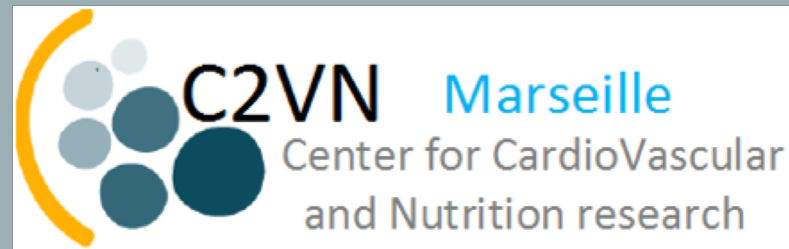




Faculté des sciences
médicales et paramédicales

Aix-Marseille Université



FISTULE RECTO-VAGINALE

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hôpital Timone, Marseille
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DESIU Coloproctologie

Hôpitaux
Universitaires
de Marseille | **ap·hm**

- **Classification-Etiologies**
- **Diagnostic**
- **Traitements chirurgicaux et données de la littérature**
- **Conclusions**

FISTULE RECTO-VAGINALE

- Communication épithélialisée pathologique entre le vagin et le (néo)rectum au travers de la paroi rectovaginale
- ≠ fistule iléo-vaginale (Crohn), sigmoïdo-vaginale (diverticulite)
- 5% des fistules anopérinéales
- Impact sur la continence et qualité de vie

CLASSIFICATION - ÉTIOLOGIES

FISTULE RECTO-VAGINALE (FRV)

Localisation

Haute

Moyenne

Basse
(fourchette)

FISTULE RECTO-VAGINALE (FRV)

Localisation

+

Diamètre

Haute



>2.5cm

Moyenne



0.5-2.5cm

Basse
(fourchette)



<0.5cm

FISTULE RECTO-VAGINALE (FRV)

Localisation

+

Diamètre

Haute



>2.5cm

Moyenne



0.5-2.5cm

Basse
(fourchette)



<0.5cm

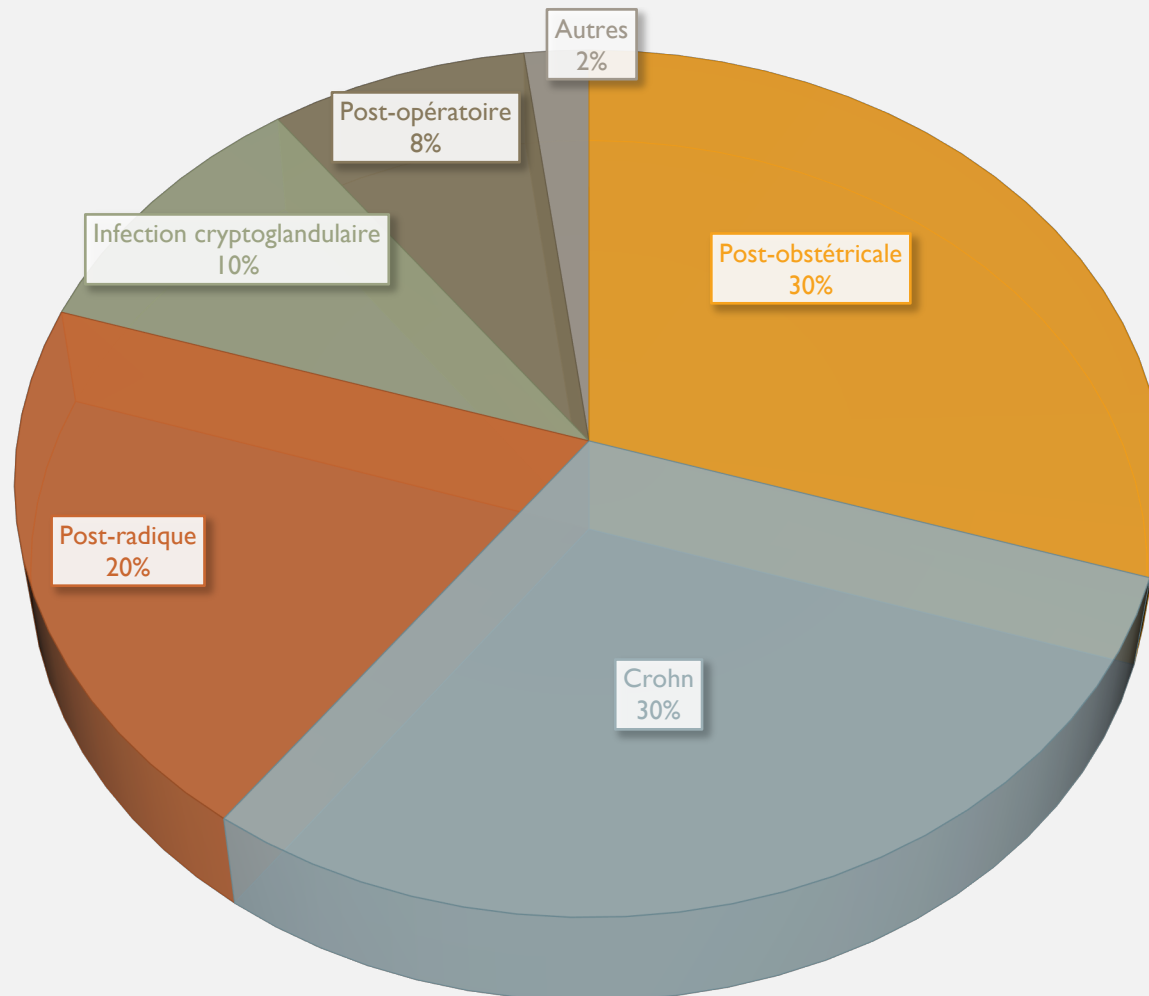
FRV complexes

- Hautes
- $\phi > 2.5\text{cm}$
- Crohn, post-radique, cancer
→ **Absence de guérison spontanée, risque d'AAP**

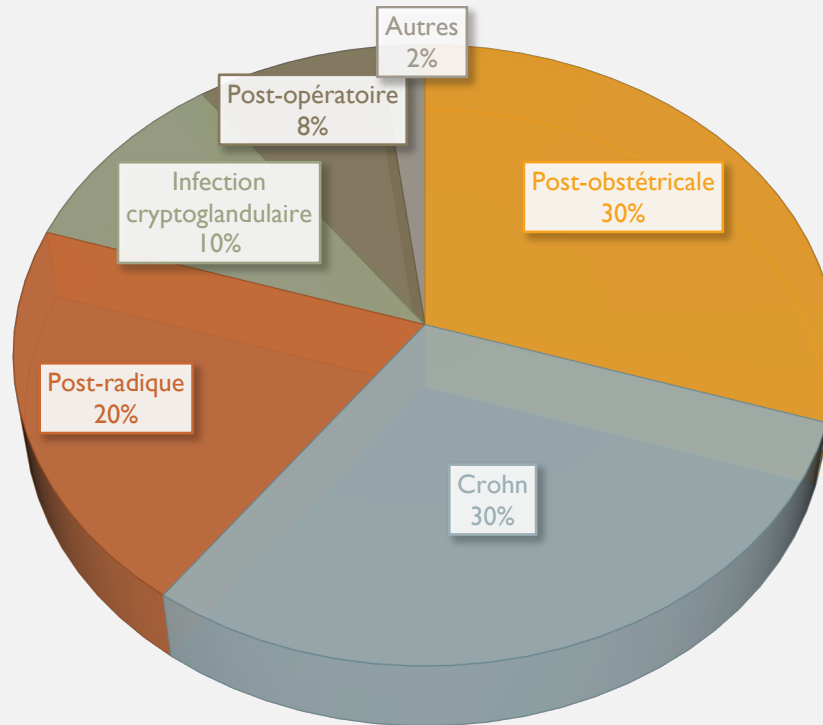
FRV simples

- Basses, moyennes
- $\phi < 2.5\text{cm}$
- Traumatique, infectieux

ETIOLOGIES DES FRV



ETIOLOGIES DES FRV



AUTRES CAUSES:

- Néoplasique
- Traumatique
- Tuberculose
- Lymphogranulomatose
- Prise prolongée de suppositoire
- Behçet
- Endométriose de la cloison RV
- Fécalome



PAPER OF THE 22ND ANNUAL ESA MEETING

Rectovaginal Fistula: What Is the Optimal Strategy?

An Analysis of 79 Patients Undergoing 286 Procedures

Helene Corte, MD, Leon Maggiori, MD,* Xavier Treton, MD, PhD,† Jeremie H. Lefevre, MD, PhD,*
Marianne Ferron, MD,* and Yves Panis, MD, PhD**

Ann Surg 2015;262:855–861

n=79

Study Population (n = 79)	
Age at diagnosis, y	43 ± 16 (18–82)*
BMI	24 ± 4 (17–39)
ASA score	
1–2	62 (78)†
3–4	17 (22)
RVF etiology	
Crohn disease	34 (43)
Postoperative	25 (32)
Obstetrical	7 (9)
Post-radiation	4 (5)
Unknown	4 (5)
Pelvic cancer	2 (3)
Diverticulitis	2 (3)
Trauma	1 (1)
RVF location	
Low	55 (70)
Middle	22 (28)
High	2 (2)
Time between diagnosis and first surgical repair (months)	22 ± 45 (0–249)
Referral after failed surgical repair	26 (33)



Are There Predictors of Outcome Following Rectovaginal Fistula Repair?

Rodrigo A. Pinto, M.D.¹ • Thais V. Peterson, M.D.² • Sherief Shawki, M.D.¹
G. Willy Davila, M.D.² • Steven D. Wexner, M.D.¹

Dis Colon Rectum 2010; 53: 1240–1247

n=125

Etiologie	%
Maladie de Crohn	36
Obstétrical	24
Post-opératoire	16
RCH	10
Infectieux (diverticulite)	5
Néoplasique	4
Autres	5

FRV ET MALADIE DE CROHN

- **I/3 des FRV**
- LAP inaugurale de la MC: 30%
- Classification de Cardiff
- Isolée ou associée à une fistule ano-périnéale complexe

Classification dite de Cardiff

Classification U.F.S.

U=Ulcération

- 0 – Absence
- 1 – fissures superficielles
a) antérieure et/ou postérieure
b) latérale
c) avec pseudo marisques
- 2 – ulcères profonds
a) canal anal
b) bas rectum
c) avec extension au périnée

F=Fistule/Abcès

- 0 – Absence
- 1 – basse/superficielle
a) périanale
b) ano vulvaire ; ano scrotale
c) inter sphinctérienne
d) ano vaginale
- 2 – haute
a) borgne, supralévatorienne
b) haute directe
c) haute complexe
d) recto vaginale
e) iléo périnéale

S=Sténose

- 0 – Absence
- 1 – sténose réversible
a) spasme du canal
b) diaphragme du bas rectum
c) spasme avec douleur sévère sans sepsis identifié
- 2 – sténose irréversible
a) sténose anale
b) fibrose extra rectale

Classification subsidiaire (A.P.D)

A=Pathologie anale associée

- 0 – Aucune
1 – Hémorroïdes
2 – Tumeur maligne
3 – Autre (à préciser)

P=Atteinte proximale

- 0 – Pas d'atteinte proximale
1 – Rectum
2 – Colon (rectum sain)
3 – Intestin grêle
4 – Bilan incomplet

D=Activité des lésions anales

- 1 - Actives
2 - Inactives
3 - Indéterminé

FRV POST-OBSTÉTRICALE

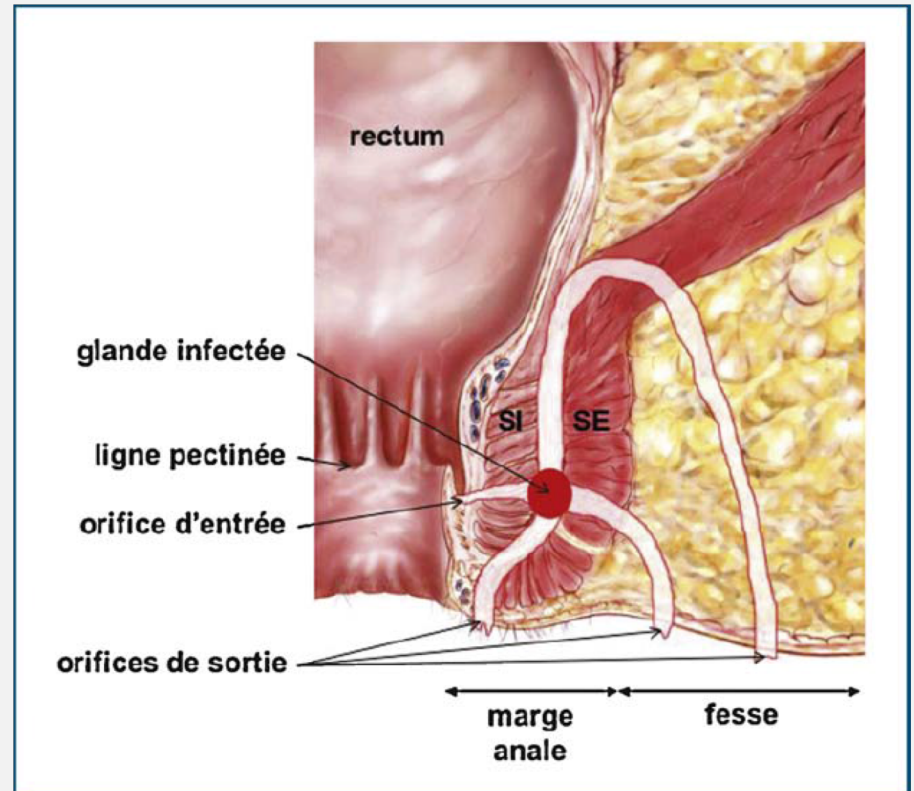
- **1/3 des FRV**
- Après un accouchement voie basse compliqué d'une déchirure périnéale
- Conséquence du lâchage/infection des sutures ++++
- FDR: maternel (primiparité, conformation du périnée), fœtal (poids, présentation), opératoire (extraction instrumentale, manœuvres)
- **2/3 inférieurs du vagin**

FRV POST-RADIQUE

- **1/5 des FRV**
- Taux de FRV après irradiation pelvienne: 0.3-3%
- 1/3 supérieur du vagin
- Tissus nécrotiques et scléreux autour (sténose vaginale, rectite radique)
→ traitement compliqué, résultat fonctionnel incertain
- Survenue dans les **2 ans (jusqu'à 10 ans)** suivants l'irradiation
- Si survenue rapide: nécrose d'une **tumeur** envahissant la cloison RV??

FRV INFECTIEUSE (CRYPTO-GLANDULAIRE)

- **1/10** des FRV
- Infection d'une glande d'Hermann et Desfosses
 - Propagation à travers le sphincter externe
 - Abscès dans la cloison RV
 - FRV



FRV POST-OPÉRATOIRE

Surgical outcomes after colorectal surgery for endometriosis: Systematic Review and Meta-Analysis

Sofiane Bendifallah¹, Anne Puchar², Elie Vesale², Gaby Moawad³, Emile Darai¹, Horace Roman⁴

J Minim Invasive Gynecol. 2020 Aug 22;S1553-4650(20)30395-2.

- **FRV=1.5%** (235/15660)

Shaving: 0.3%

Disc excision: 2.7%

Résection segmentaire: 3.3%

$p < 0.0001$

**anastomose mécanique +++
colorectale ou iléo-anale**

Management of recto-vaginal fistulas after prosthetic reinforcement treatment for pelvic organ prolapse

Mehdi Ouaiissi, Silvia Cresti, Urs Giger, Igor Sielezneff, Nicolas Pirrò, Bruno Berthet, Philippe Grandval, Bernard Consentino, Bernard Sastre

World J Gastroenterol 2010 June 28; 16(24): 3011-3015

Patients No.	Age (yr)	Primary pathology of PM	POP surgery/type
1	73	Colpo-cystocele laparoscopic approach/two polypropylene meshes	
2	65	Colpo-cystocele Bologna procedure/two polypropylene meshes	
3	60	SUI Prolift® procedure/two polypropylene meshes	
4	52	Colpo-rectocele transabdominal approach/one polypropylene mesh	
5	73	Cysto-colpocele transabdominal approach/one polypropylene mesh	

AUTRES FRV

- **Traumatique**

pratique sexuelle, corps étranger, empalement, usage répété de canule de lavement

DIAGNOSTIC

INTERROGATOIRE

- Pauci-symptomatique
- Passage de selles ou de gaz dans le vagin
- Vaginite chronique, Dyspareunie
- La recherche d'antécédents oriente vers l'étiologie
 - Maladie de Crohn/Rectite radique: si diarrhées, aggravation des symptômes (douleurs++)
 - Cryptoglandulaire: masse douloureuse soulagée par l'émission de pus par le vagin

EXAMEN CLINIQUE

- A la consultation ou sous AG
- **Examen du périnée:** lésions associées? (*Maladie de Crohn*)
- **Toucher rectal:**
 - induration pariétale,
 - tonus sphinctérien,
 - masse, sténose....
- **Anuscopie:** Orifice primaire?

EXAMEN CLINIQUE

- **Examen gynécologique** (toucher, spéculum):
 - orifice secondaire?
- **Test au bleu** (tampon dans le vagin, bleu dans le rectum)

→ Diagnostic positif et caractériser la FRV (taille, siège, lésions associées) pour orienter vers l'étiologie et la stratégie thérapeutique

EXAMENS PARACLINIQUES

AUCUN

Examens paracliniques en fonction de l'étiologie

- **Post-obstétrical:**

- intégrité sphinctérienne: **EEA** (+/- vaginale), manométrie anorectale

- **Maladie de Crohn:**

- lésions anopérinéales associées: **EEA, IRM périnéale**

- collections pelviennes: **TDM AP**

- atteinte rectale (+ autres localisations): **Coloscopie**

- **Radique:**

- bilan du cancer initial, **biopsies de la FRV++++**

TRAITEMENTS CHIRURGICAUX

PRISE EN CHARGE THÉRAPEUTIQUE

- **Haut risque de récurrence +++++**

- **Eviter la stomie définitive**

- **Traiter la pathologie sous-jacente (AntiTNF++)**

Long-term Treatment of Rectovaginal Fistulas in Crohn's Disease: Response to Infliximab in the ACCENT II Study

BRUCE E. SANDS,* MARION A. BLANK,† KAM PATEL,† and SANDER J. VAN DEVENTER§

CLINICAL GASTROENTEROLOGY AND HEPATOLOGY 2004;2:912-920

- Attendre **3-6 mois** avant de proposer un traitement chirurgical

→ périnée propre non inflammatoire, prise en charge de la maladie sous-jacente

→ possible fermeture spontanée

PRISE EN CHARGE THÉRAPEUTIQUE

= Par étapes d'agressivité croissante

FRV simples	FRV complexes
Drainage en sétou	
Excision-suture	Interposition musculaire (Martius, Gracilis) ou prothétique
Périnéotomie + suture (Musset)	Proctectomie
Lambeau musculo-muqueux d'avancement (rectal, vaginal)	Intervention de Soave
Interposition musculaire (Martius, Gracilis) ou prothétique	Amputation abdominopérinéale

DRAINAGE EN SÉTON LIBRE

- Séton dans la FRV, sans traction
- **NE TRAITE PAS LA FRV**
- **Tarir l'infection et l'inflammation**
- Maladie de Crohn +++

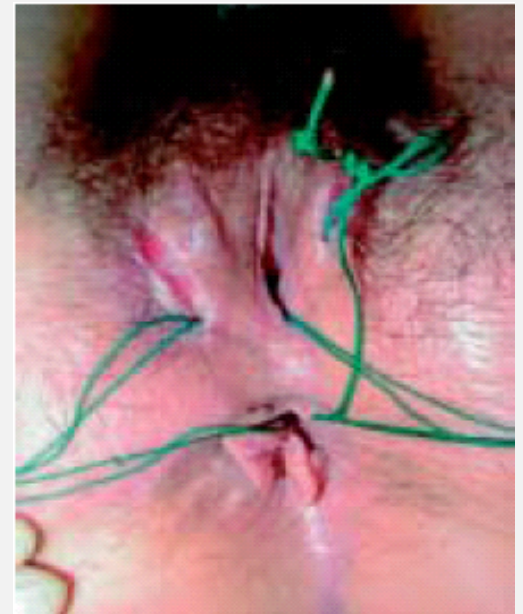
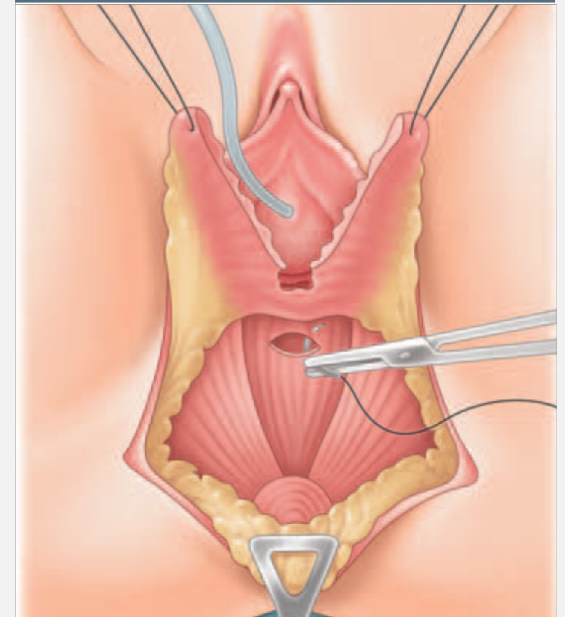
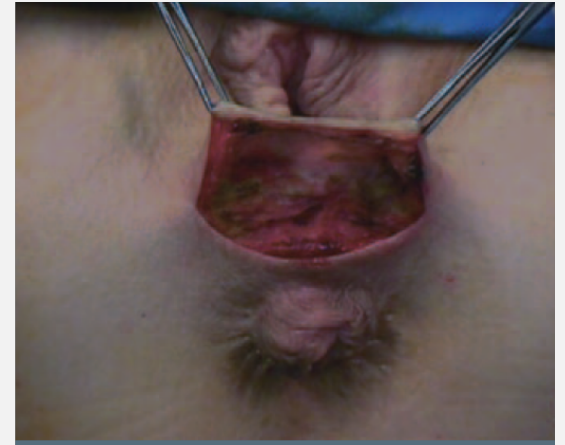


Image donnée par Pr Panis

PROCÉDURES CONSERVATRICES

EXCISION-SUTURE

- FRV **simples ++**
- Voie vaginale, périnéale transverse ou rectale
- Suture transversale du rectum
- Suture longitudinale du vagin
- +/-myoraphie des releveurs



OPÉRATION DE MUSSET

- **1^{er} temps: Périnéotomie**

mise à plat du trajet fistuleux, section franche du SE, excision de tout tissu infecté/fibreux/nécrotique

- *Cicatrisation pendant 2 mois (accolement rectovaginal)*
ou 2^{ème} temps d'emblée!!

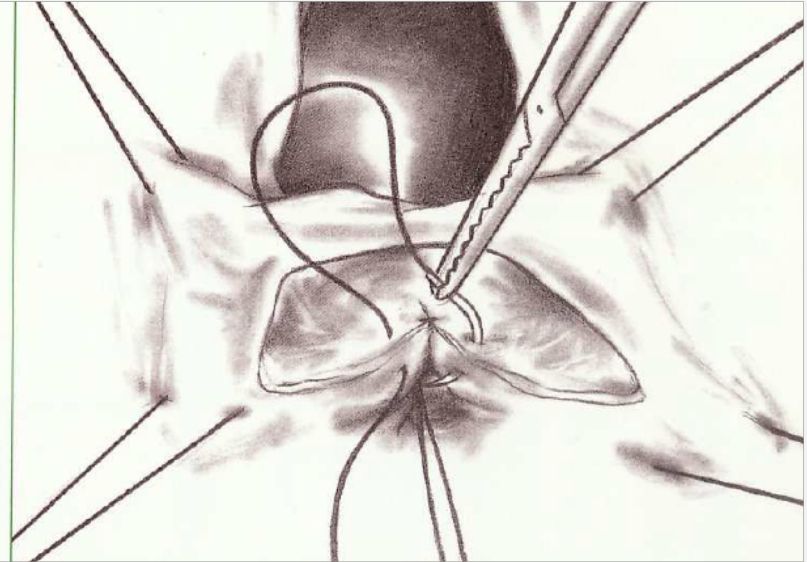
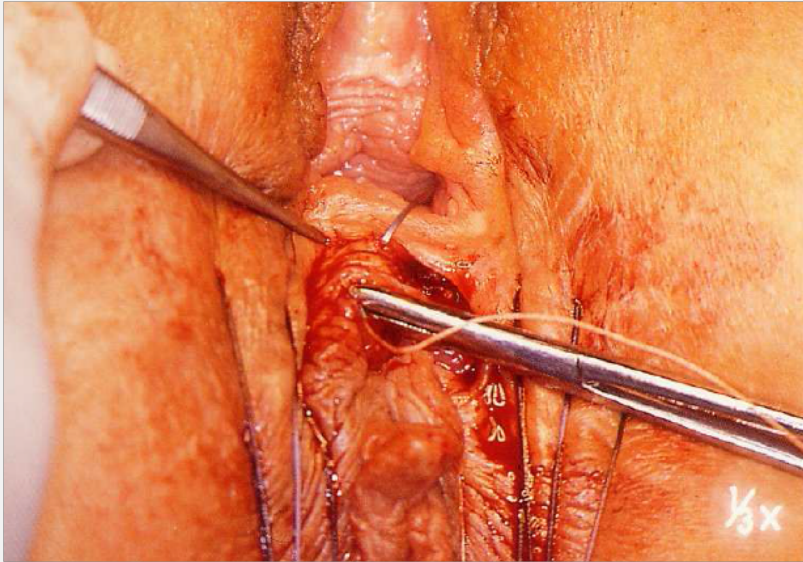
- **2^{ème} temps: Reconstruction**

du canal anal, sphincter externe et vagin; fermeture cutanée

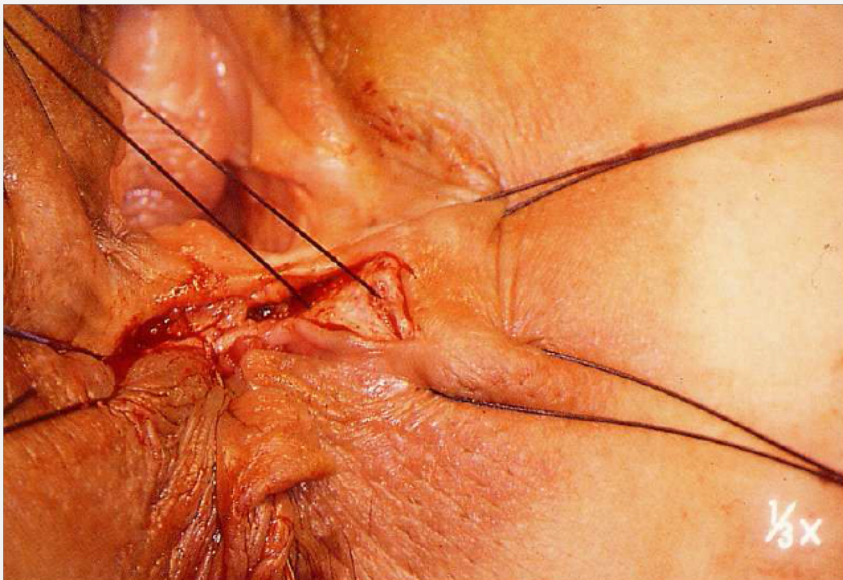
OPÉRATION DE MUSSET



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Results of recto-vaginal fistula repair: retrospective analysis of 48 cases

D. Soriano, A. Lemoine, C. Laplace, B. Deval,
L. Dessolle, E. Darai*, P. Poitout

European Journal of Obstetrics & Gynecology and
Reproductive Biology 96 (2001) 75–79

- 1992-1998, n=48

Characteristics	RVF repair (n=48)
Age (year)	
Mean±S.D.	34.7±10.2
Parity	
Mean±S.D.	1.6±1.0
Post-menopausal state (%)	3 (6.3%)
Previous operation for RVF	
Repair (%)	30 (62.5%)
Range	1–4
Previous colostomy	1 (2.0%)
Etiology	
Obstetrical trauma	25 (52.1%)
Local infection	11 (22.9%)
Inflammatory disease	7 (14.6%)
Post surgery	3 (6.2%)
Local trauma	2 (4.1%)
Surgery (min)	
Mean±S.D.	44.9±7.5

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Reproductive Biology 96 (2001) 75–79

- 1992-1998, n=48
- **Suivi 1-3 ans (??):
cicatrisation 100%**
- **Incontinence gaz n=7,
dont 5 incontinence selles
→ sphinctéroplastie**

Characteristics	RVF repair (n=48)
Age (year)	
Mean±S.D.	34.7±10.2
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We conclude, that the Musset operation offers excellent results even after previous RVF repair failure. Women with RVF due to Crohn's disease or complete perineal tear have no increased risk of operative failure.

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OPÉRATION DE MUSSET

Surgeons Should Not Hesitate to Perform Episioproctotomy for Rectovaginal Fistula Secondary to Cryptoglandular or Obstetrical Origin

Tracy L. Hull, M.D. • Galal El-Gazzaz, M.D., Ph.D. • Brooke Gurland, M.D.
James Church, M.D. • Massarat Zutshi, M.D.

Dis Colon Rectum 2011; 54: 54–59

- 1997-2009
- FRV obstétricale ou cryptoglandulaire
- N= 50 Musset vs N=37 Lambeau rectal
- Cicatrisation: **78% vs 62%**

Variables	Episioproctotomy 50 (57.5%)	Advancement flap 37 (42.5%)	P
Seton			
Yes	15 (30.0%)	11 (30.6%)	.9
No	35 (70.0%)	25 (69.4%)	
Stoma			
Yes	36 (75.0%)	19 (54.3%)	.051
No	12 (25.0%)	16 (45.7%)	

OPÉRATION DE MUSSET

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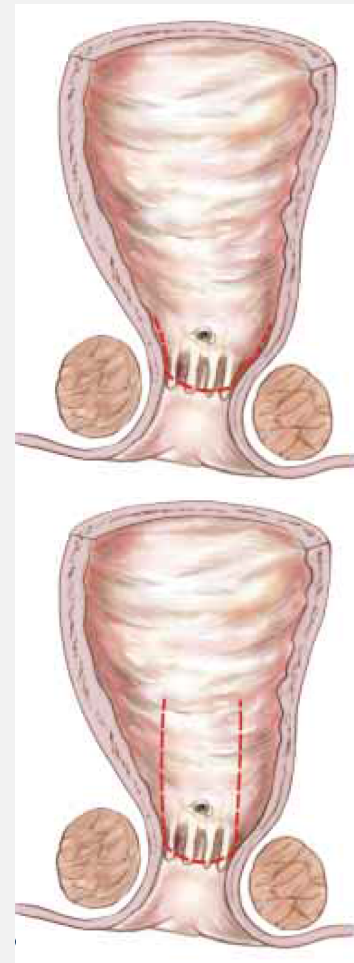
- 1997-2009
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- Cicatrisation: **78% vs 62%**

Variables	Episioproctotomy 36 (62%)	Advancement flap 22 (37%)	P
FIQL	55.9 ± 30.3	58.5 ± 36.3	.7
Lifestyle	3.1 ± 1.0	3.0 ± 1.1	.9
Coping	2.8 ± 1.1	2.5 ± 0.9	.5
Depression	2.5 ± 0.8	2.5 ± 0.7	1.0
Embarrassment	2.8 ± 1.1	2.7 ± 0.9	.5
SF-12			
Physical health	47.6 ± 9.6	45.4 ± 9.9	.4
Mental health	42.5 ± 12.1	46.8 ± 10.1	.3
Sexual activity	28 (56%)	13 (35.1%)	.8
Dyspareunia			
Yes	6 (22.2%)	5 (41.7%)	.3
No	21 (77.8%)	7 (58.3%)	
IBD-QOL score	58.9 ± 32.0	56.8 ± 37.0	1.0

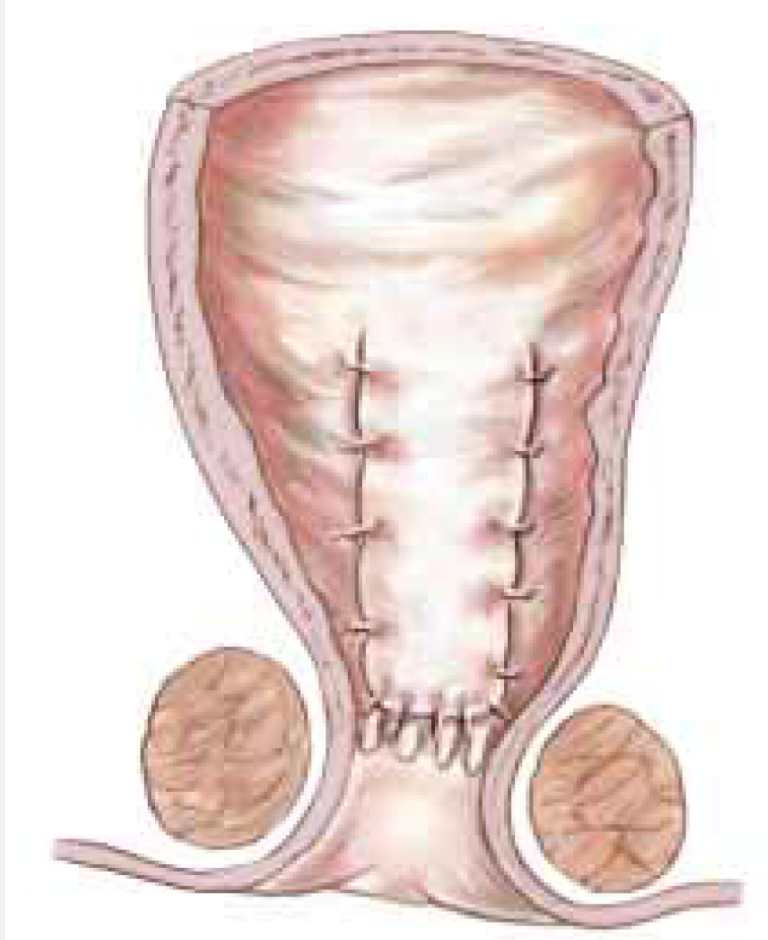
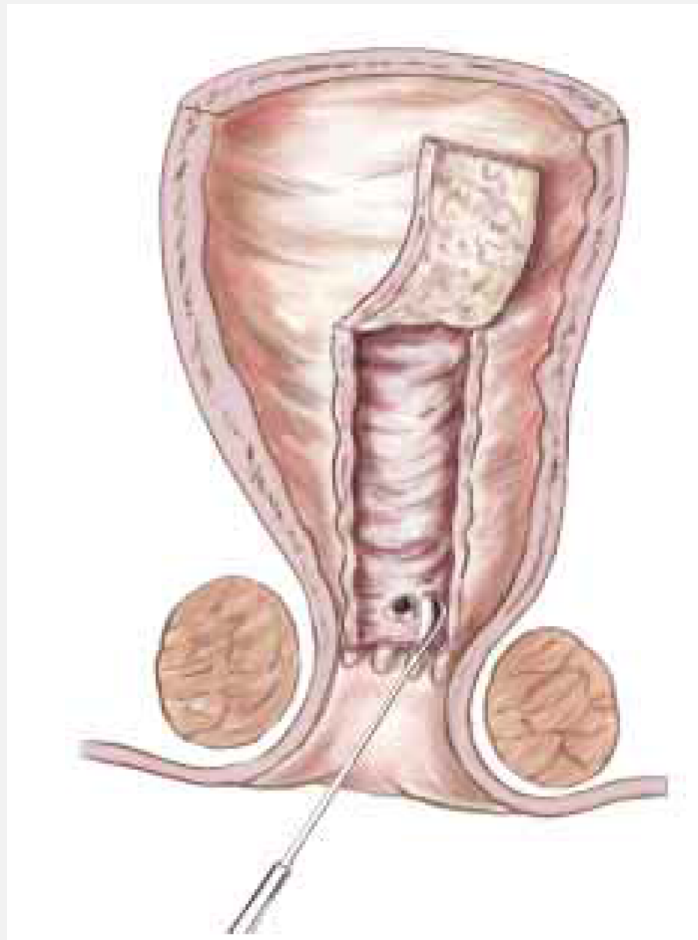
Fecal incontinence	Never/rarely	Usually/always	P
EP n = 50 (57.5%)			
Preop	25 (50%)	25 (50%)	<.001
Postop	46 (92%)	4 (8%)	
RAF n = 37 (42.5%)			
Preop	23 (62.1%)	14 (37.9%)	.4
Postop	25 (67.6%)	12 (32.4%)	

LAMBEAU D'AVANCEMENT RECTAL

- **FRV basses** (rectum sain)
- Infiltration sous-muqueuse (sérum adrénaliné)
- Incision au niveau de la ligne pectinée
- Lambeau épais (muqueuse, sous-muqueuse, musculieuse)
- Lambeau long (8cm)



LAMBEAU D'AVANCEMENT RECTAL



LAMBEAU D'AVANCEMENT RECTAL

**Succès:
29-86%**

Study	N	Success (%)	Etiology
de Parades et al. ¹¹	23	65	Mixed
Hull et al. ¹³	37	62	Mixed
Jarrar et al. ¹⁴	17	41	Mixed
El-Gazzazz et al. ^{15,26}	37	62	Mixed
Pinto et al. ¹⁶	75 ^a	56	Mixed
Ellis et al. ¹⁷	29	62	Crohn's excluded
Uribe et al. ¹⁸	56	86	Mixed
Mizrahi et al. ¹⁹	32	56	Mixed
Sonada et al. ²⁰	37	43	Mixed
Zimmerman et al. ²¹	21	48	Crohn's excluded
Baig et al. ²²	19	74	Crohn's excluded
Lowry et al. ²³	81	83	Mixed
Tsang et al. ⁶	27	41	Mixed
MacRae et al. ¹²	23	29	Mixed

LAMBEAU D'AVANCEMENT VAGINAL

- Infiltration de sérum adrénaliné depuis la fourchette
- Incision transversale de la paroi postérieure du vagin
- **1cm sous** l'orifice secondaire sur **8cm** de haut
- NE PAS ELARGIR L'ORIFICE RECTAL – FERMER L'ORIFICE RECTAL
- Résection de la partie inférieure du lambeau (orifice)
- Suture à la berge inférieure avec du fil tressé lentement résorbable 4/0

Lambeau musculo-muqueux d'avancement: rectal vs vaginal

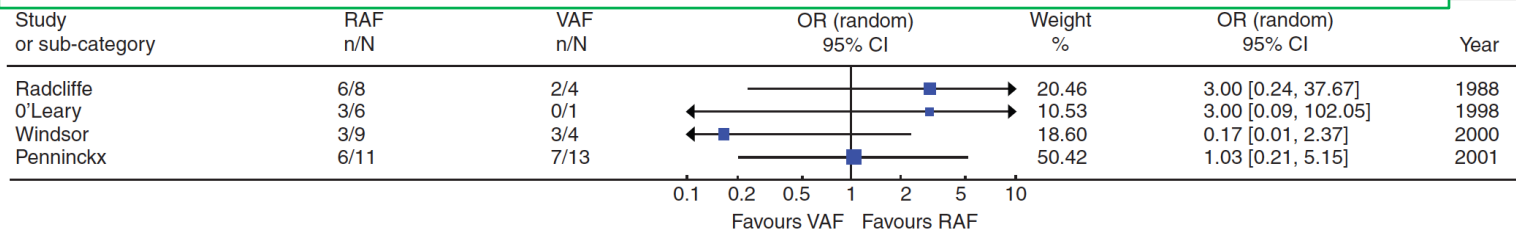
A systematic review on advancement flaps for rectovaginal fistula in Crohn's disease: transrectal *vs* transvaginal approach

C. Ruffolo*, M. Scarpa†, N. Bassi* and I. Angriman†

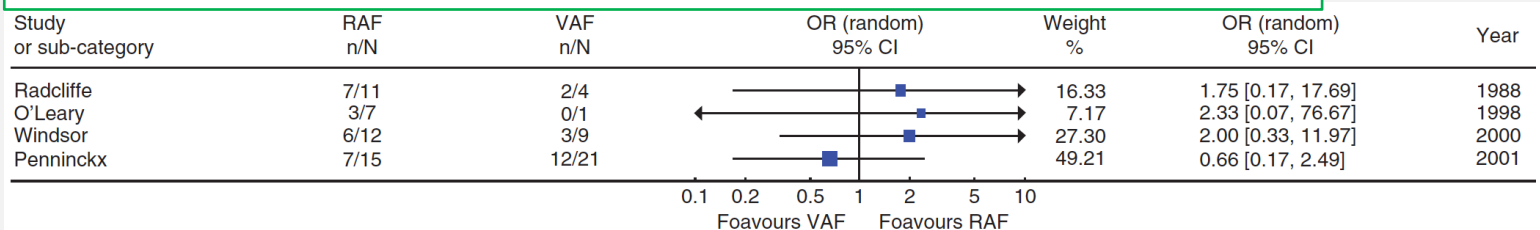
Colorectal Disease © 2010

11 séries dont 4 comparatives

Fermeture première: 54% (rectal) vs 61% (vaginal), $p=0.52$



Succès global: 75% (rectal) vs 81% (vaginal), $p=0.99$



AUTRES STRATÉGIES CONSERVATRICES

Fibrin Glue Treatment of Complex Anal Fistulas Has Low Success Rate

Rasmy Loungnarath, M.D., David W. Dietz, M.D., Matthew G. Mutch, M.D.,
Elisa H. Birnbaum, M.D., Ira J. Kodner, M.D., James W. Fleshman, M.D.

Dis Colon Rectum 2004; 47: 432–436

FRV: 3/39
Succès 33%

Fibrin Glue Is Effective Healing Perianal Fistulas in Patients with Crohn's Disease

JEAN-CHARLES GRIMAUD,* NICOLAS MUNOZ-BONGRAND,[‡] LAURENT SIPROUDHIS,[§] LAURENT ABRAMOWITZ,^{||}
AGNÈS SÉNÉJOUX,[¶] VÉRONIQUE VITTON,* LUC GAMBIEZ,[#] BERNARD FLOURIÉ,** XAVIER HÉBUTERNE,^{‡‡}
EDOUARD LOUIS,^{§§} BENOIT COFFIN,^{|||} VINCENT DE PARADES,^{¶¶} GUILLAUME SAVOYE,^{##} JEAN-CLAUDE SOULÉ,^{||}
YORAM BOUHNİK,^{¶¶} JEAN-FRÉDÉRIC COLOMBEL,[#] JEAN-FRANÇOIS CONTOU,^{***} YVES FRANÇOIS,**
JEAN-YVES MARY,^{†††} MARC LÉMANN,[‡] and the Groupe d'Etude Thérapeutique des Affections Inflammatoires du Tube
Digestif (GETAID)[‡]

GASTROENTEROLOGY 2010;138:2275–2281

FRV: 3/36
Succès 0%

STOMIE TEMPORAIRE

- NON SYSTEMATIQUE
- **Maladie de Crohn active +++**
- Cancer non résécable

STOMIE TEMPORAIRE

PAPER OF THE 22ND ANNUAL ESA MEETING

Rectovaginal Fistula: What Is the Optimal Strategy?

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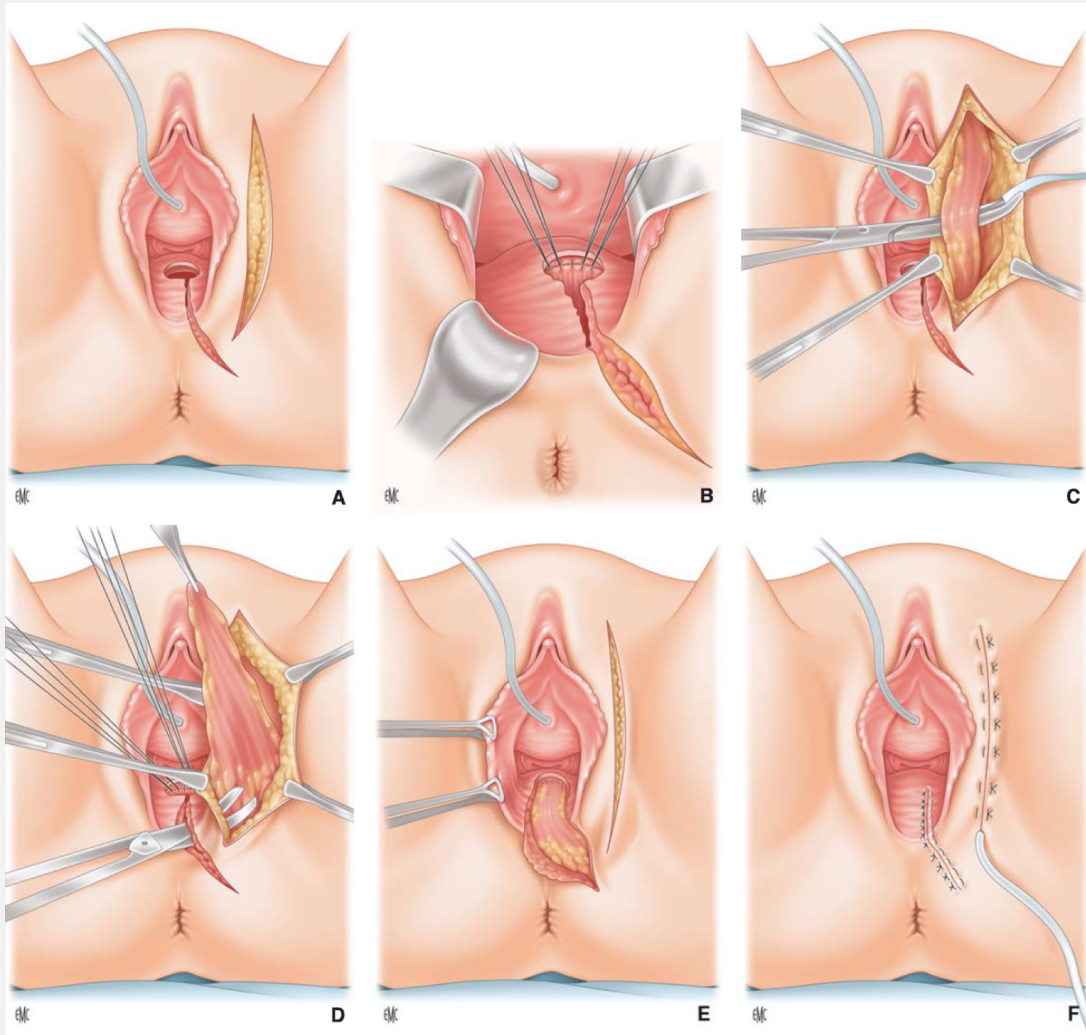
Helene Corte, MD,* Leon Maggiori, MD,* Xavier Treton, MD, PhD,† Jeremie H. Lefevre, MD, PhD,*
Marianne Ferron, MD,* and Yves Panis, MD, PhD*

Ann Surg 2015;262:855–861

	Success (n = 57)	Failure (n = 229)	Univariate Analysis <i>P</i>	Multivariate Analysis*	
				<i>P</i>	OR (95% CI)
Age <40 y	22 (39)†	114 (50)	0.130	0.104	0.5 (0.2–1.2)
ASA score 3–4	6 (11)	35 (15)	0.359	—	—
BMI ≥30	9 (16)	33 (14)	0.792	—	—
High or middle RVF location	14 (25)	45 (20)	0.412	—	—
Etiology					
Crohn disease	23 (40)	137 (60)	0.008	0.238	0.6 (0.2–1.5)
Postoperative	20 (35)	40 (17)	0.003	0.766	1.2 (0.4–3.2)
Obstetrical	7 (12)	19 (8)	0.349	—	—
Post Radiation	1 (2)	6 (3)	1.000	—	—
Unknown	3 (5)	19 (8)	0.584	—	—
Pelvic cancer	0	4 (2)	0.588	0.867	1.2 (0.5–4.7)
Diverticulitis	2 (4)	1 (1)	0.102	0.377	3.4 (0.2–53.7)
Tuberculosis	1 (2)	2 (1)	1.000	—	—
Major procedure	34 (60)	35 (15)	<0.0001	<0.0001	6.4 (2.9–14.2)‡
Procedure with stoma	50 (88)	102 (45)	<0.0001	0.009	3.5 (1.4–8.7)
Primary management in our institution	40 (70)	107 (48)	0.002	0.003	3.2 (1.5–6.9)
Delay <9 months	45 (79)	150 (66)	0.051	0.046	2.3 (1.1–5.3)

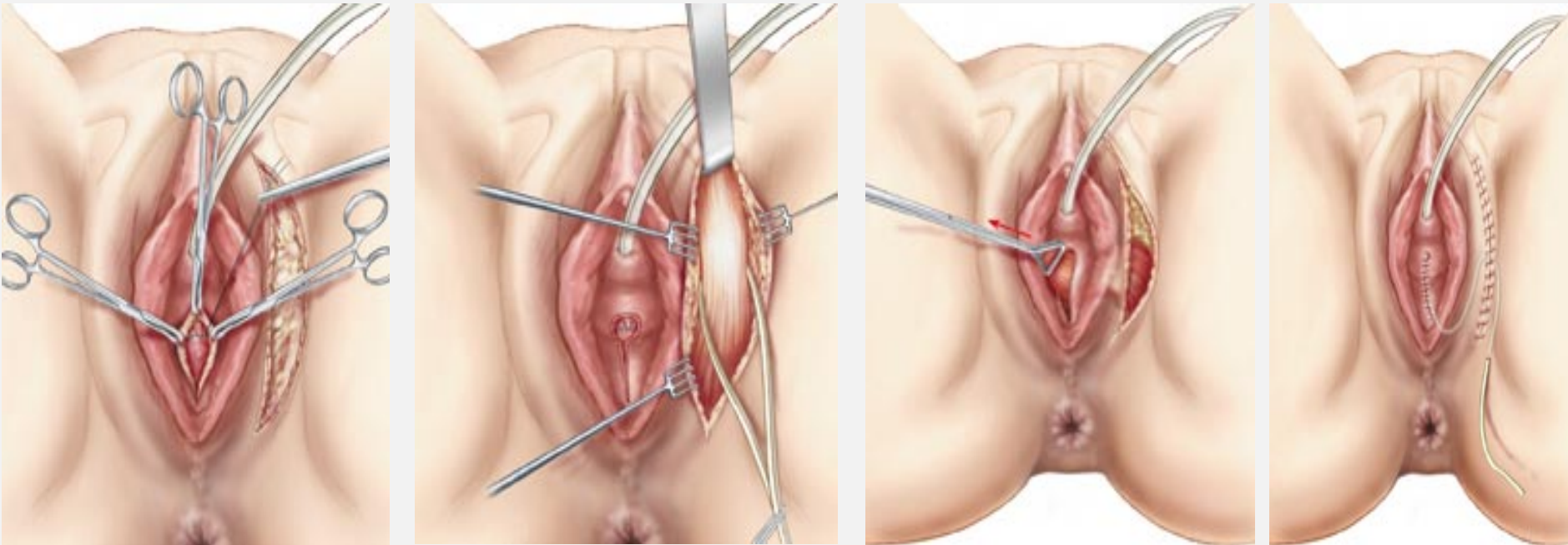
PROCÉDURES D'INTERPOSITION

RECONSTRUCTION PAR INTERPOSITION MUSCULAIRE: LAMBEAU DE MARTIUS



**+/- STOMIE DE
PROTECTION**

RECONSTRUCTION PAR INTERPOSITION MUSCULAIRE: LAMBEAU DE MARTIUS



+/- STOMIE DE PROTECTION

LAMBEAU DE MARTIUS

Treatment of anovaginal or rectovaginal fistulas with modified Martius graft

K. Songne*, M. Scotté*†, J. Lubrano*, E. Huet*, B. Lefébure*, Y. Surlemont*, S. Leroy‡, F. Michot* and P. Ténrière*

Colorectal Disease, **9**, 653–656

1994-2004, n=14

Aucune infection pariétale, 3 séromes

Aetiology	Crohn's disease	Ileoanal anastomosis for ulcerative colitis	Coloanal anastomosis for rectal tumour	Obstetrical	Postradiotherapy
Number of patients	8	2	2	1	1
Previous surgery (n)	Anterior levatorplasty (2)	Mucosal advancement flap (1)		Drainage (1)	
healing	8	1 (1 recurrence treated successfully with contralateral Martius graft)	2	1	1
Final outcome	Excellent (4) Abdominoperineal resection of the rectum (2) (progressive disease)	Excellent	Excellent	Excellent	Excellent

3 mois: 13/14 (93%)

40 mois: 10/14 (71%)

+ 2 cas d'incontinence

LAMBEAU DE MARTIUS

Martius advancement flap for low rectovaginal fistula: short- and long-term results

S. Pitel, J. H. Lefevre, Y. Parc, N. Chafai, C. Shields and E. Tiret

Colorectal Disease © 2011

2000-2010, n=21

Complications pariétales n=3

Suivi 29 (2-210) mois: **cicatrisation 65%**

→ Traitements additionnels: séton, lambeau d'avancement, suture

Succès global: **50% (Crohn) et 75% (autres)**

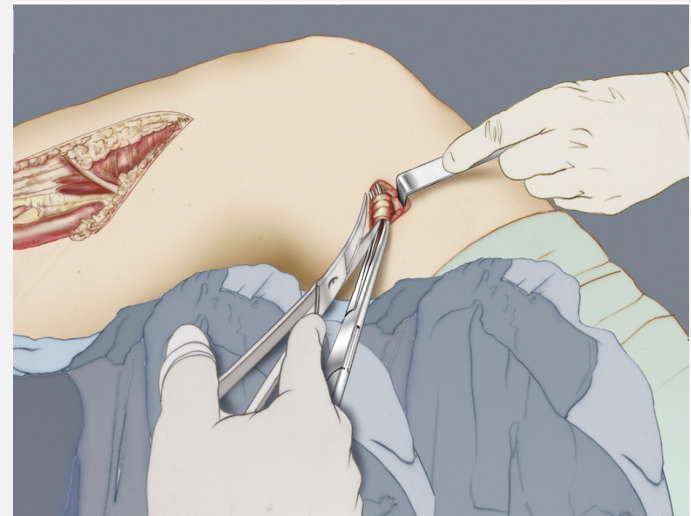
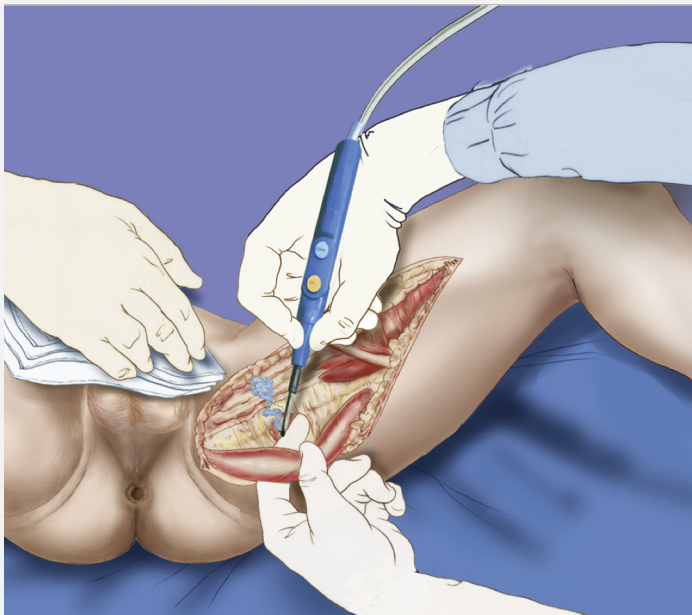
Characteristics	Value
Mean age at time of surgery (years)	40.2 (± 13.5)
Body mass index	29.3 (± 5.4)
Former surgical procedures	2 (0-5)
Seton drainage	11
Rectal advancement flap	14
Vaginal advancement flap	4
Others (e.g. fibrin glue or surgisis)	7
Aetiology of rectovaginal fistulae	
Inflammatory bowel diseases	8 (40%)
Crohn's disease	7
Ulcerative colitis	1
Iatrogenous	5 (25%)
Postbartholinitis surgery	3
Posthaemorrhoidectomy	1
Postrectocele surgery	1
Postobstetric	4 (20%)
Cryptoglandular	2 (10%)
Hirschsprung	1 (5%)
Diverting stomas	14 (70%)
Preoperative diverting stoma	10
Diverting stoma during the Martius procedure	4

LAMBEAU DE MARTIUS

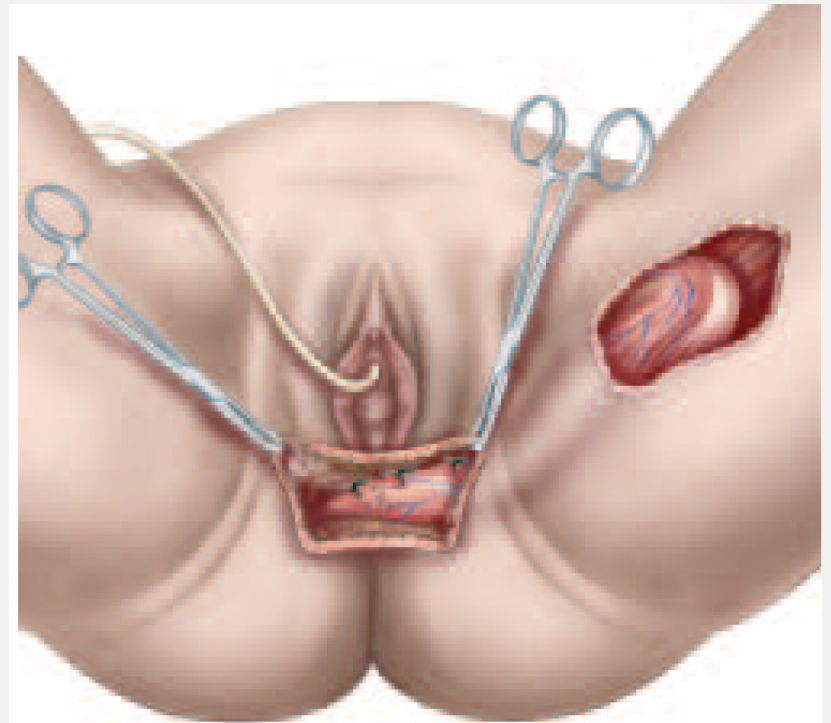
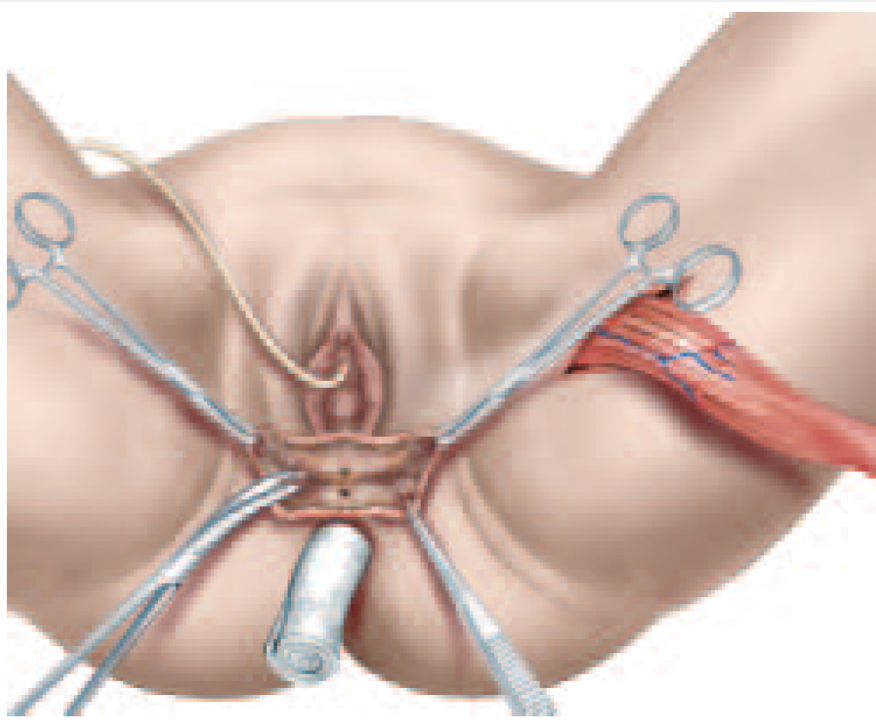
Author	N	Success (%)
Cannom et al. ³⁴	21	52
Pitel et al. ⁴⁴	20	65
McNevin et al. ⁴¹	16	94
Songne et al. ⁴⁵	14	100
Zimmerman et al. ²¹	12	50
Pinedo et al. ⁴⁶	8	75
Elkins et al. ⁴⁷	7	71
Aartsen and Sindram ⁴⁸	14	100
Boronow ⁴²	19	84
White et al. ⁴³	12 ^a	92
Zacharin ⁴⁹	13	86

>50%

Reconstruction par interposition musculaire: GRACILIS



Reconstruction par interposition musculaire: GRACILIS



+ STOMIE DE PROTECTION

GRACILOPLASTIE

Operative Results and Quality of Life After Gracilis Muscle Transposition for Recurrent Rectovaginal Fistula

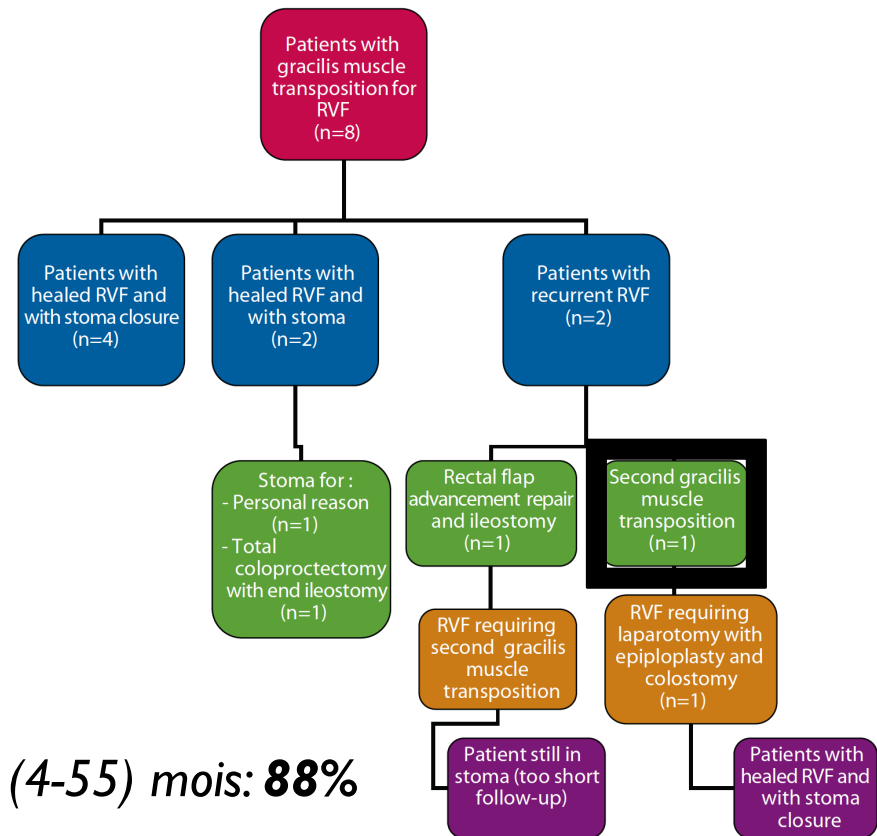
J. H. Lefèvre, M.D. • F. Bretagnol, M.D. • L. Maggiori, M.D. • A. Alves, M.D., Ph.D.
M. Ferron M.D. • Y. Panis, M.D., Ph.D.

DISEASES OF THE COLON & RECTUM VOLUME 52: 7 (2009)

- n=8
(5 Crohn, 2 postopératoires,
1 obstétricale)
- Chirurgies précédentes 3 (1-6):
lambeau d'avancement rectal/vaginal,
glue, fistulotomie
- 3 complications (infection
périnée/cuisse, saignement vaginal)

75%

28 (4-55) mois: 88%



GRACILOPLASTIE

Gracilis Muscle Interposition for the Treatment of Rectourethral, Rectovaginal, and Pouch-vaginal Fistulas

Results in 53 Patients

Ann Surg 2008;248: 39–43

Steven D. Wexner, MD, Dan E. Ruiz, MD, Jill Genua, MD, Juan J. Nogueras, MD,
Eric G. Weiss, MD, and Oded Zmora, MD

15 FRV, 2 « pouch-vaginal »

- Morbidité: 47%
- Succès global: 65%
- Crohn 5/9 (56%)
- non Crohn 6/8 (75%)

Etiology	n (%)
Crohn's disease	9 (53)
Pouch-vaginal fistulas	2 (11.8)
Radiotherapy for anal cancer	2 (11.8)
Fourth-degree obstetrical tear	1 (5.9)
Gastrointestinal stromal tumor at rectovaginal septum	1 (5.9)
Rectocele repair	1 (5.9)
Coloanal anastomotic-vaginal fistula	1 (5.9)
Type of Repair	N
Advancement flap	7
Transperineal repair (includes sphincteroplasty)	6
Fibrin glue	4
Pouch advancement	2
Primary repair	3
Fistulotomy	1

GRACILOPLASTIE

Study	N	Success (%)	Etiology	Diverted
Cannom et al. ³⁴	20	65, 25 ^a	Mixed	All
Levefre et al. ³⁵	8	60	Mixed	All
Ulrich et al. ³⁶	9	77	Mixed	All
Furst et al. ³⁷	12	91	Crohn's	All
Wexner et al. ³⁸	17 ^b	75, 33 ^c	Mixed	All
Zmora et al. ³⁹	5	80	Mixed	All
MacRae et al. ¹²	2	100	Crohn's/radiation	50%
Obrink et al. ⁴⁰	16	43	Cervical cancer/radiation	–

Lowry et al, Seminars in Colon and Rectal Surgery, 2016

Reconstruction par interposition prothétique

Is biological mesh interposition a valid option for complex or recurrent rectovaginal fistula?

D. Mege, M. Frasson, L. Maggiori and Y. Panis

Department of Colorectal Surgery, Beaujon Hospital, Assistance Publique-Hôpitaux de Paris, Université Paris VII, Clichy, France

Colorectal Disease © 2015



RECONSTRUCTION PAR INTERPOSITION PROTHÉTIQUE

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Colorectal Disease © 2015

**Morbidité globale 70%;
majeure 20%**

Patient no.	Origin	Number of previous surgical treatments	Results of biological mesh interposition	Last surgical treatment	Final results
1	Crohn's disease	8	Success	—	Success
2	Obstetric trauma	3	RPF	CAA	Success
3	Crohn's disease	4	Success	—	Success
4	Crohn's disease	4	RVF	Vaginal flap	VPF
5	Crohn's disease	0	RPF	Gracilis	Success
6	Obstetric trauma	2	VPF	Vaginal flap	Success
7	Idiopathic	2	RPF	Plug	Success
8	Indeterminate colitis	2	RVF	Gracilis	RVF
9	Bartholinitis	2	RPF	Gracilis	RVF
10	Perineal trauma	4	RVF	CAA	Success

(90%
récidivante)

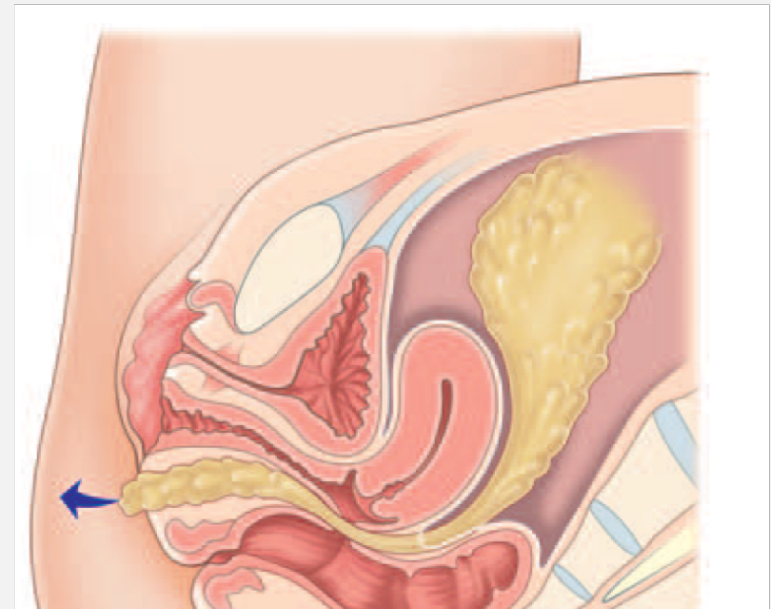
**Succès
initial: 20%**

**Succès
final: 70%**

PROCÉDURES ABDOMINALES

ÉPIPLOOPLASTIE DE COMPLEMENT

- Décollement colo-épiploïque
- Pédiculiser sur l'artère gastro-épiploïque gauche
- Fixation au rectum et au col/cds vaginal



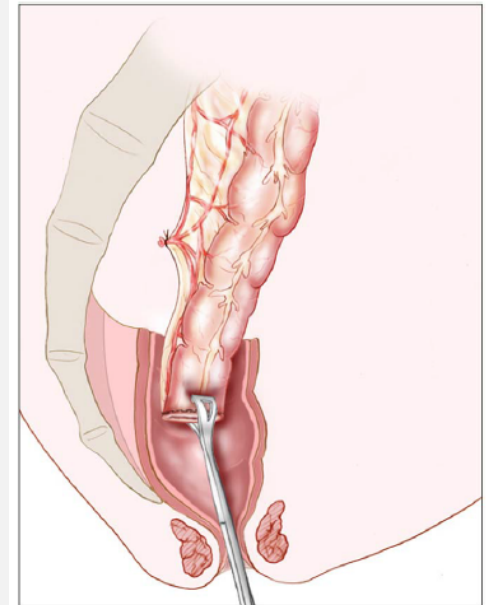
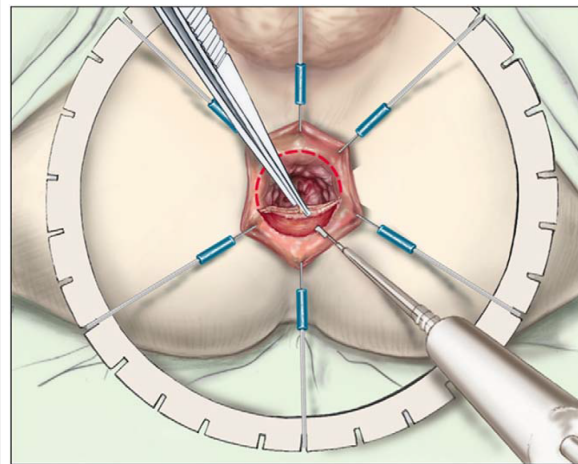
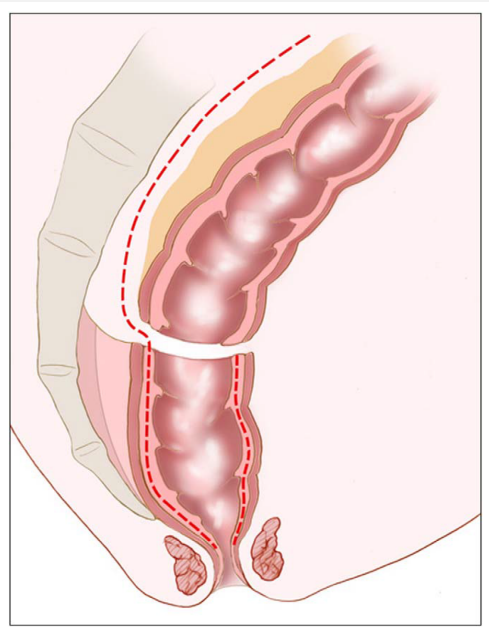
J Urol (Paris). 1988;94(5-6):289-93.

[Treatment by omentoplasty of vesicorectovaginal and rectovaginal fistulae].

[Article in French]

Kiricuta I¹.

INTERVENTION DE SOAVE



+ STOMIE DE PROTECTION

INTERVENTION DE SOAVE

British Journal of Surgery 1998, 85, 962–964

Soave's procedure: the final sphincter-saving solution for iatrogenic rectal lesions

J. L. FAUCHERON, R. ROSSO, E. TIRET, E. KELI, K. P. NUGENT, P. FRILEUX and R. PARC

- 1978-1994
- N=30 → Fistule 18 → 3 récurrences de fistule (rectovésicale ou vaginale)
- Sténose anastomotique n=3

Symptom	No. of patients
Continence	19
Normal	
Incontinence to flatus	3
Incontinence to stools	1
Bowel frequency per day	
1–3	18
4–6	4
7–9	1
Good discrimination between stool and flatus	23
Urgency	5
Fragmentation of stool	5
Abdominal pain	2
Perineal pain or straining	2
Enema use	5
Diet	8
Subjective appreciation	
Very well	13
Well	7
Poor	2
Very poor	1

INTERVENTION DE SOAVE

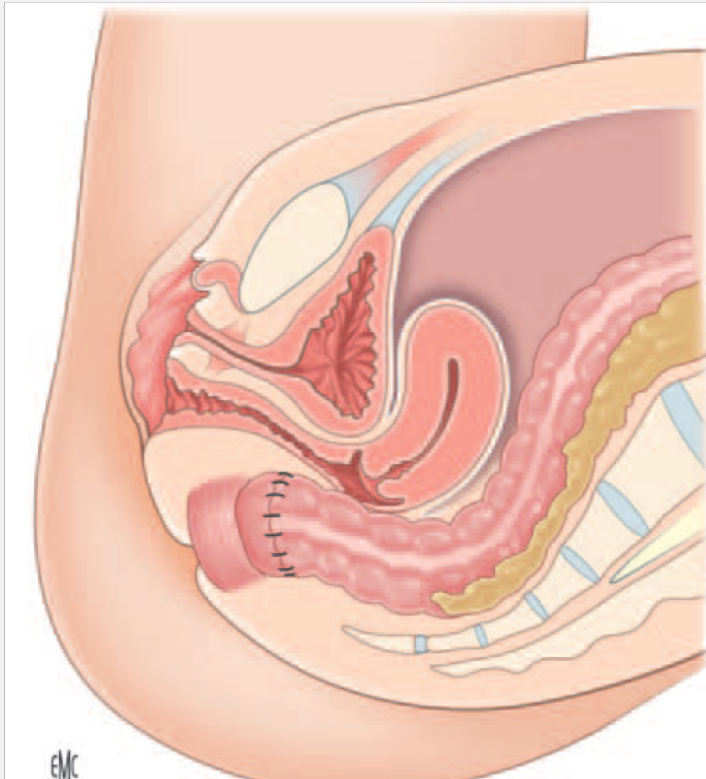
Coloanal Sleeve Anastomosis (Soave Procedure): The Ultimate Treatment Option for Complex Rectourinary Fistulas

Mircea Chirica, M.D., Yann Parc, M.D., Ph.D., Emmanuel Tiret, M.D.,
Nidal Dehni, M.D., Deborah McNamara, M.D., Rolland Parc, M.D.

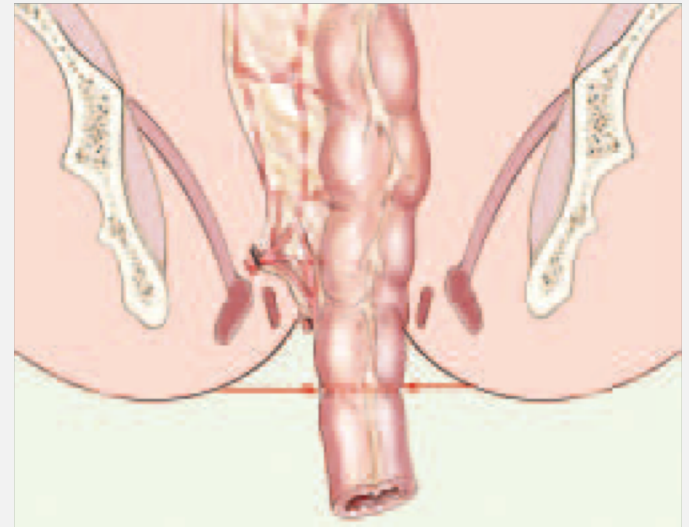
Dis Colon Rectum, September 2006

- N=8 **fistule recto-urinaire!!!**
- Morbidité 38%
- **Succès initial: 75%**
- 25 (3-132) mois: **87.5% continence urinaire normale et stomie fermée**, 25% incontinence anale

RÉSECTION RECTALE EMPORTANT LA ZONE PATHOLOGIQUE



**Anastomose
colo-anale/colorectale basse**



**Anastomose
colo-anale différée**

ANASTOMOSE COLO-ANALE DIFFÉRÉE

Outcomes following Turnbull–Cutait abdominoperineal pull-through compared with coloanal anastomosis

F. H. Remzi, G. El Gazzaz, R. P. Kiran, H. T. Kirat and V. W. Fazio

British Journal of Surgery 2009; **96**: 424–429

- n=67 ACA différée vs n=88 ACA pour cancer du rectum
- Appariement sur sexe et BMI

Indication

Persistent RVF after surgery for rectal cancer or diverticulitis, colonic J pouch, related to CD, RT for anal or cervical cancer	13 (19)
Persistent RUF after RT for prostate or rectal cancer, diverticulitis, TAH + BSO followed by RT, related to CD	12 (18)
Complicated rectal cancer due to coexisting prostate cancer, excessive fibrosis and rigidity after RT, vaginal involvement, morbid obesity	10 (15)
Complex perianal fistula due to CD	10 (15)
Anastomotic leak or stricture after LAR and RT for rectal cancer	10 (15)
Severe radiation proctitis after rectal or prostate cancer	6 (9)
Stricture secondary to CD	3 (4)
Technical difficulty related to reversal of Hartmann's procedure	3 (4)

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	Turnbull–Cutait (<i>n</i> = 67)	Coloanal anastomosis (<i>n</i> = 88)	<i>P</i>
Age (years)*	49.2(15.8)	57.4(11.4)	0.010†
Men	40 (60)	54 (61)	0.913¶
Body mass index (kg/m ²)*	26.7(6.2)	26.2(5.9)	0.634†
Follow-up (years)*	5.6(3.2)	3.6(2.4)	0.110†
Radiotherapy	24 (36)	52 (59)	0.032¶
Chemotherapy	19 (28)	55 (63)	0.011¶
Leak	2 (3)	6 (7)	0.048§
Stricture	11 (16)	11 (13)	0.928§
Abscess formation	0 (0)	4 (5)	0.043§
Anorectal prolapse	5 (7)	0 (0)	0.012§
Fistula	5 (7)	4 (5)	0.238§
Functioning anastomosis	50 (75)	78 (89)	0.094¶

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	Turnbull–Cutait (n = 44)	Coloanal anastomosis (n = 88)	P
Bowel function			
Wexner continence score*	10.6(2.7)	12.2(2.5)	0.093†
Bowel movement*			
Day	3.73(1.19)	3.92(3.09)	0.137†
Night	1.61(1.08)	2.15(4.30)	0.314†
Faecal incontinence (never/rarely)	34 (77)	79 (90)	0.121§
Pad use	16 (36)	42 (48)	0.431§
Urgency	14 (32)	37 (42)	0.242§
Antidiarrhoeal medication	24 (55)	45 (51)	0.936§
Bladder function			
Urinary incontinence	5 (11)	18 (20)	0.073§
Urgency	10 (23)	45 (51)	0.042¶
Nocturnal micturition	10 (23)	51 (58)	0.031¶
Poor stream	6 (14)	22 (25)	0.092¶
Sexual function			
Sexually active	16 (36)	41 (47)	0.063¶
Erection	11 of 21 (52)	34 of 50 (68)	0.205¶
Orgasm			
Male	9 of 20 (45)	35 of 49 (71)	0.063¶
Female	8 of 13 (62)	26 of 34 (76)	0.409¶

ANASTOMOSE COLO-ANALE DIFFÉRÉE

Int J Colorectal Dis (2015) 30:543–548
DOI 10.1007/s00384-014-2119-0

ORIGINAL ARTICLE

Redo-surgery by transanal colonic pull-through for failed anastomosis associated with chronic pelvic sepsis or rectovaginal fistula

Léon Maggiori • Julien Blanche • Yann Harnoy •
Marianne Ferron • Yves Panis

- 2007-2013
- N=24 → **9 FRV**
- Morbidité majeure: 21%
- **Succès global: 79%**
- **Résultats fonctionnels: 82%** (Pas de LARS ou LARS mineur)

AMPUTATION ABDOMINO-PÉRINÉALE

QUELLE PROCÉDURE CHOISIR?

Author	Year	Type of Fistula	N	Repair	Success Rate
Greenwald et al ¹⁷	1978	RV	20	RAF	100%
Ryan et al ¹⁰	1979	RU	1	Gracilis	100%
Parks et al ¹⁸	1983	RU	5	RAF	100%
Hoexter et al ¹⁹	1985	RV	15	RAF	100%
Jones et al ²⁰	1987	RU	4	RAF	75%
Wise et al ²¹	1991	RV	40	RAF	85%
MacRae et al ²²	1995	RV	28	RAF	29%
Wilbert et al ²³	1996	RU	2	TEM	100%
Al-Ali et al ¹²	1997	RU	30	RAF	100%
Tsang et al ²⁴	1998	RV	27	RAF	41%
Nyam et al ¹⁶	1999	RU	3	Gracilis	100%
Ruis et al ²⁵	2000	RU	1	Gracilis	100%
Baig et al ²⁶	2000	RV	19	RAF	74%
Sonoda et al ²⁷	2002	RV	37	RAF	43%
Oded Zmora et al ⁵	2003	RU	11	Gracilis	100%
Rabau et al ²⁸	2006	RU/RV	10	Gracilis	90%
Osnat Zmora et al ⁶	2006	RU/RV	9	Gracilis	77%
Current study	2008	RU	36	Gracilis	78% (After repair)
Current study	2008	RU	36	Gracilis	97% (After second repair)
Current study	2008	RV	9	Gracilis	33% (Crohn's)
Current study	2008	RV	8	Gracilis	75% (Non-crohn's)

Rectovaginal Fistula: What Is the Optimal Strategy?

An Analysis of 79 Patients Undergoing 286 Procedures

Helene Corte, MD,* Leon Maggiori, MD,* Xavier Treton, MD, PhD,† Jeremie H. Lefevre, MD, PhD,*

Marianne Ferron, MD,* and Yves Panis, MD, PhD*

Ann Surg 2015;262:855–861

- **n=79 → 286 procédures**
- **Stomie de dérivation: 85%**
- **Succès: 72% (33 mois)**

Overall (n = 286)	
Conservative procedures 76%	
Seton drainage	59 (21)*
Vaginal advancement flap	49 (17)
Rectal advancement flap	46 (16)
Diverting stoma only	27 (9)
Fistula plug	15 (5)
Fibrine glue	13 (5)
Other	8 (3)
Major procedures 24%	
Gracilis muscle transposition	32 (11)
Biomesh interposition	9 (3)
Standard CAA or CRA	8 (3)
Delayed CAA	11 (4)
APE	9 (3)

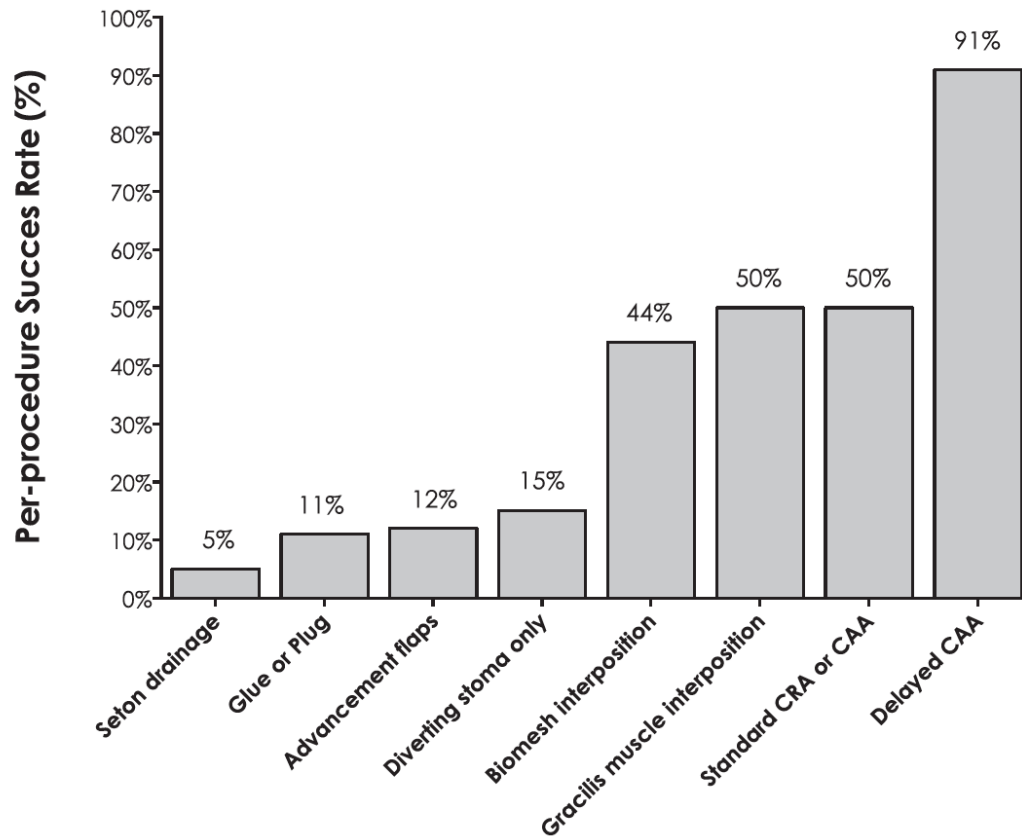
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- **Augmentation significative du taux de succès en présence d'une stomie+++**
- Taux de stomie définitive: 22% (APE, récurrence, souhait)

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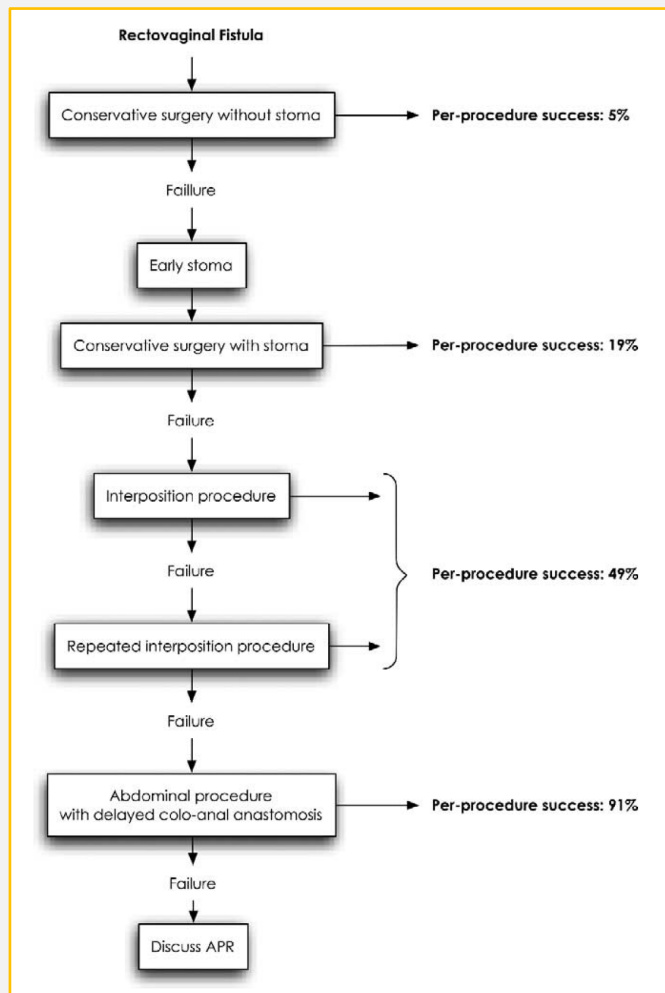
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ASA score 3–4	6 (11)	35 (15)	0.359	—	—
BMI ≥30	9 (16)	33 (14)	0.792	—	—
High or middle RVF location	14 (25)	45 (20)	0.412	—	—
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Postoperative	20 (35)	40 (17)	0.003	0.766	1.2 (0.4–3.2)
Obstetrical	7 (12)	19 (8)	0.349	—	—
Post Radiation	1 (2)	6 (3)	1.000	—	—
Unknown	3 (5)	19 (8)	0.584	—	—
Pelvic cancer	0	4 (2)	0.588	0.867	1.2 (0.5–4.7)
Diverticulitis	2 (4)	1 (1)	0.102	0.377	3.4 (0.2–53.7)
Trauma	1 (2)	3 (1)	1.000	—	—
Major procedure	34 (60)	35 (15)	<0.0001	<0.0001	6.4 (2.9–14.2)‡
Procedure with stoma	50 (88)	102 (45)	<0.0001	0.009	3.5 (1.4–8.7)
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Delay <9 months	45 (79)	150 (66)	0.051	0.046	2.3 (1.1–5.3)

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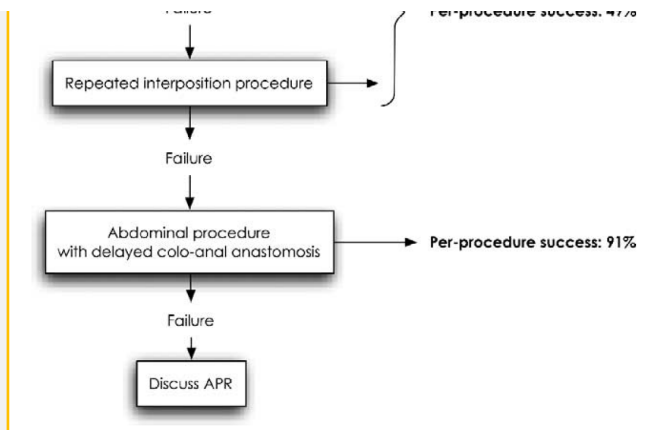
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Ann Surg 2015;262:855–861

Rectovaginal Fistula

In conclusion, our study suggested that the classic step-up approach for surgical management of RVF could be changed to a more aggressive attitude with early use of diverting stoma and, if necessary, major procedures such as gracilis muscle interposition or even transanal colonic pull-through coloanal anastomosis, which clearly give the best healing rate in patients with RVF (Fig. 2).



Are There Predictors of Outcome Following Rectovaginal Fistula Repair?

Rodrigo A. Pinto, M.D.¹ • Thais V. Peterson, M.D.² • Sherief Shawki, M.D.¹
G. Willy Davila, M.D.² • Steven D. Wexner, M.D.¹

Dis Colon Rectum 2010; 53: 1240–1247

- n=125 → **184 procédures**
- Stomie de dérivation: 34%
- Succès initial: **59%** (sans séton)
- Succès 20 (4-168) mois: **87%**

Procédure	%
Suture trans-anale	2.7
Séton	13.6
Glue	1.1
Plug	2.3
Transpérinéale	8.7
Transvaginale	8.1
Lambeau d'avancement rectal	40.7
Lambeau de Gracilis	13.6
Lambeau de Martius	1.6
Voie abdominale	7.6

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<i>Type of procedure</i>	<i>Success, n (%)</i>	<i>Recurrence, n (%)</i>
Endorectal advancement flap ± sphincteroplasty	40 (56.3)	31 (43.7)
Gracilis interposition	19 (79.2)	5 (20.8)
Transvaginal approach	9 (60)	6 (40)
Transperineal approach	10 (66.7)	5 (33.3)
Other	26 (50)	26 (50)

FP de récidence: tabagisme actif
(OR=1.94, 95%CI 1.05-3.57, p=0.02)

Procédure	Succès global	Références
Musset	100%	Soriano et al, J of Gynecol, 2001
Lambeau d'avancement rectal	75%	Ruffolo et al, CRD, 2010
Lambeau d'avancement vaginal	81%	
Martius	65-71%	Songne et al, CRD, 2007 Pitel et, CRD, 2010
Gracilis	65-88%	Wexner et al, Ann Surg, 2008 Lefevre et al, DCR, 2009
Prothèse	20→70%	Mege et al, CRD, 2016
Soave	75%	Chirica et al, DCR, 2006
Anastomose colo-anale différée	75%	Remzi et al, BJS, 2005

Clinical Practice Guideline for the Management of Anorectal Abscess, Fistula-in-Ano, and Rectovaginal Fistula

Dis Colon Rectum 2016; 59: 1117–1133

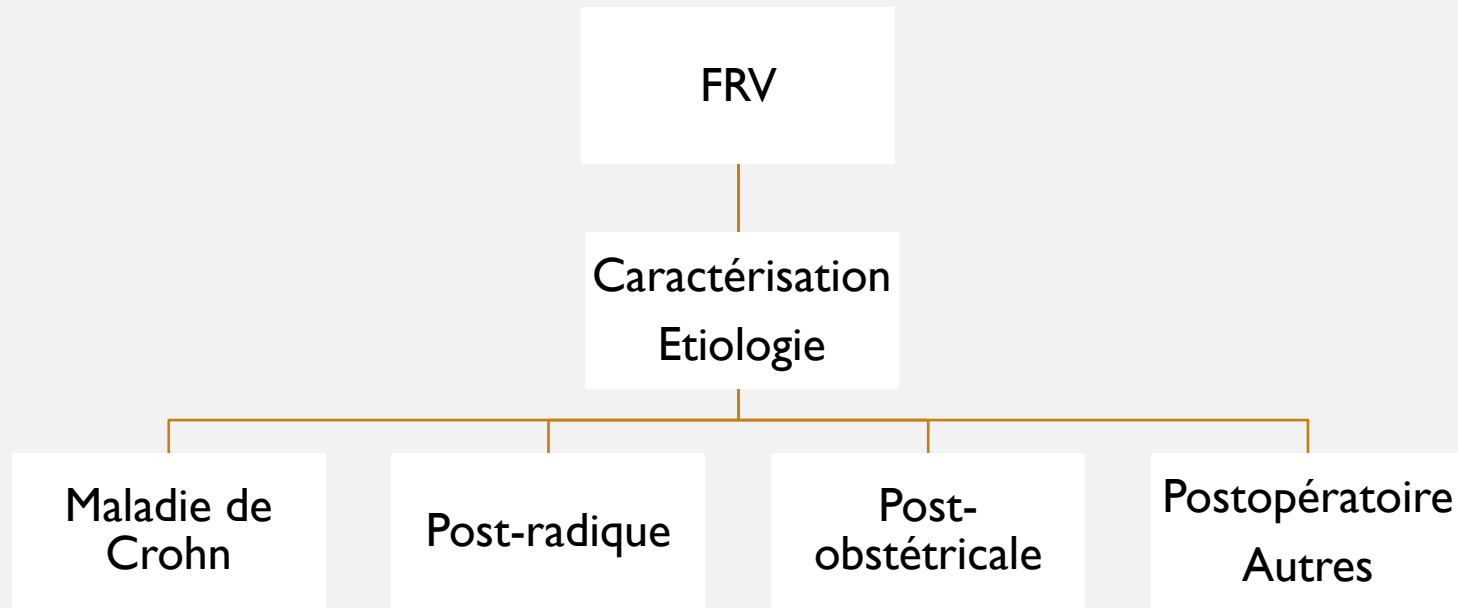
Jon D. Vogel, M.D. • Eric K. Johnson, M.D. • Arden M. Morris, M.D. • Ian M. Paquette, M.D.
Theodore J. Saclarides, M.D. • Daniel L. Feingold, M.D. • Scott R. Steele, M.D.



2. A **draining seton** may be required to facilitate resolution of acute inflammation or infection associated with rectovaginal fistulas. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
4. **Episioproctotomy** may be used to repair **obstetrical or cryptoglandular** rectovaginal fistulas associated with **extensive anal sphincter damage**. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
6. **High** rectovaginal fistulas that result from complications of a colorectal anastomosis often require an **abdominal approach** for repair. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
3. **Endorectal advancement flap**, with or without sphincteroplasty, is the procedure of choice for **most simple** rectovaginal fistulas. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
5. A **gracilis muscle or bulbocavernosus muscle** (Martius) flap is recommended for recurrent or otherwise complex rectovaginal fistula. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
7. **Proctectomy with colon pull-through or coloanal anastomosis** may be required to repair radiation-related and recurrent complex rectovaginal fistula. Grade of Recommendation: Weak recommendation based on low-quality evidence, 2C.

CONCLUSIONS

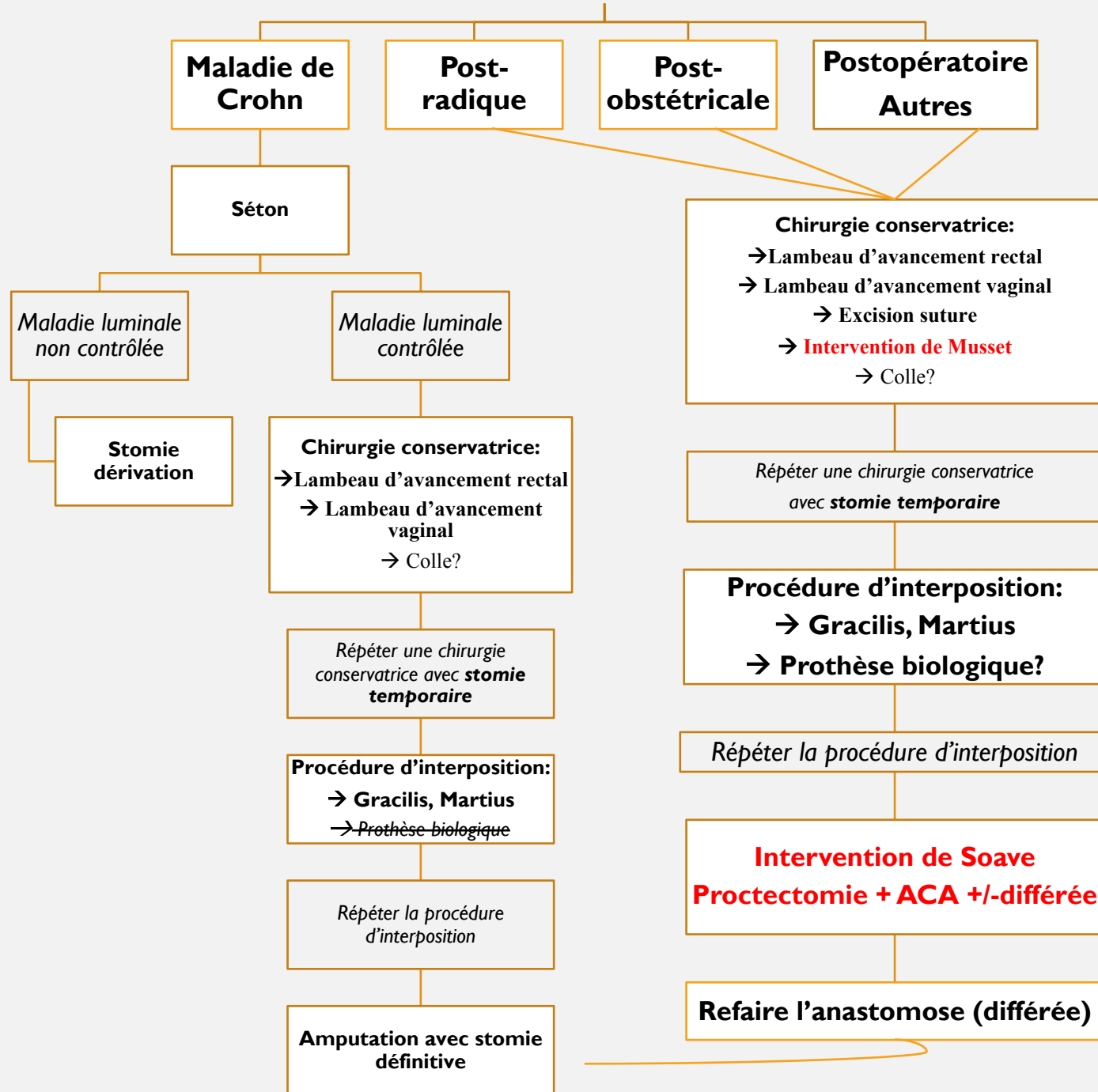
- Diagnostic **CLINIQUE**
- Caractériser la FRV, et définir sa cause
- Traitement chirurgical en présence de **rectum sain**
- **Traiter la maladie sous-jacente**
- **Risque de récurrence (50% si Crohn, 25% autres)**
- Escalade thérapeutique vs procédure agressive d'emblée



3-6 mois

Bilan + Traitement de la pathologie sous-jacente

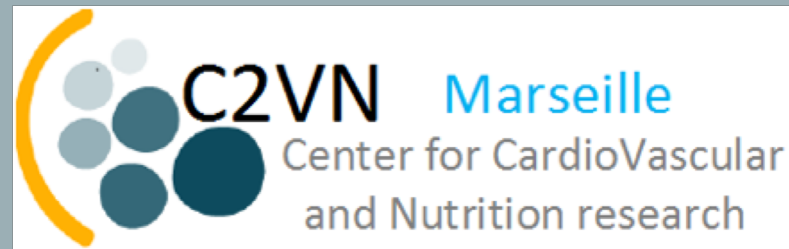
Arrêt du tabac





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FISTULE RECTO-VAGINALE

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