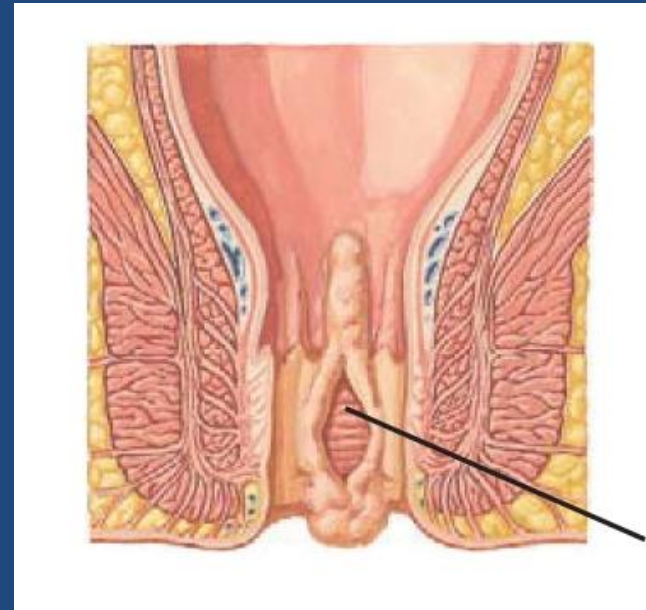




Disclosure belangen spreker

(potentiële) belangenverstrengeling	Geen

# Anale fissuur



Fissuur

# Fissuur

Helder kliniek

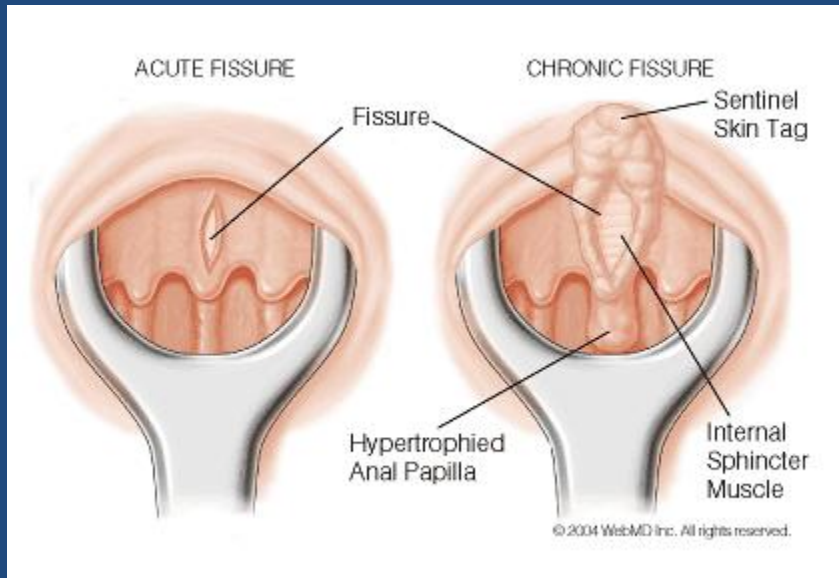
Een anale fissuur (fissura ani of anus kloof) is een klein scheurtje, wondje of kloofje in het **slijmvlies** bij de uitgang van de anus

# Anale fissuur

Br Med J 2012

Incidentie	1/350
Man/Vrouw ratio	1:1
Leeftijdspiek	20-40 jaar

# Chronische anale fissuur



- Poor healing rate
- Predilection for posterior midline (90%)
- Pain out of proportion
- No granulation tissue

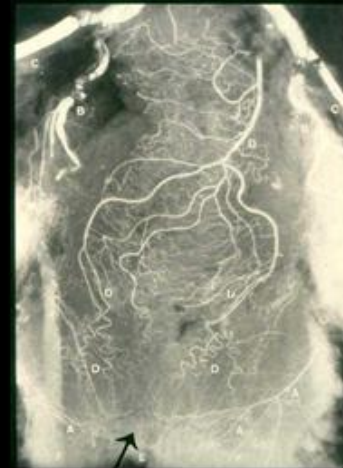
# Fissuur

## Topography of Inferior Rectal Artery:

*A Possible Cause of Chronic, Primary Anal Fissure*

*Bernd Klosterhalfen, M.D., Peter Vogel, M.D.,  
Helma Rixen M.D., Christian Mittermayer, M.D.*

## Topography of Inferior Rectal Artery



*Erafing*

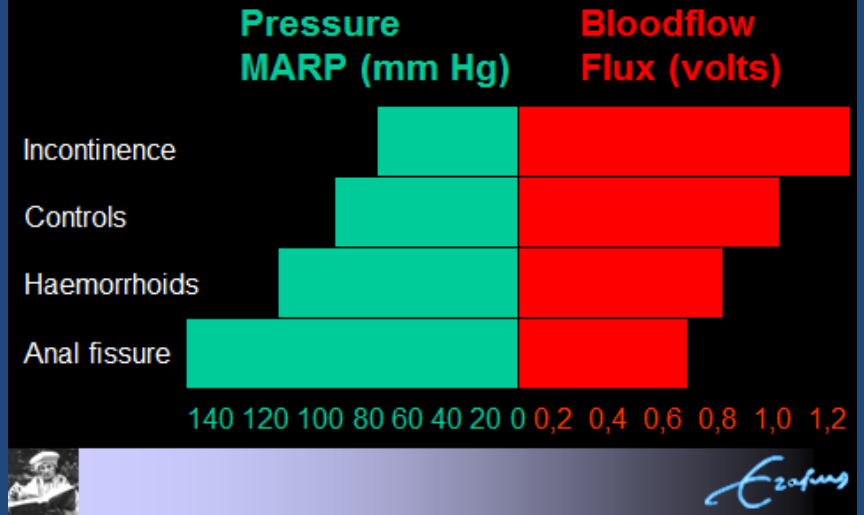


*Erafing*

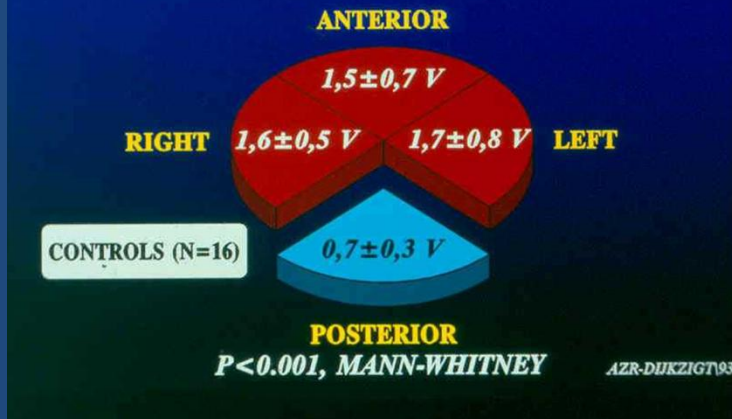
# Laser Doppler Flowmetrie



## MARP and Anodermal Bloodflow



## ANODERMAL BLOODFLOW IN FOUR SEGMENTS OF THE ANAL CANAL



# Ischaemisch ulcus van de anodermis



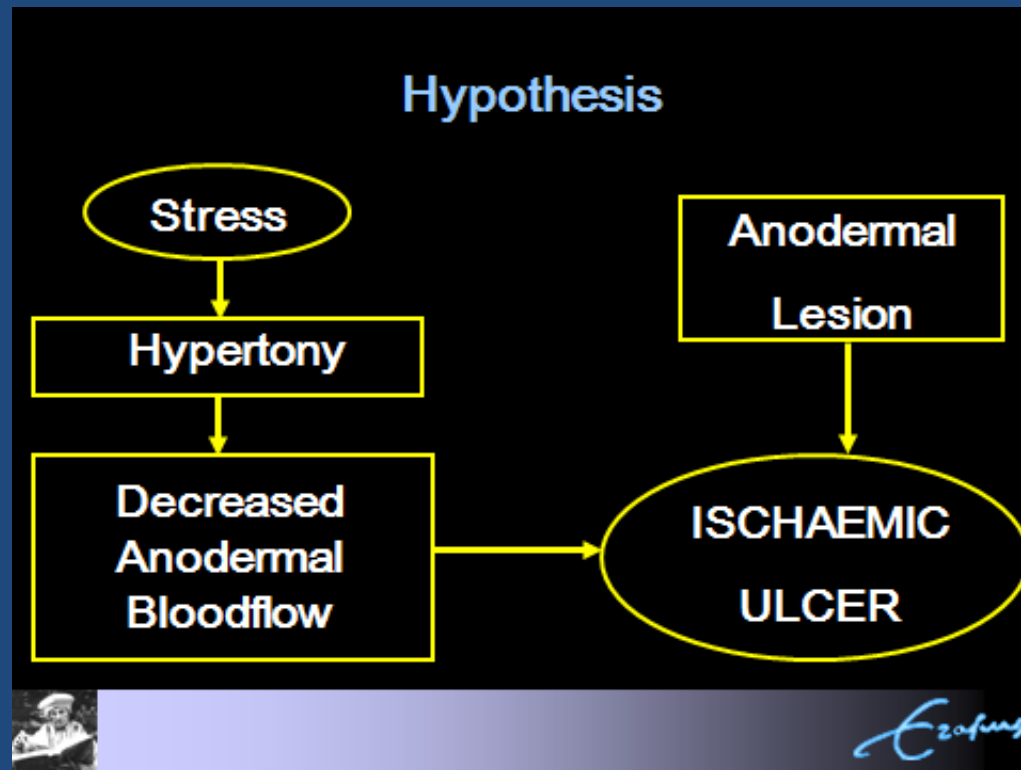
*British Journal of Surgery* 1996, 83,63-65

## **Ischaemic nature of anal fissure**

W. R. SCHOUTEN, J. W. B R I E L , J . J . A. AUWERDA and E. J . R. D E GRAAF



# Fissuur



# Anal dilatation



1838 (Recamier)

- Uncontrolled
- IAS disruption
- Continence disturbances: up to 50%

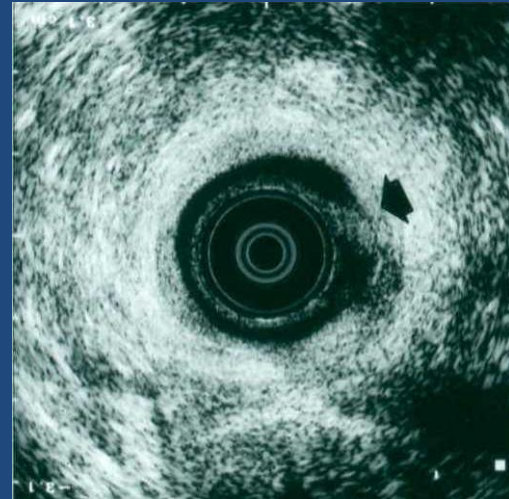
# Anal dilatation

Ram et al., RCT (2007)

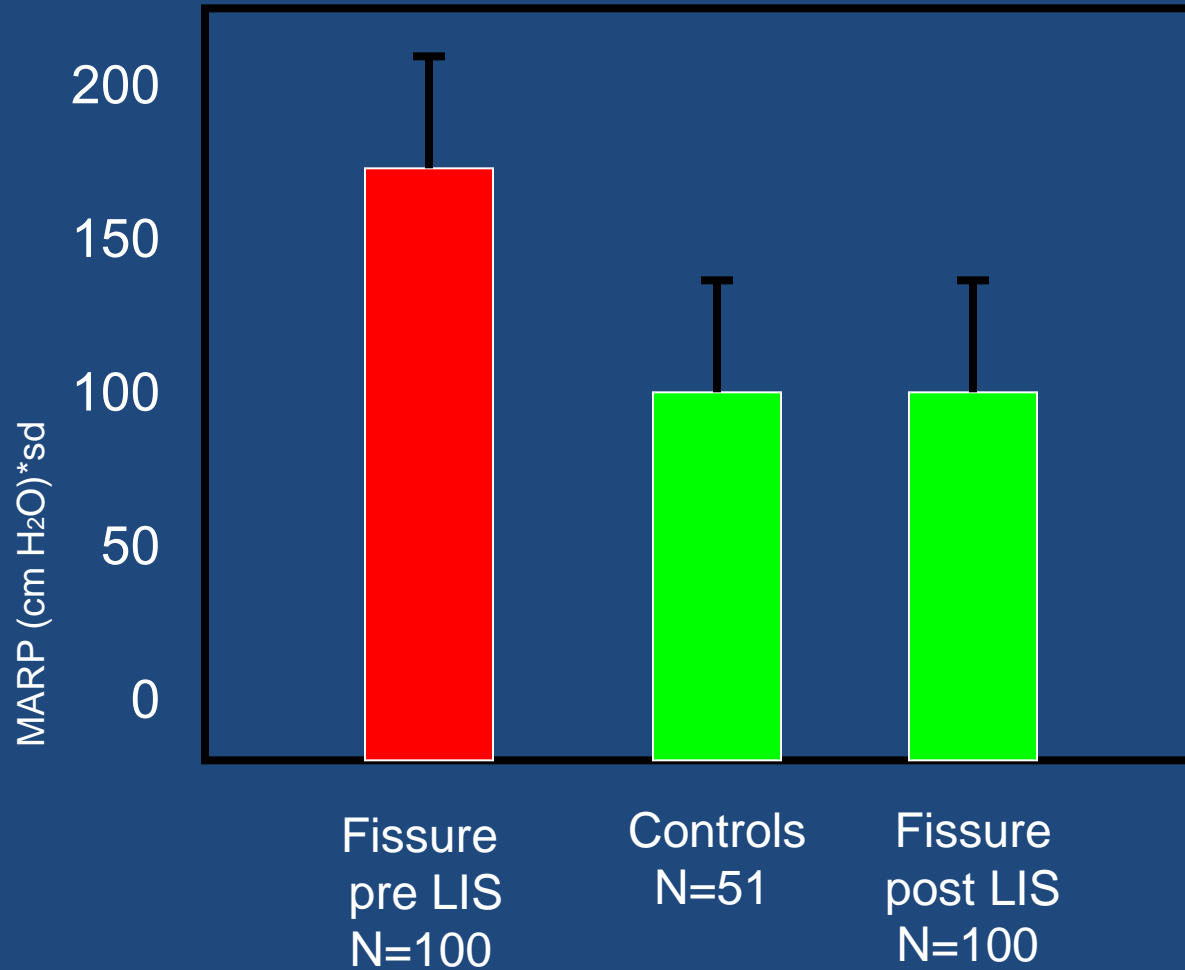
Follow-up: 1 year

	AD	LIS
No. patients	55	53
Minor incontinence	15%	4%
Major incontinence	0%	0%
Recurrence	11%	2%

# Lateral internal sphincterotomy

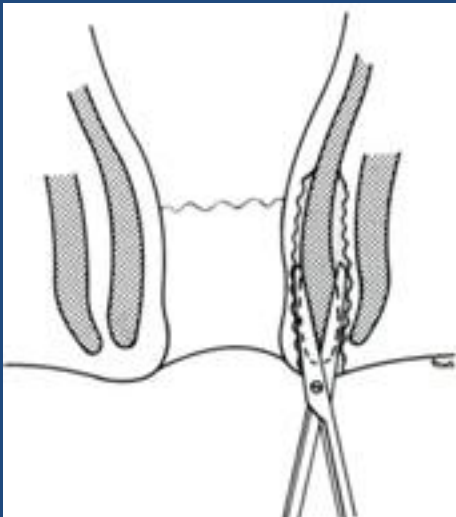


# Anal Resting Pressure



# Lateral internal sphincterotomy

- Healing rate > 90%
- Recurrence rate: very low
- Almost immediate pain relief
- Patient satisfaction: high



Continence disturbances ?

# Long-term continence disturbance after LIS

Garg et al. (2012)

Systematic review

342 studies screened

22 included (n>4500)

2 years or more after LIS

# Long-term continence disturbance after LIS

Overall continence disturbance	14%
Incontinence for gas	9%
Soiling	6%
Incontinence for stool	<1%



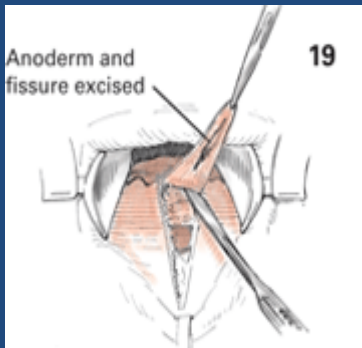
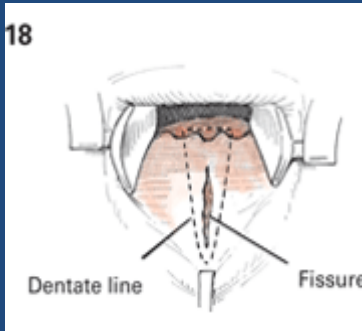
# Long-term continence disturbance after LIS



## Risk factors

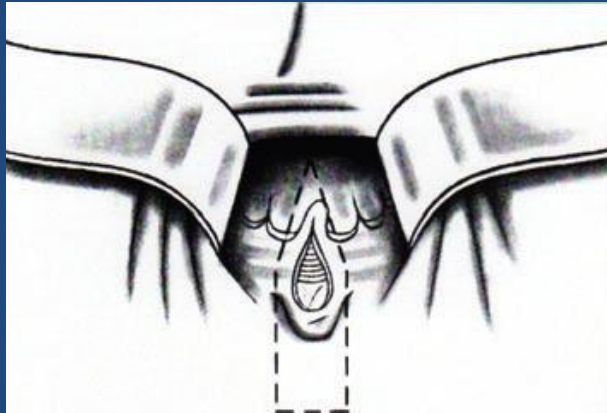
- Female gender
- History of vaginal delivery
- Anterior fissure

# Alternative



- Fissurectomy with or without anoplasty
- Fissurectomy with chemical sphincterotomy

# Fissurectomy with anoplasty



Abramowitz et al. (2013)

N= 246

Follow-up: [?] 1 year

Healing: 100%

Recurrence: 0%

De novo cont. disturbances: 7%



# Fissurectomy with ISDN

Engel et al. (2002)



- N=17
- Follow-up: > 2 years
- Healing: 100%
- Recurrence: 0%
- Continence: ?

# Fissuur

## Relaxatie interne sfincter

- Exogenous NO donors
  - Glyceryl Trinitrate (GTN)
  - Isosorbide Dinitrate (ISDN)
- Calciumblockers
  - Diltiazem
  - Nifedipine
- Botulinum toxin
  - Botox

# GTN vs Diltiazem

Sajid et al. (2011)

Diltiazem

Systematic review

7 RCT's

481 patients

Lower incidence side effects

Lower recurrence

# Medicamenteuze Behandeling Fissuur

GTN, ISDN, Diltiazem

Botox

Healing rate

Healing rate

$\pm 60\%$

$\pm 75\%$

# Botox

Follow-up > 3 years

Recurrence

40-50%

Minguez et al. Gastroenterology 2002

Arroyo et al. Am J Surg 2005





# Fissure treatment

First step

Second step

Chemical sphincterotomy

Surgical treatment

- Men, high pressure: LIS
- Female, normal pressure: fissurectomy