Wondsymposium 17 maart 2022
De Sinus Pilonidalis

Dr. R.M. Smeenk, chirurg, Albert Schweitzer ziekenhuis, Dordrecht
Voorzitter Werkgroep Richtlijn Sinus Pilonidalis

Disclosures

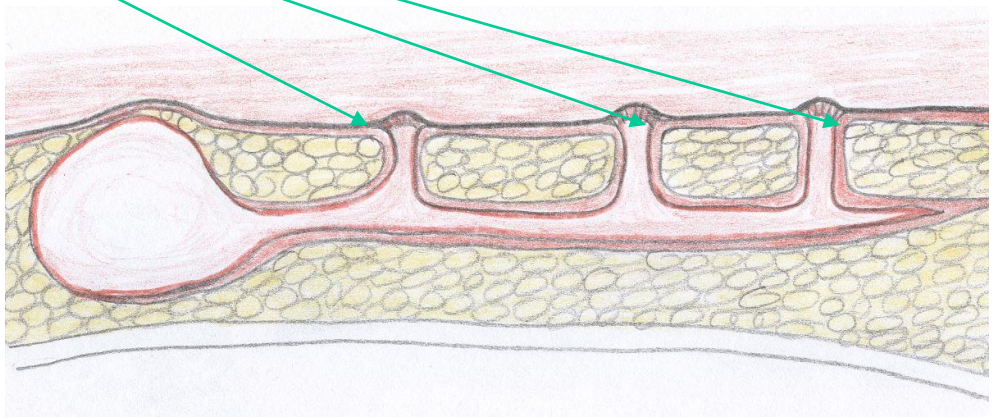
- Voorzitter richtlijn sinus pilonidalis
- Penningmeester Stichting Research Foundation PSD

Wat komt er aan bod?

- Etiologie en pathofysiologie
- Classificatie
- Chirurgische behandelingen
- Secundaire preventie
- Lastige casus

Etiologie en pathofysiologie

- Theorieën
  - Karydakis: binnendringen haren/debris > pits
  - Bascom: follikel occlusie > ontsteking > pits > haren dringen binnen



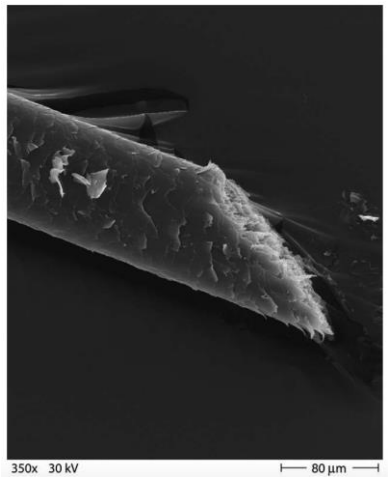
Karydakis GE. Easy and successful treatment of pilonidal sinus after explanation of its causative process. Aust N Z J Surg. 1992;62:385-389.

Bascom J. Pilonidal disease: long-term results of follicle removal. Dis Colon Rectum. 1983;26:800-807.

ORIGINAL CONTRIBUTION

Strength of Occipital Hair as an Explanation for Pilonidal Sinus Disease Caused by Intruding Hair

Dietrich Doll, M.D., Ph.D.[1,7] • Friederike D. Bosche, M.D.[1] • Verena K. Stauffer, M.D.[2]
Inga Sinicina, M.D., Ph.D.[3] • Sebastian Hoffmann, M.D., Ph.D.[4]
Dominic van der Zypen, Ph.D.[5] • Markus M. Luedi, M.D., M.B.A.[6]



World J Surg
DOI 10.1007/s00268-017-4093-5

ORIGINAL SCIENTIFIC REPORT

The Hair in the Sinus: Sharp-Ended Rootless Head Hair Fragments can be Found in Large Amounts in Pilonidal Sinus Nests

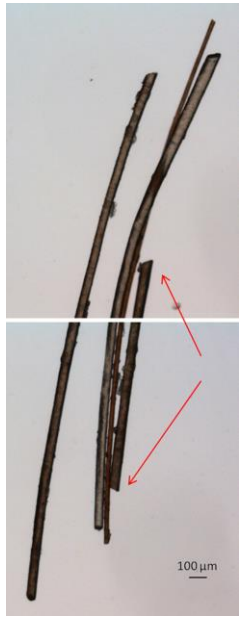
Friederike Bosche[1] · Markus M. Luedi[2] · Dominic van der Zypen[3] · Philipp Moersdorf[4] · Bjoern Krapohl[5] · Dietrich Doll[1,6]

Tech Coloproctol (2017) 21:905–906
https://doi.org/10.1007/s10151-017-1702-0

CORRESPONDENCE

Scanning electron microscope imaging of pilonidal disease

M. P. Gosselink[1] · L. Jenkins[1] · J. W. T. Toh[1] · M. Cvejic[2] · E. Kettle[3] · R. A. Boadle[3] · G. Ctercteko[1]



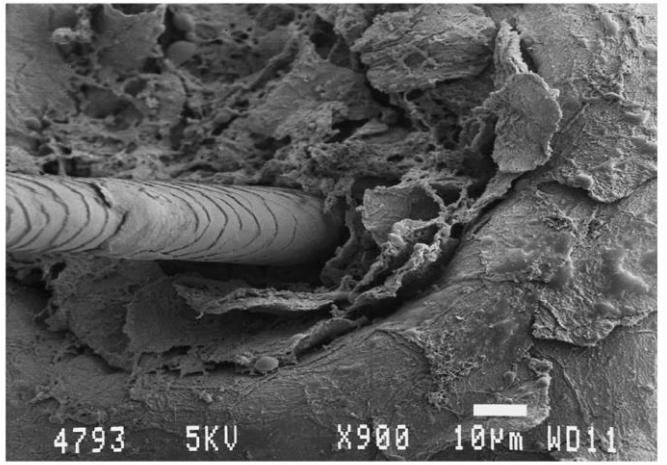


Fig. 2 Scanning electron microscope image showing a hair orientated with its root end into the primary pit. Magnification × 900. Scale bar = 10 micron

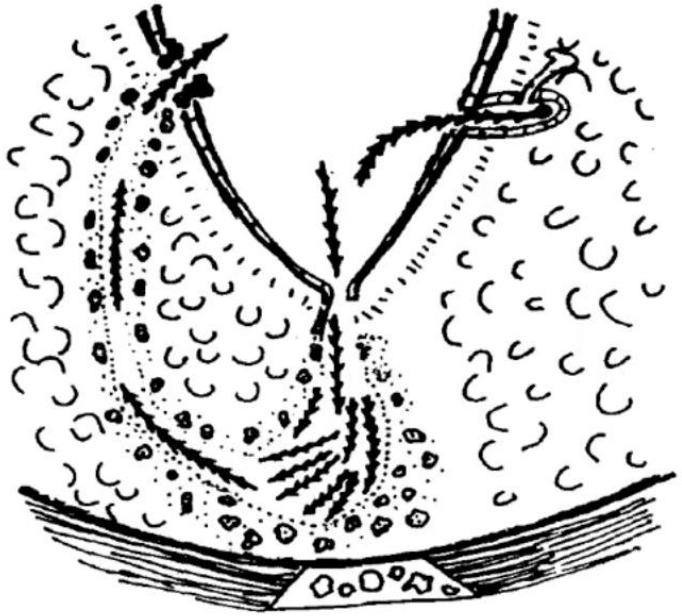


Fig. 2. Pilonidal sinus fully established. In this stage continuous insertion of loose hair by primary sinus and exit by secondary fistula.

Karydakis, 1992

Etiologie en pathofysiologie

- Risicofactoren
  - **Beharing (man)**
  - Diepe bilnaad
  - Gebrekkige hygiëne

  - Langdurig zitten/wrijving?
  - Roken?
  - Overgewicht?
  - **Kappersbezoek?**

International Journal of Colorectal Disease (2018) 33:567–576
https://doi.org/10.1007/s00384-018-2988-8

ORIGINAL ARTICLE

CrossMark

The presence of occipital hair in the pilonidal sinus cavity—a triple approach to proof

Dietrich Doll[1,2,3] · F. Bosche[1] · A. Hauser[4] · P. Moersdorf[5] · I. Sinicina[6] · J. Grunwald[7] · F. Reckel[7] · M. M. Luedi[8]

Etiologie en pathofysiologie

- Primaire preventie
  - Hygiëne
  - Niet langer dan 6? uur zitten
  - Stoppen met roken
  - Gewichtsverlies
  - Ontharen?

Classificatie

- Type I
  - A
  - B
- Type II
- Type III
- Type IV
- Type V

- Simpel (type I en II)
- Complex (type III en IV)

Techniques in Coloproctology (2019) 23:435–443
https://doi.org/10.1007/s10151-019-01988-x

ORIGINAL ARTICLE

A systematic review of classification systems for pilonidal sinus

E. M. Beal[1,4] · M. J. Lee[2,4] · D. Hind[1,4] · A. P. Wysocki[3,4] · F. Yang[1] · S. R. Brown[2]

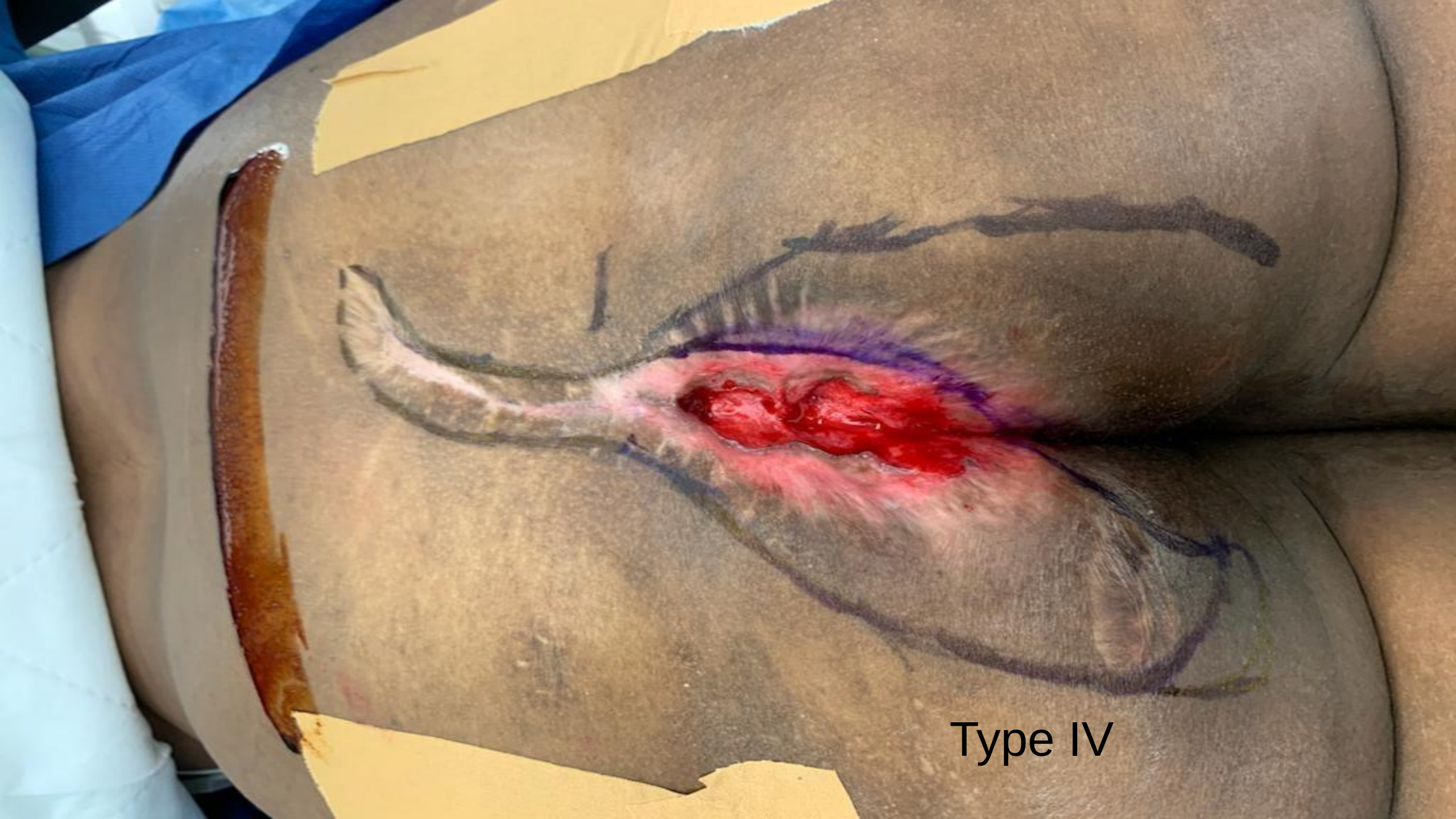
7 classificatie systemen

Niet gevalideerd


Type I


Type II


Type III


Type IV

Type V

Albert Schweitzer ziekenhuis

Een sinus pilonidalis en dan….?

8000 operaties per jaar in NL

Chirurgische behandelingen

Doelen:

- Laag % complicaties/recidieven
- Weinig pijn
- Snelle werkhervatting
- Goede cosmetiek
- Dagbehandeling / poliklinisch
- Minimaal ziekenhuisbezoek
- Kosteneffectief
- Kwaliteit van leven

- **Afhankelijk van classificatie?**

Enquête onder Nederlandse chirurgen (in opleiding) over behandeling sinus pilonidalis

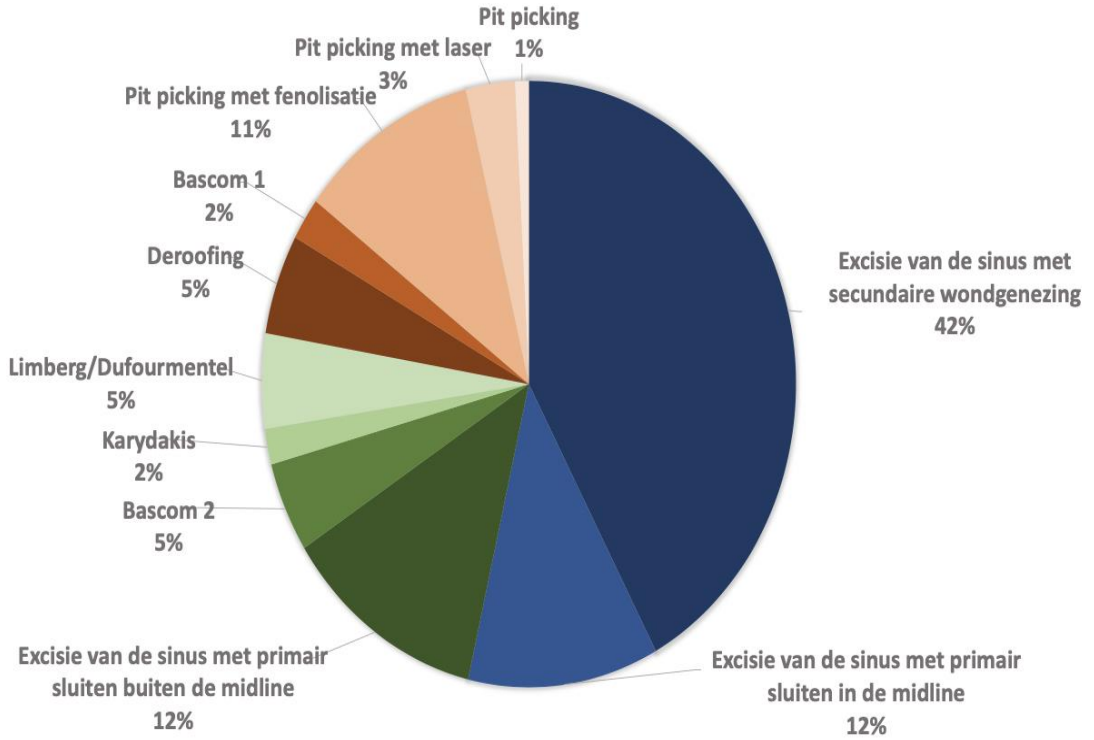
Galema HA, Vles WJ, Gosselink MP, Schouten R, Smeenk RM, Toorenvliet BR. Nederlands Tijdschrift voor Heelkunde. 2021 Jan;30(1)20-24.

Chirurgische behandelingen

Excisie (huidige standaard)

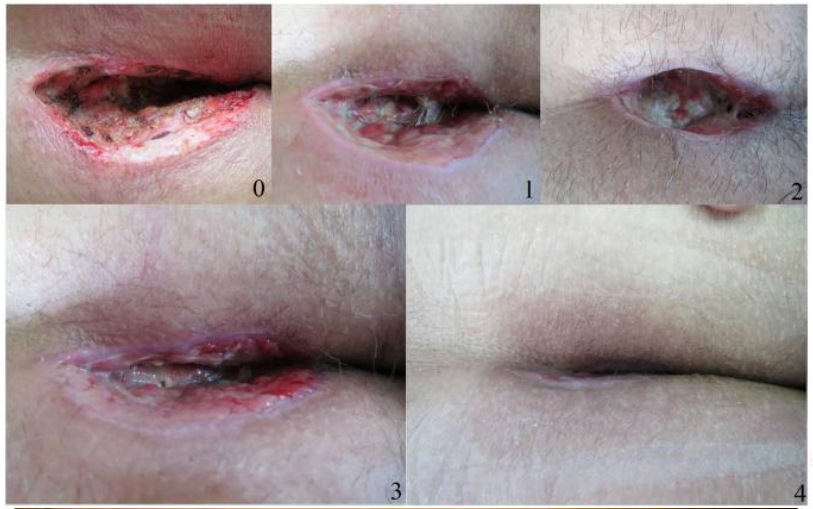
Minimaal invasief

Verschuivingsplastieken



Figuur 1; de toegepaste behandeling voor sinus pilonidalis in Nederland.

Excisie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1
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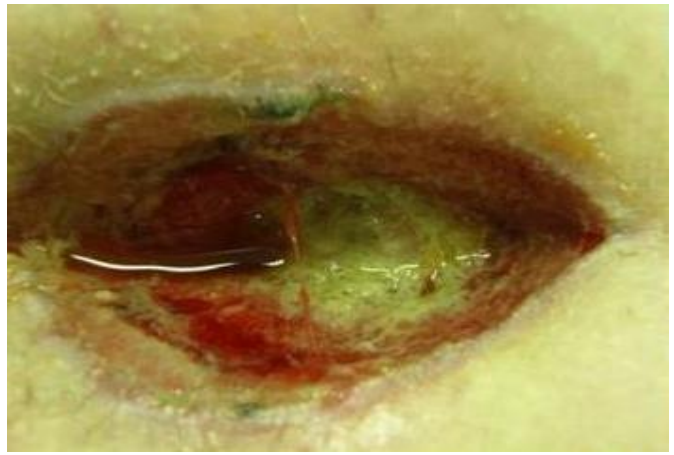
50th ANNIVERSARY EDITION
CLINT EASTWOOD
THE GOOD
THE BAD
and THE UGLY
co-starring
LEE VAN CLEEF
also starring
ELI WALLACH
in the role of TUCO
directed by
SERGIO LEONE



Excisie

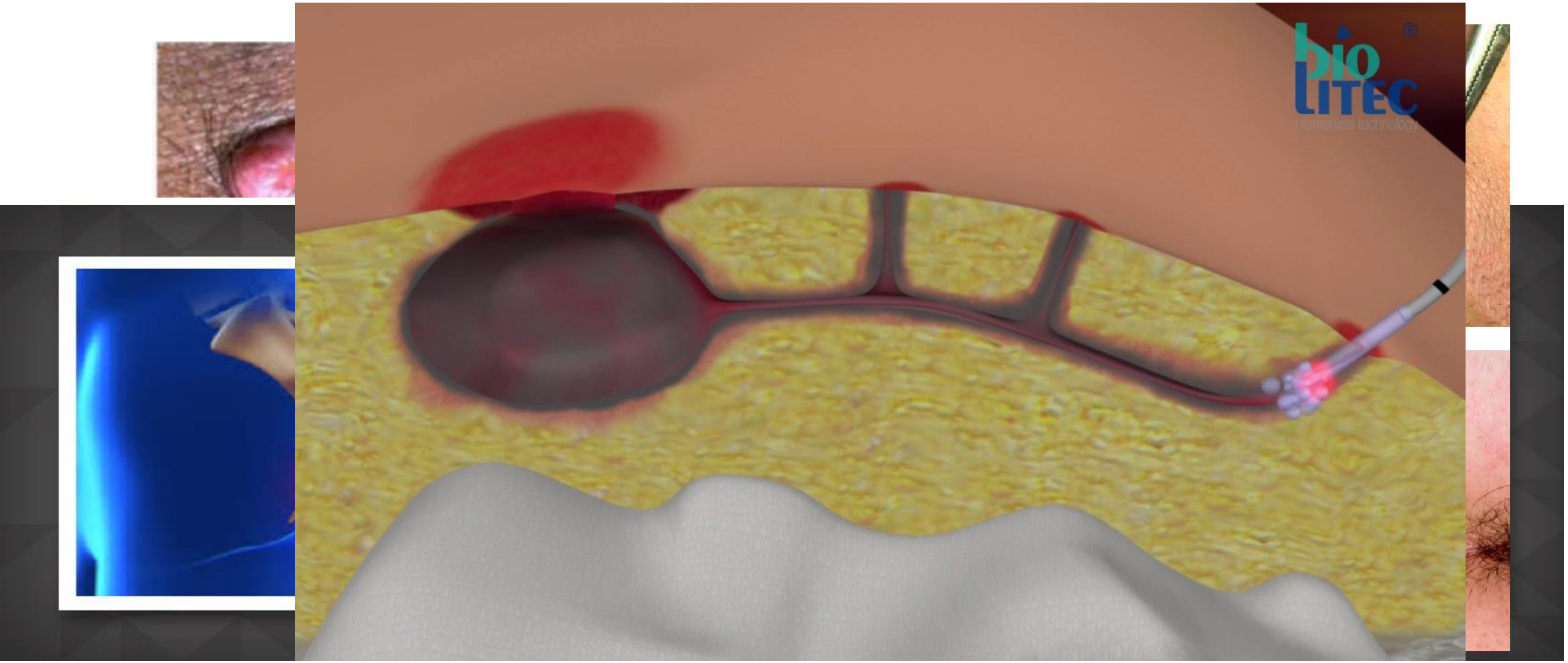
- Meest gebruikt
- Makkelijk

- Lange wondgenezing bij wond open laten: gemiddeld 2-3 maanden
  - Delayed healing of zelfs non healing 2-5%
- Infecties ++ bij wondsluiting
- Vertraagde werkhervatting
- Meer recidieven, tot zelfs 30%

Review
Zentralbl Chir 2021 Aug;146(4):417-426.
Wound Healing Disorders after Excision and Open Treatment for Pilonidal Sinus
Petersen [1], Andreas Ommer [2], Igors Iesalnieks [3], Dietrich Doll [4]

Multicenter Study
Dis Colon Rectum 2007 Nov;50(11):1928-34.
Timeline of recurrence after primary and secondary pilonidal sinus surgery
Dietrich Doll [1], Colin M Krueger, Stefan Schrank, Heidi Dettmann, Sven Petersen, Wolfgang Duesel

Minimaal invasieve behandelingen



Minimaal invasieve behandelingen

- Weinig, maar steeds meer gebruikt
- Makkelijk, veilig
- Poliklinisch
- Korte wondgenezing, snellere werkhervatting

- Meer recidieven
- Soms duurder (laser, endoscopie)

International Journal of Colorectal Disease (2019) 34:561–568
https://doi.org/10.1007/s00384-019-03260-y

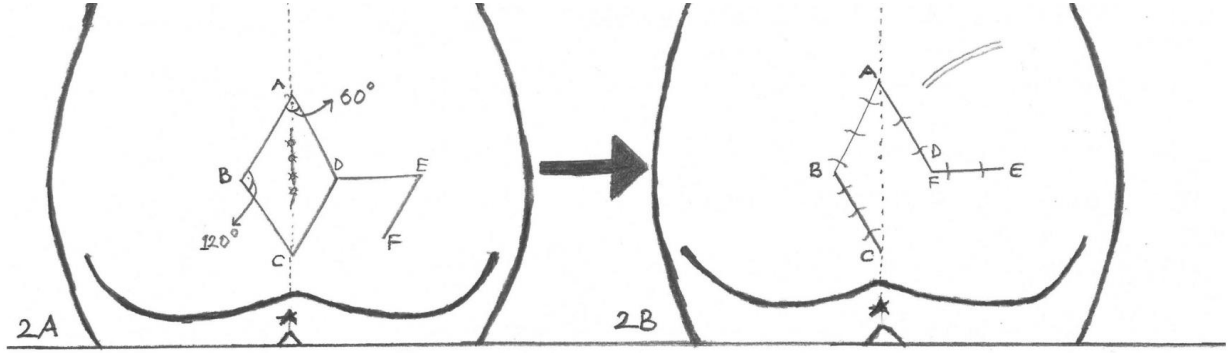
REVIEW

Minimally invasive techniques in the management of pilonidal disease

Ramya Kalaiselvan[1] · Sonia Bathla[1] · William Allen[1] · Aloka Liyanage[1] · Rajasundaram Rajaganeshan[1]

Verschuivingsplastieken

- Door middenlijn
  - Limberg/Dufourmentel
- “Off midline”
  - Karydakis
  - Bascom Cleft Lift



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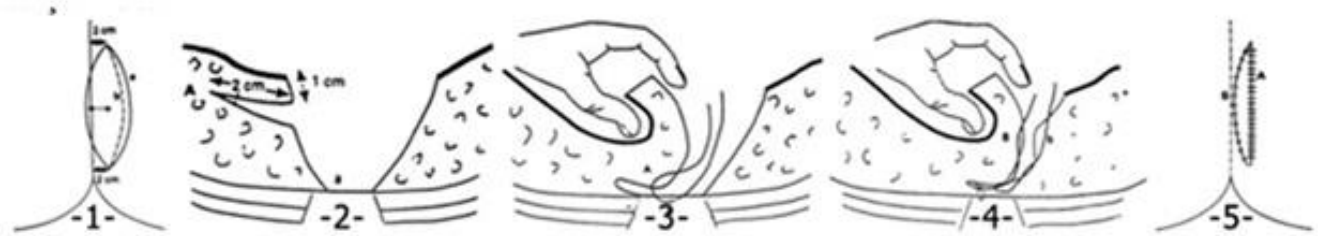

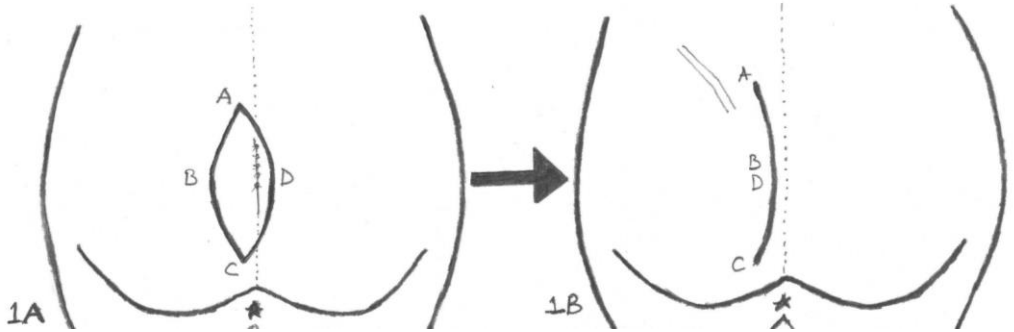

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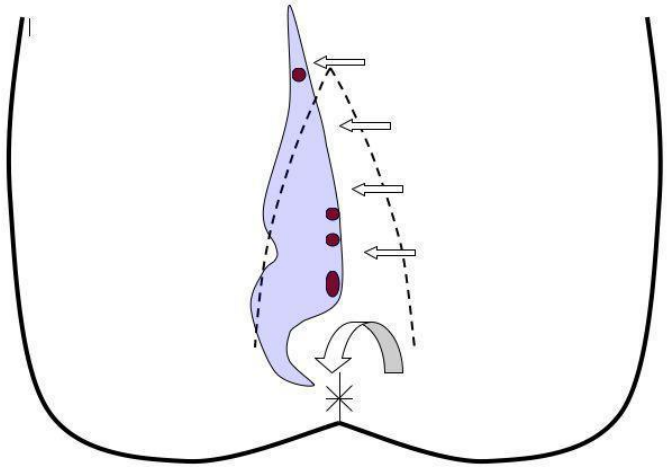
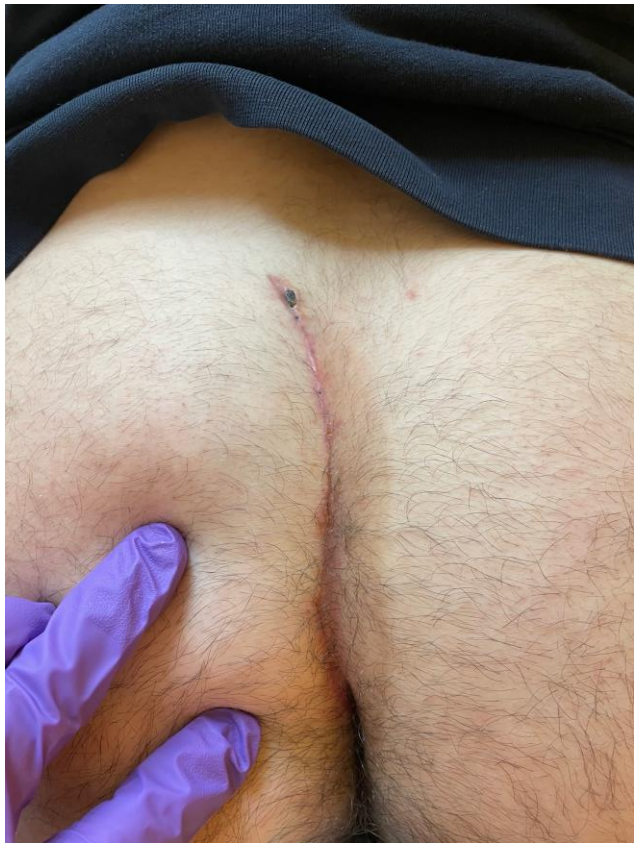




Verschuivingsplastieken

Received: 22 March 2019 | Revised: 22 May 2019 | Accepted: 28 May 2019

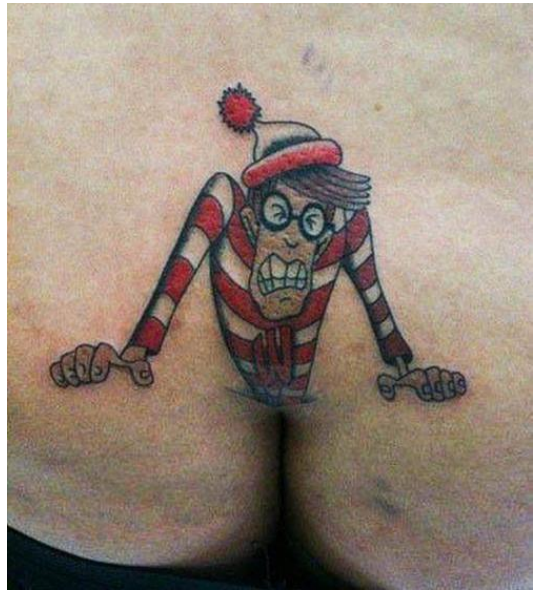
DOI: 10.1111/iwj.13163

ORIGINAL ARTICLE

IWJ WILEY

A comparison of flap reconstruction vs the laying open technique or excision and direct suture for pilonidal sinus disease: A meta-analysis of randomised studies

Charline Berthier[1] | Emilie Bérard[2] | Thomas Meresse[1] | Jean-Louis Grolleau[1] | Christian Herlin[3] | Benoit Chaput[1]



The meta-analysis demonstrated a lower risk of recurrence, a shorter duration of incapacity to work, a lower risk of wound infec- tions, a lower risk of skin wound complications, and a shorter duration of hospitalisation in favour of flap vs direct closure. A shorter time to complete wound healing and a shorter duration of incapacity to work for flap vs the laying open technique were observed.

Evidence

SCIENTIFIC REPORTS

OPEN

Common surgical procedures in pilonidal sinus disease: A meta-analysis, merged data analysis, and comprehensive study on recurrence

Received: 5 October 2017
Accepted: 15 January 2018
Published online: 15 February 2018

V. K. Stauffer[1], M. M. Luedi[2], P. Kauf[3], M. Schmid[3], M. Diekmann[4], K. Wieferich[4], B. Schnüriger[5] & D. Doll[4]

Table 2: Procedure specific recurrence rates in PSD [%]* derived from RCTs

Procedure / Follow up time [months]	*Patients included*	*12*	*24*	*60*	*120*	*240*
Overall	11,730	1.5	4.3	20.3	NA	NA
Primary open	1,713	1.0	3.2	16.5	NA	NA
Primary midline closure	4,626	2.1	7.0	21.9	NA	NA
Primary asymmetric closure	119	7.3	NA	NA	NA	NA
Karydakis/Bascom**	1,457	1.5	2.4	10.2	NA	NA
Limberg / Dufourmentel	2,380	0.6	1.8	NA	NA	NA
Other flap techniques	283	0.4	7.5	NA	NA	NA
Marsupialisation	343	1.0	14.3	NA	NA	NA
Limited excision	384	1.3	1.7	NA	NA	NA
Pit picking***	98	4.3	8.3	NA	NA	NA
Partial closure	73	NA	NA	NA	NA	NA
Incision and drainage	0	NA	NA	NA	NA	NA
Phenol treatment	70	NA	NA	NA	NA	NA
Laser treatment	0	NA	NA	NA	NA	NA

* Data of homogeneous recurrence rates ($I^2 < 5\%$, $p > 0.2$) are printed in bold, heterogeneous data in italic numbers; **includes Bascom cleft lift; ***includes Bascom Pit Picking

Excisie

Verschuivingsplastiek

Minimaal invasief

1% 5% 10% 25% 50%

Not available (NA)

Albert Schweitzer ziekenhuis

Table 3: Procedure specific recurrence rates in PSD [%]* overall derived from RCTs and non-RCTs

Procedure / Follow up time [months]		*Patients included*	*12*	*24*	*60*	*120*	*240*
Overall	Excisie	89,583	**2.0**	**4.4**	**10.8**	**16.9**	**60.4**
Primary open	Excisie	10,166	**1.5**	**4.2**	**13.1**	**19.9**	NA
Primary midline closure	Excisie	21,583	**3.4**	**7.0**	**16.8**	**32.0**	**67.9**
Primary asymmetric closure	Excisie	3,121	*1.0*	**1.6**	**3.2**	NA	NA
Karydakis/Bascom**	Verschuivingsplastiek	16,349	**0.2**	**0.6**	**1.8**	**2.7**	NA
Limberg / Dufourmentel	Verschuivingsplastiek	12,384	**0.4**	**1.6**	**5.1**	**11.4**	NA
Other flap techniques	Verschuivingsplastiek	4,257	**1.1**	**1.9**	**7.5**	NA	NA
Marsupialisation	Minimaal invasief	3,207	*1.8*	**5.6**	**9.4**	**10.3**	NA
Limited excision	Minimaal invasief	6,366	**5.0**	**6.8**	**16.2**	**31.0**	NA
Pit picking***	Minimaal invasief	6,272	*2.7*	**6.5**	**15.6**	NA	NA
Partial closure	Minimaal invasief	530	**2.8**	**5.1**	**12.8**	NA	NA
Incision and drainage	Minimaal invasief	360	**10.4**	**25.1**	**40.2**	NA	NA
Phenol treatment	Minimaal invasief	1,947	**1.9**	**14.1**	**40.4**	NA	NA
Laser treatment	Minimaal invasief	125	**1.9**	**5.3**	**36.6**	NA	NA

* Data of homogeneous recurrence rates ($I^2 < 5\%$, $p > 0.2$) are printed in bold, heterogeneous data in italic numbers; **includes Bascom cleft lift, ***includes Bascom Pit Picking

1% 5% 10% 25% 50%

Not available (NA)

A comparison of flap reconstruction vs the laying open technique or excision and direct suture for pilonidal sinus disease: A meta-analysis of randomised studies

Charline Berthier[1] | Emilie Bérard[2] | Thomas Meresse[1] | Jean-Louis Grolleau[1] | Christian Herlin[3] | Benoit Chaput[1]

Tech Coloproctol. 2014 Oct;18(10):863-72. doi: 10.1007/s10151-014-1149-5. Epub 2014 Apr 30.

Meta-analysis of randomized controlled trials comparing different techniques with primary closure for chronic pilonidal sinus.

Enriquez-Navascues JM[1], Emparanza JI, Alkorta M, Placer C.

Cochrane Library

Cochrane Database of Systematic Reviews

Healing by primary versus secondary intention after surgical treatment for pilonidal sinus (Review)

AL-Khamis A, McCallum I, King PM, Bruce J

Excisie met open wondgenezing

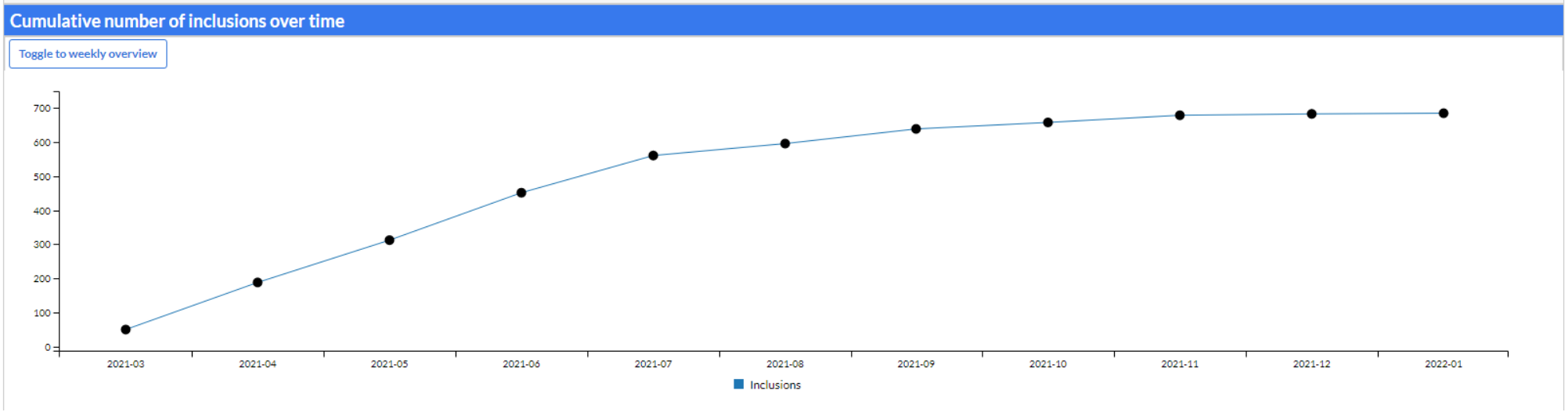
- Tijd tot wondgenezing
  - 1.5 tot 3 maanden
- Recidieven
  - 3.2% na 2 jaar en 16.5% na 5 jaar
- Wondinfecties
  - 3.1% – 14%

Verschuivingsplastieken

- Tijd tot wondgenezing
  - 2 tot 3 weken
- Recidieven
  - 2.4% na 2 jaar en 10.2% na 5 jaar
- Wondinfecties
  - 3.3% – 10%

PITS studie

- Analyse behandelingen en resultaten NL
- 684 patienten



- Richtlijn
- Kennisagenda

Voorstel Nederlandse indeling en behandeling

Asymptomatisch (type Ia):
Geen operatie indicatie. Expectatief. Uitleg en advies. Goede hygiëne, bilnaad schoon en droog.

Beperkte ziekte (type Ib)
Bij voorkeur minimaal invasief

Sinus pilonidalis abces (type II):
I&D (het liefst naast de midlijn)

Uitgebreidere Sinus pilonidalis of recidief (type III en IV)
Verschuivingsplastiek
(Geen excisie en secundaire wondgenezing of sluiten in de midlijn)

Chronische open wond bilnaad met hypergranulatie (type V):
Terracotril & gaasjes beleid
Alternatief: andere wondbehandeling, Bascom Cleft Lift

Secundaire preventie

- **Laser ontharing?**

GEEN HOOG LEVEL EVIDENCE

- *2 RCT's met tegengestelde uitkomsten*

(Demircan/Ghnam et al.)

- *Prospectieve series en review zijn wel positief*

(Pronk et al.)

- 1 nieuwe RCT volgt, echter vergelijken laser met scheren

(Minneci et al.)

Secundaire preventie

- Laser ontharing?

- Dagelijks douchen
- Stoppen met roken
- Gewichtsverlies
- Vermijd langdurig zitten
- Bilnaad droog houden?

- Hygiëne protocol?

Lastige casus (2x)

- Zeer uitgebreide complexe sinus pilonidalis

- Chronische niet genezende hypergranulerende wond (na chirurgie)

Zeer uitgebreide complexe sinus pilonidalis

Chronische niet genezende hypergranulerende wond (na chirurgie)

Take home message

- Sinus pilonidalis is lastig ziektebeeld
  - Recidiverend karakter
  - Welke behandeling voor welk type? Richtlijn volgt…
- Na richtlijn meer consensus?
  - Geen excisie meer!?

- Complexe wonden > wondverpleegkundige en chirurg samen

Vragen?

PSD Research Foundation:
https://psdresearch.nl/