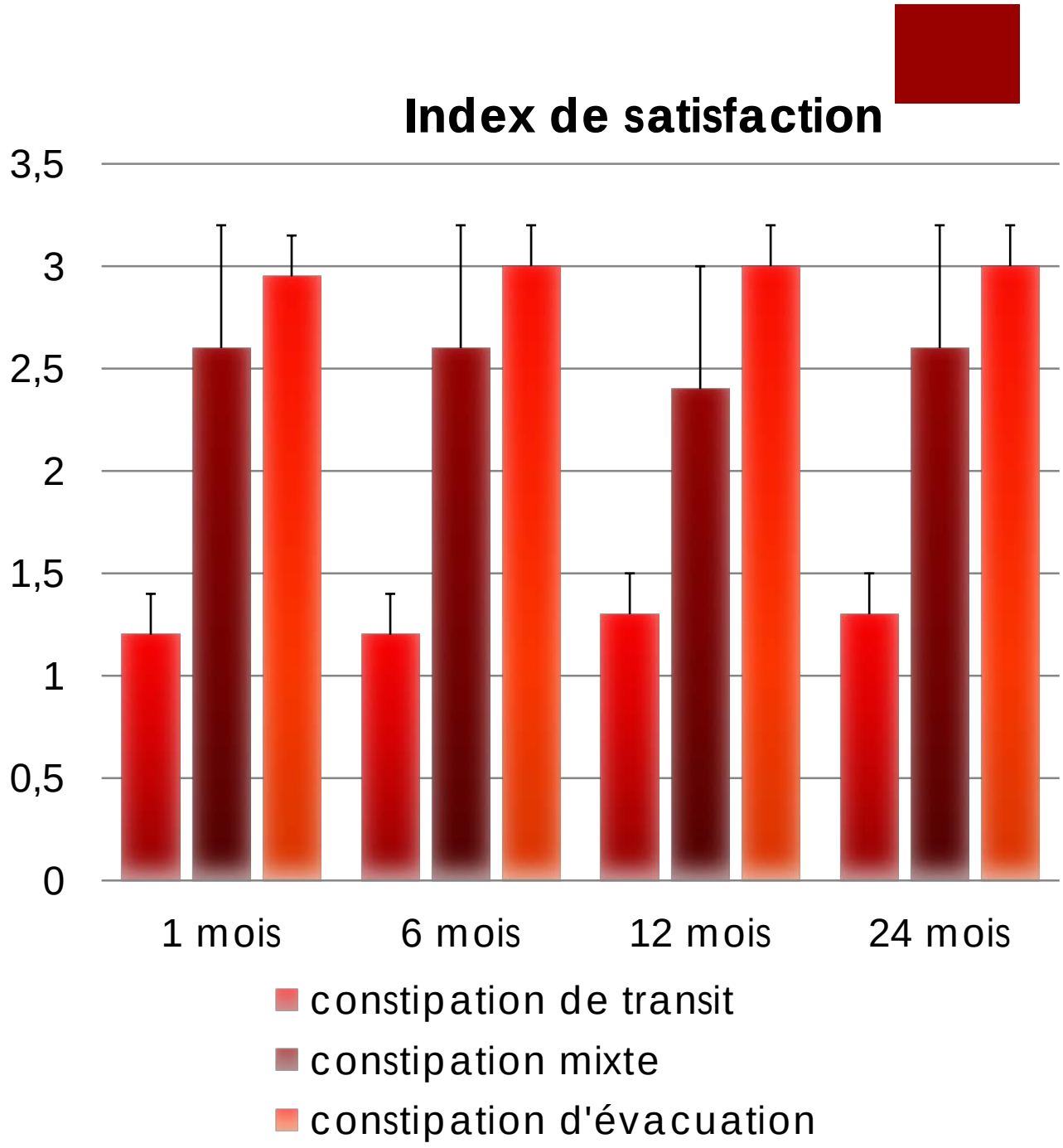


GASTROENTEROLOGY 2005;129:86–97

Biofeedback Benefits Only Patients With Outlet Dysfunction, Not Patients With Isolated Slow Transit Constipation

GIUSEPPE CHIARIONI,* LARA SALANDINI,* and WILLIAM E. WHITEHEAD‡

*Divisione di Riabilitazione Gastroenterologica, Universitá di Verona, Azienda Ospedaliera di Verona, Centro Ospedaliero Clinicizzato, Valeggio sul Mincio, Verona, Italy; and ‡UNC Center for Functional Gastrointestinal and Motility Disorders, and Division of Gastroenterology and Hepatology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

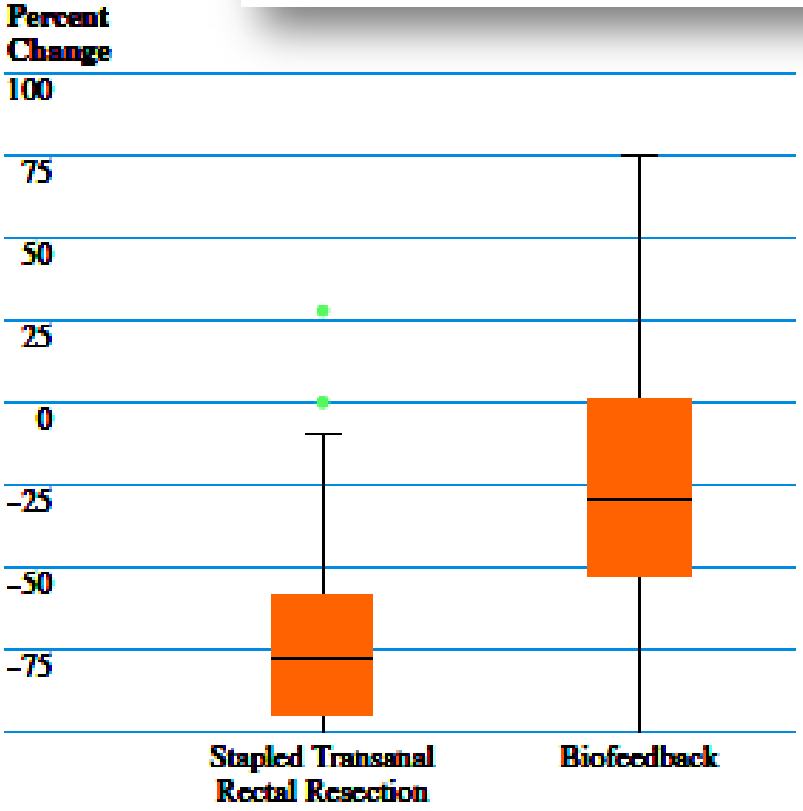


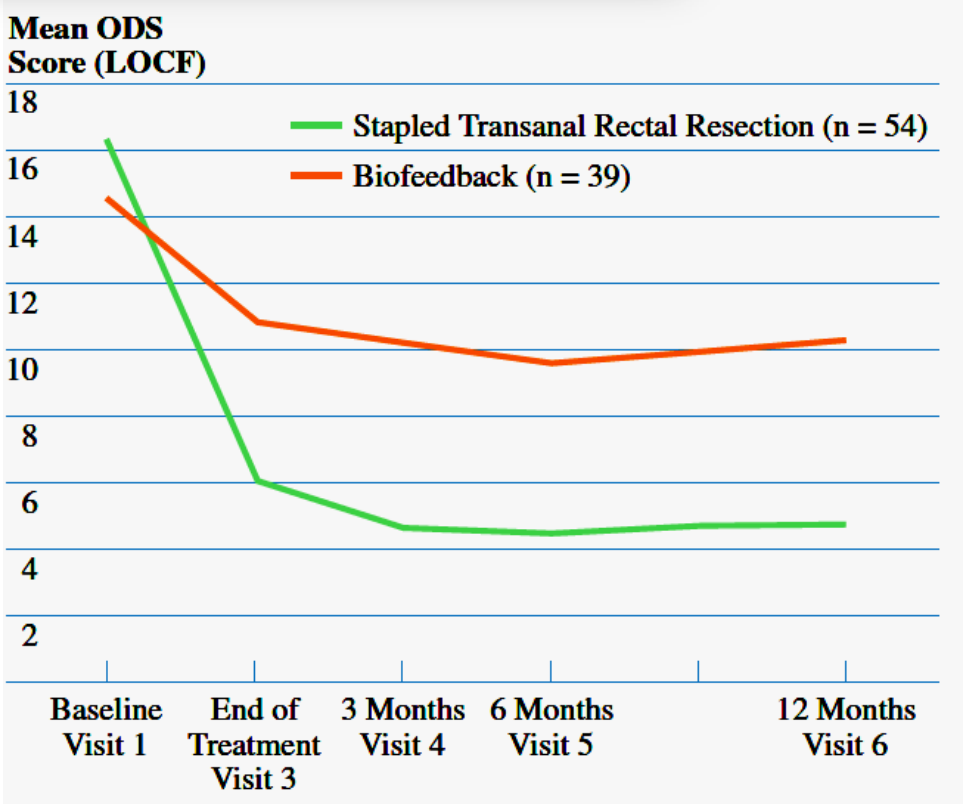
DISEASES OF THE COLON & RECTUM

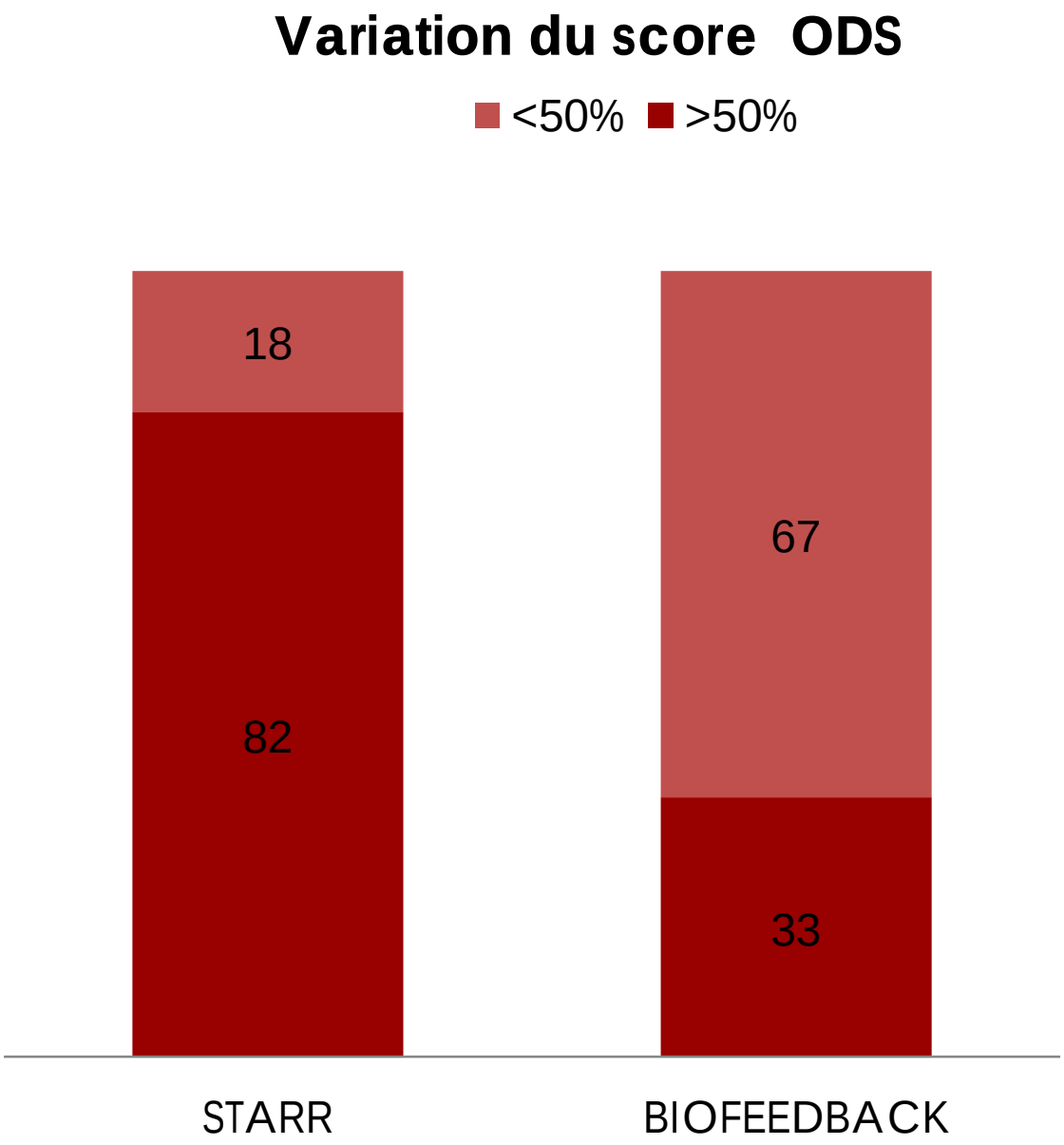
ORIGINAL CONTRIBUTION

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

Paul A. Lehur, M.D.[1] • Angelo Stuto, M.D.[2] • Michel Fantoli, M.D.[3] • Roberto D. Villani, M.D.[4] • Michel Queralto, M.D.[5] • Franck Lazorthes, M.D.[6] • Michael Hershman, M.D.[7] • Alfonso Carriero, M.D.[8] • François Pigot, M.D.[9] • Guillaume Meurette, M.D.[1] • Prashanty Narisetty, M.D.[2] • Richard Villet, M.D.[10] • for the ODS II Study Group






Variation du score ODS
<50%
>50%
18
82
67
33
STARR
BIOFEEDBACK

Message 2

La rééducation améliore les troubles de l'évacuation:

- ✓ patients avec anisme;
- ✓ (troubles de la statique)~~;~~
- ~~✓ constipation de transit~~.

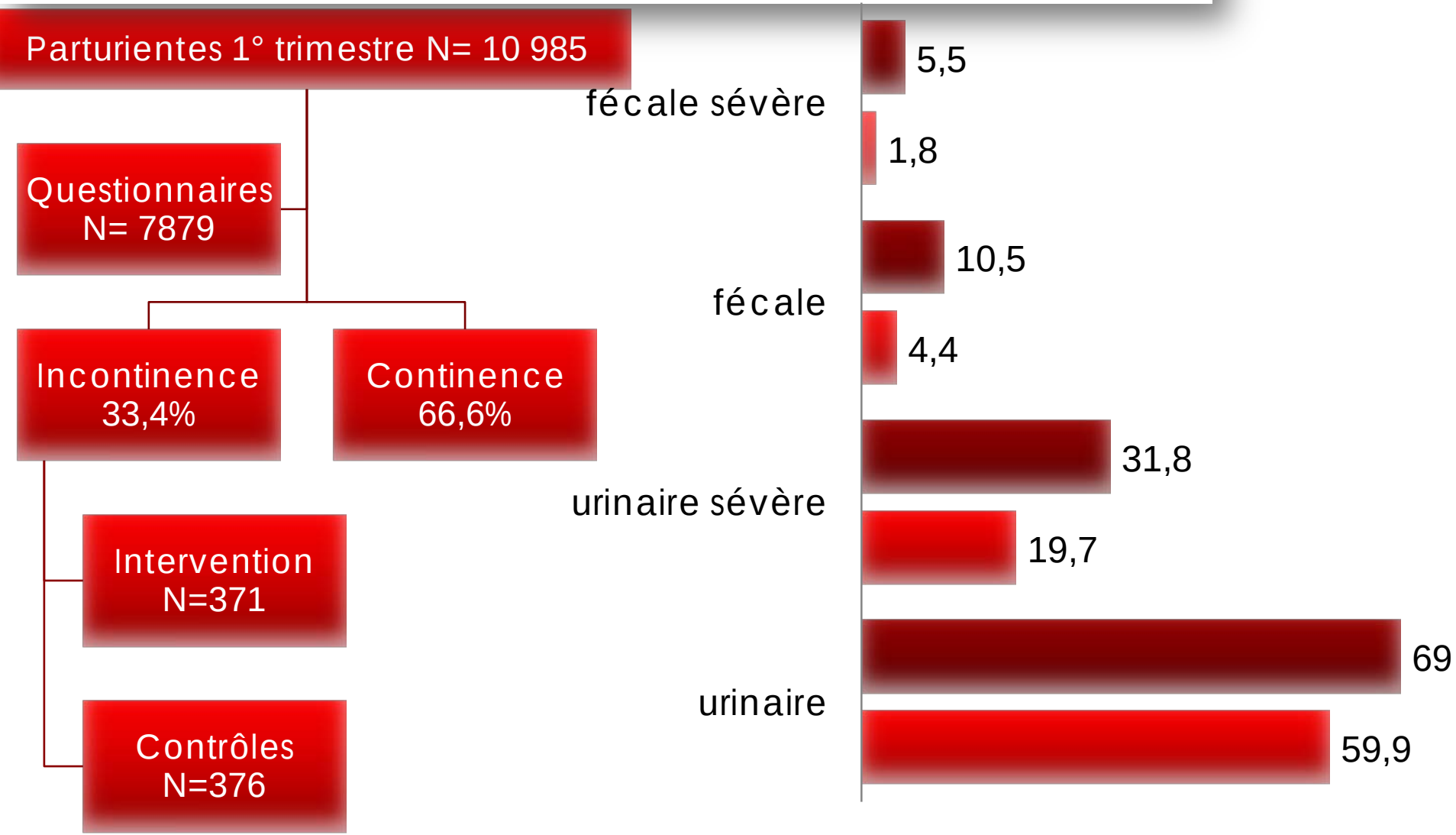
Constipation

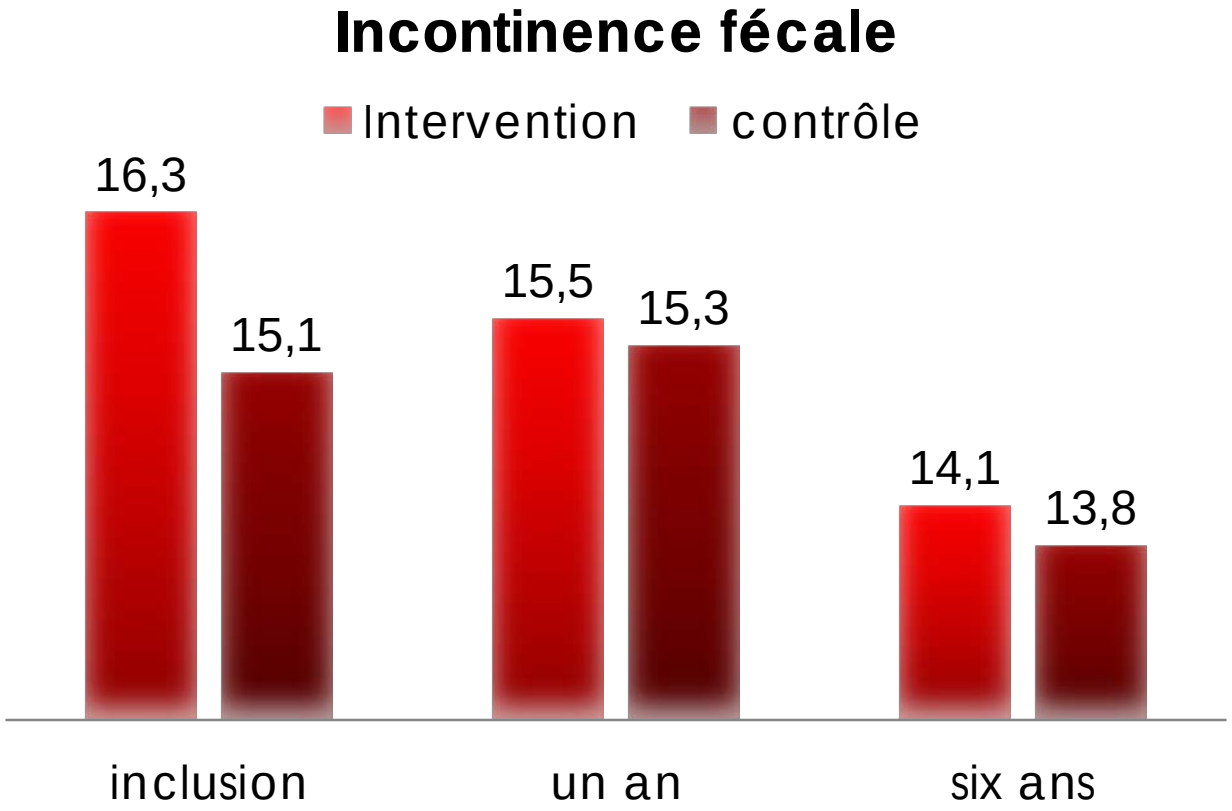
troubles de continence
troubles de l'évacuation
troubles du post partum
…

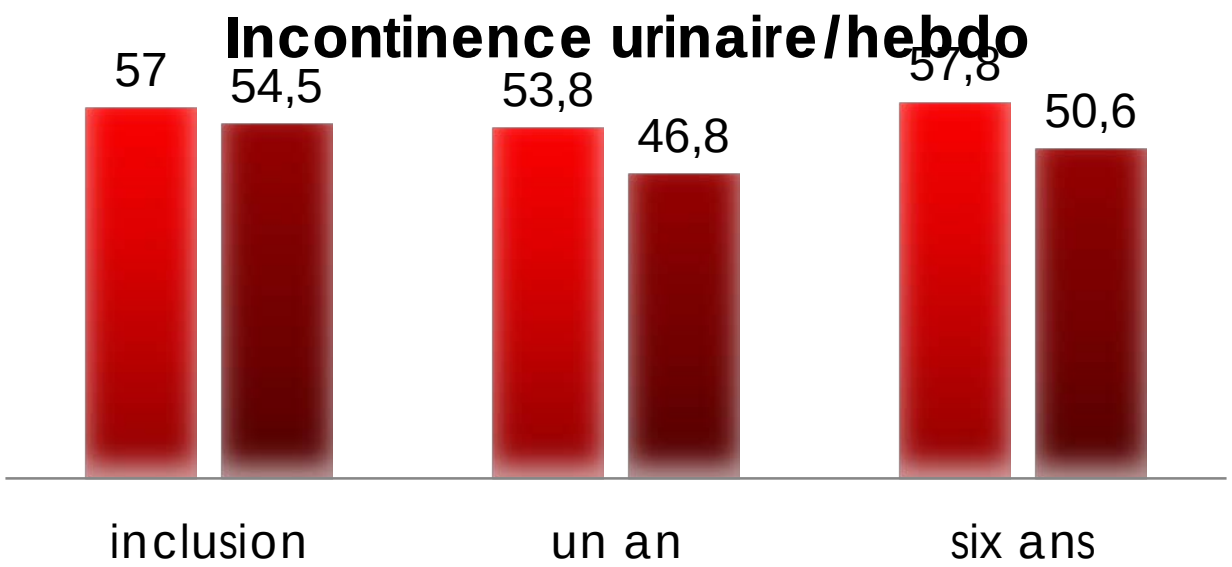
Conservative management of persistent postnatal urinary and faecal incontinence: randomised controlled trial

Topic: 66;68;159;161

Cathryn M A Glazener, G Peter Herbison, P Don Wilson, Christine MacArthur, Gordon D Lang, Harry Gee, Adrian M Grant







bmj.com

Randomised controlled trial of conservative management of postnatal urinary and faecal incontinence: six year follow up

Cathryn M A Glazener, G Peter Herbison, Christine MacArthur, Adrian Grant and P Don Wilson

BMJ 2005;330;337-; originally published online 22 Dec 2004; doi:10.1136/bmj.38320.613461.82

Message 3

L'accouchement peut compromettre les grandes fonctions pelviennes:

- ✓ les conséquences fonctionnelles ne peuvent être prévenues par la rééducation;
- ✓ La rééducation peut améliorer les troubles de la continence;
- ✓ cet effet ne se maintient pas dans le temps.

Rééducation & post partum

Points forts

1. *Les méthodes de rééducation reposent sur la correction des troubles de la commande volontaire des muscles striés pelviens et ceux de la sensibilité rectale à la distension.*

2. *Elles sont nombreuses et leur réalisation hétérogène : il est difficile d'en privilégier une sur les autres.*

3. *Le bénéfice de la rééducation dans le traitement de l'incontinence fécale est mince et discutable par rapport aux stratégies conservatives.*

4. *Le bénéfice de la rééducation pour traitement de la constipation d'évacuation par dyssynergie anorectale est franc : il est supérieur aux traitements laxatifs à court et à long termes.*

5. *La rééducation périnéale systématique des femmes en post partum est souvent prescrite mais elle n'en a pas la validation scientifique et médico économique.*