



coloproctology

st. gallen & rorschach

Hämorrhoiden – *New Techniques*



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Aims

Questions answered:

- Is there something really **new**?
- What are the **new procedures** and how are the **results**?
- **New tools** worthwhile?
- What's the "**state of the art**" today?





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Methods

Research:

- Internet
- Pubmed



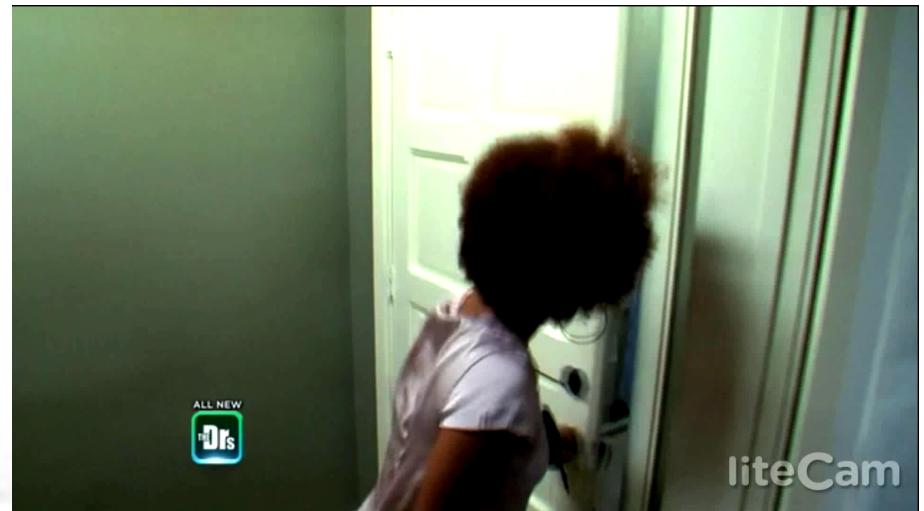


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Internet ?

Dr. Rosenfeld....





Internet

www.google.com

- „new procedure hemorrhoids“



1'740'000 hits

No real news + Dr. Rosenfeld

- „new treatment hemorrhoids“



1'110'000 hits

No real news + Dr. Rosenfeld

- „new therapy hemorrhoids“



1'200'000 hits

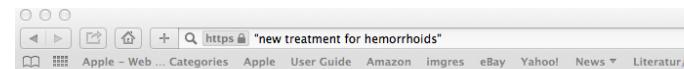
No real news + Dr. Rosenfeld



Internet

www.google.com

- Exact phrase „new treatment for hemorrhoids“:
- 13'600 hits
- **HET** procedure
- *CRH O'Regan System™*: rubberband...
- (Dr. Rosenfeld)



[PDF] a new option in early grades of bleeding hemorrhoids
www.bmjjournals.org/bmj/2005/10689-08.pdf [Diese Seite übersetzen](#)
von PJ Gupta - Ähnliche Artikel
for hemorrhoids. Dis Colon Rectum 1993; 36: 958—961. 43. Infrared coagulation: a new treatment for hemorrhoids. Dis Colon Rectum 1981; 24: 602—605. 44.

Anal Surgery for Hemorrhoids - Medscape Reference
emedicine.medscape.com/article/1582358-overview [Diese Seite übersetzen](#)
16.07.2013 - Anal Surgery for Hemorrhoids. Hemorrhoidal cushions are anal cushions of tissue composed of blood vessels, smooth muscle, and connective ...

New ambulatory treatment with radiofrequency for internal ...
www.em-consulte.com/en/article/156231 [Diese Seite übersetzen](#)
Infrared coagulation: a new treatment for hemorrhoids. Dis Colon Rectum 1981; 24: 602-5. Click here to see the Library]. The bleeding is probably due to the ...

The Ascrs Textbook of Colon And Rectal Surgery
<https://books.google.ch/books?isbn=0387248463> [Diese Seite übersetzen](#)
James W. Fleshman, Bruce G. Wolff, American Society of Colon and Rectal Surgeons - 2007 - Medical
Leicester RJ, Nicholls RJ, Mann CV. Infrared coagulation: a new treatment for hemorrhoids. Dis Colon Rectum 1981;24(8):602-605. 66. Dennison A, Whiston RJ ...

Surgical Treatment of Haemorrhoids
<https://books.google.ch/books?isbn=1852334967> [Diese Seite übersetzen](#)
Charles V. Mann - 2002 - Medical
Dis Colon Rectum 37(1):37-41 Leicester RJ, Nicholls RJ, Mann CV (1981) Infrared coagulation: a new treatment for hemorrhoids. Dis Colon Rectum 24(8): ...

Surgical Treatment of Hemorrhoids
<https://books.google.ch/books?isbn=1848003145> [Diese Seite übersetzen](#)
Indru Khubchandani, Nina Paoneesa, Khawaja Azimuddin - 2008 - Medical
... C. Infrared coagulation: a new treatment for hemorrhoids. Dis Colon Rectum 1981; 24:602—605 Iaspers D. Doppler sonographic diagnostic and treatment ...

Colon and Rectal Surgery - Seite 251 - Google Books-Ergebnis...
<https://books.google.ch/books?isbn=0781740436> [Diese Seite übersetzen](#)
Marvin L. Corman - 2005 - Medical
Infrared coagulation: a 174. new treatment for hemorrhoids. Dis Colon Rectum 1981; 24:602. 149. Lewis AAM, Rogers HS, Leighton M. Trial of maximal anal ...



Pubmed

The screenshot shows a PubMed search results page. The search query is '(hemorrhoids) AND new treatment'. The results are sorted by Recently Added, with 20 items per page. The first result is a study comparing rivaroxaban and dabigatran therapy for persistent atrial fibrillation.

Display Settings: Summary, 20 per page, Sorted by Recently Added

Results: 1 to 20 of 459 Selected: 2

1. [Comparison of the safety of rivaroxaban versus dabigatran therapy in patients with persistent atrial fibrillation]. Gorzelak-Pabiś P, Duraj I, Szlagowska L, Ciastkowska A, Broncel M. Pol Merkur Lekarski. 2014 Nov;37(221):261-4. Polish. PMID: 25546985 [PubMed - in process] Related citations

Search for „news“:

- „hemorrhoids“ /“new treatment“: 459 manuscripts:
- **SEC:** Submucosal electrocoagulation for prolapsed hemorrhoids¹
- **Emborrhoid:** After insertion of a 5F catheter into the inferior mesenteric artery.....²
- **Hemorpex system:** HAL ohne Doppler....³
- **Laser...**⁴
- **HAL-RAR** (Hemorrhoid artery ligation – Recto anal repair) oder THD...⁵
- **False dissemination** of "treatment of hemorrhoids by acupuncture of...⁶

[1] Yada et al. *Acta Med Okayama*. 2010 [2] Vidal V et al. *Cardiovasc Intervent Radiol*. 2015

[3] Iachino C et al. *Cir Esp*. 2009 [4] Giamundo P et al. *Dis Colon Rectum*. 2011

[5] Walega P et al. *ScientificWorldJournal*. 2012 [6] Huang YM, Huang LX. *Zhen Ci Yan Jiu*. 2011



Pubmed

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Search for „news“:

- However **evidence** for most new procedures **low...**
- A systematic review on the options for treatment up to Dec. 2012¹:
 - HAL/(RAR)
 - Segment resection (Milligan/Ferguson)
 - Stapled hemorrhoidopexy (Longo)
- ⇒ Conventional surgical techniques better long-term results.
- ⇒ Despite good results postoperatively, PPH/HAL-RAR have not shown consistent longterm...
- ⇒ Concurring reviews from Altomare and Zindel^{2,3}

[1] Cerato MM et al. *Arq Bras Cir Dig.* 2014 [2] Altomare DF et al. *Nat Rev Gastroenterol Hepatol.* 2013

[3] Zindel J et al. *Ther Umsch.* 2014



New procedures: HET

HET Bipolar Systems:

- New device with „mouth“ to coagulate
- Outpatient clinic/Office procedure
- **Only one** case series published so far¹:
 - 23 patients (half I; half II° hemorrhoids)
 - Sedation at end of colonoscopy or no sedation; nothing else; well tolerated
 - At 11.5 months: No recurrence (bleeding/prolapse)
- So easy; virtually **painfree; quick**
 - ⇒ Alternative to rubberbands? Costs?



.....total time required to treat
all 3 hemorrhoidal branches was 37.3 +/- 8.7 seconds.

[1] Kantsevoy SV, Bitner M. Gastrointest Endosc. 2013.



New procedures: SEC

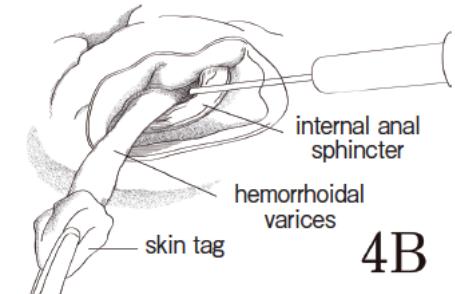


Fig. 4 The internal anal sphincter and hemorrhoidal varices are separated with an electric knife.

SEC (Submucosal electrocoagulation) :

- Bring out the internal hemorrhoidal vessels without cutting in the anal canal
- One large cases series¹:
 - 403; III/IV°
 - retrospective; quality?; no structured follow-up
 - Recurrence 3 (0.7%)
 - Woundhealing 4 – 12 weeks
 - Low complication-rate (no reintervention in first 30 days)
- ⇒ Interesting, but data can't be really trusted

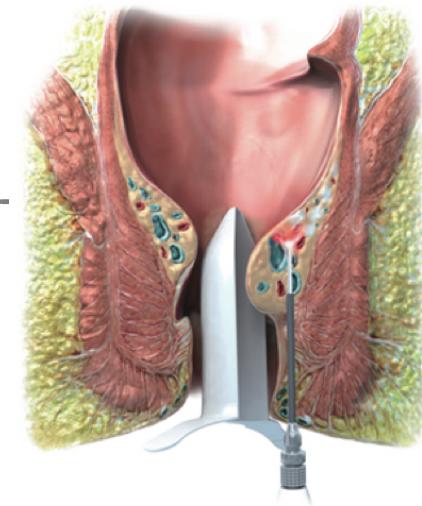
Table 1 Patients' operative characteristics, n = 403

Mean age (yrs)	60.4 (23-89)
Male: female ratio	192 : 211
Hemorrhoid degree (Grade 3/4)	334/69
Mean operation time for a hemorrhoid (min)	4.8 (2-14)
Mean duration of hospitalization (days)	3.9 (1-9)
Postoperative return to job (days)	7.1 (1-15)

[1] Yada et al. Acta Med Okayama. 2010



New procedures: Laser



Hemorrhoidal laser procedure(HeLP):

- A diode laser fiber is inserted in hemorrhoidal cushion and energy applied¹...
- Giamundo proposes a duplex guided positioning
- 15 month follow-up: 97 patients with II or III° with **minimal or moderate prolapse**³
 - Recurrence: **5%**
 - Office procedure, no general/spinal anesthesia
 - But see results in table....
- Is more expensive and more successful than rubberband ligation⁴
(RCT 30 vs 30: reduction 1°: 40/80%)
- ⇒ So alternative treatment to rubberbands?

[1] Karahaliloglu A. *Coloproctology* 2010 [2] Giamundo P et al. *Surg Endosc.* 2011

[3] Crea N et al. *Am J Surg.* 2014. [4] Giamundo P et al. *Dis Colon Rectum.* 2011



Table 1.

Pre- and postoperative symptoms and HD grade of the patients who underwent the HeLP

Symptoms (any grade of intensity)	Preoperative (97 pts), n (%)	1 mo (97 pts), n (%)	3 mo (97 pts), n (%)	P *	6 mo (97 pts), n (%)	1 y (68 pts), n (%)	2 y (33 pts), n (%)	P †
Bleeding	63 (65)	25 (25.7)	16 (16.5)	<.0001	14 (14.4)	9 (13.2)	4 (12.1)	1
Pain	27 (27.8)	13 (13.4)	6 (6.1)	<.0001	5 (5.1)	3 (4.4)	2 (6)	1
Itching	21 (21.6)	9 (9.3)	6 (6.2)	.0037	4 (4.1)	3 (4.4)	2 (6)	1
HAS	31 (32)	8 (8.2)	7 (7.2)	<.0001	6 (6.1)	4 (5.8)	2 (6)	1
HD grade				<.0001				.81
First	0	39 (40.2)	46 (47.4)		45 (46.4)	35 (51.5)	16 (48.5)	
Second	51 (52.5)	45 (46.4)	44 (45.4)		45 (46.4)	28 (41.2)	13 (39.5)	
Third	46 (47.5)	13 (13.4)	7 (7.2)		7 (7.2)	5 (7.3)	4 (12)	

HAS = hemorrhoidal acute syndrome; HD = hemorrhoidal disease; HeLP = hemorrhoidal laser procedure; pts = patients.

* Between preoperative data and 3 months postoperatively.

† Between 6 and 24 months postoperatively.

Table options ▾





New procedures HAL-RAR

HAL

- Hemorrhoidal artery ligation
 - Introduced by Morinaga 1995¹
 - Different tools and providers
 - Ligation of strong arteries in the lower rectum
- Reduction of blood supply to the hemorrhoids
- Detection using a doppler probe
 - Ideally two “circles”
 - 6 to 10 “z”-ligations; 5/8 suture; “no main arteries”
 - Symptom-regression correlates with no. of ligatures²



[1] Morinaga K et al. Am J Gastroenterol. 1995 [2] Roka S et al. Eur Surg. 2013



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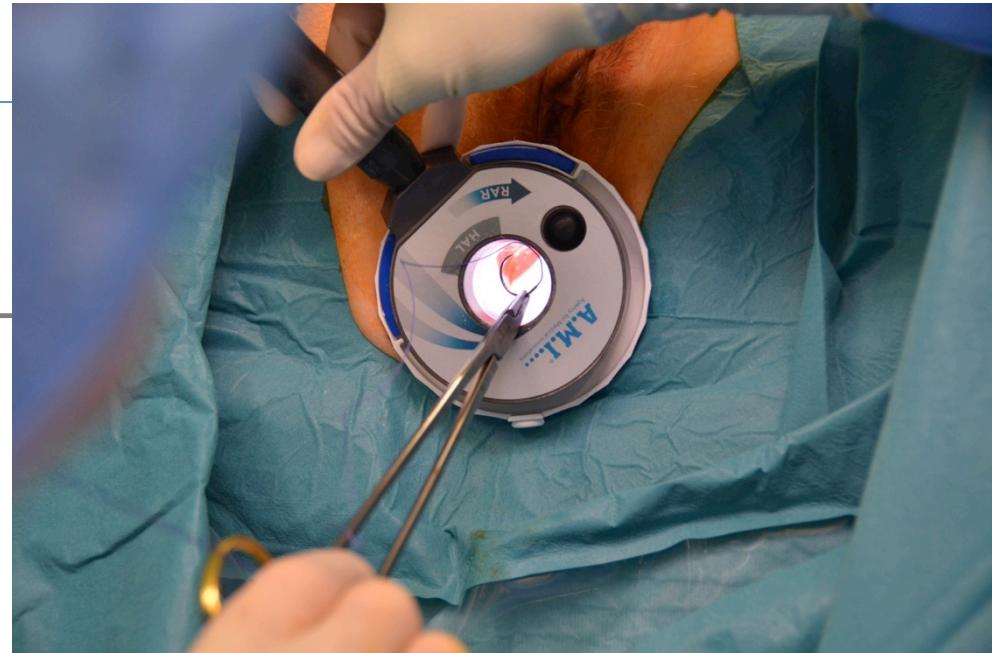
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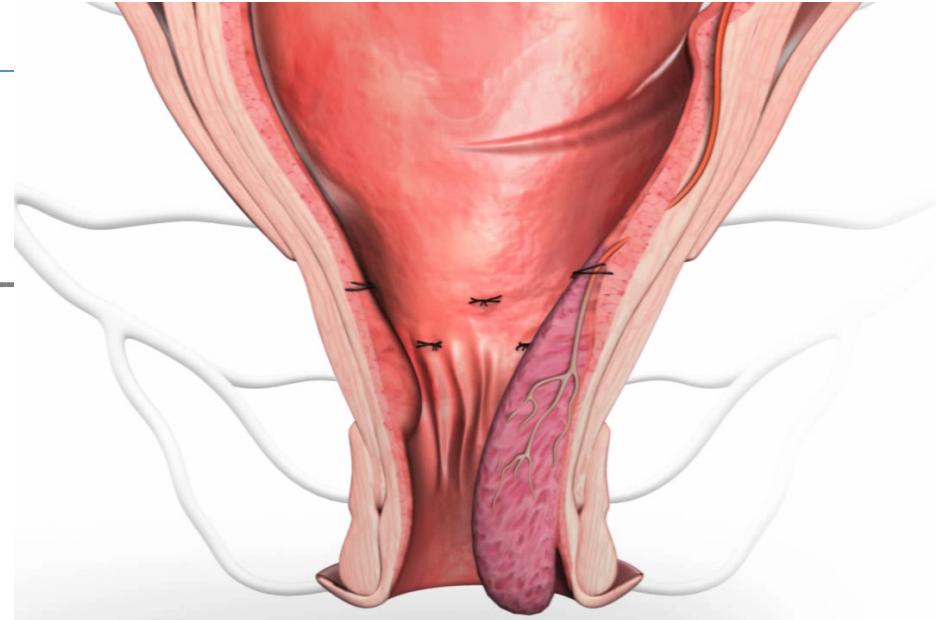


[1] Morinaga K et al. Am J Gastroenterol. 1995 [2] Roka S et al. Eur Surg. 2013



New Procedures HAL- RAR

HAL-RAR



- recto anal repair
- Primary „HAL“ is conducted
- Biggest prolabsing cushions → RAR
- 3(2-4) „running suture“ from cranial to distal
- 5mm above linea dentata „stop“
- Lifting distal tissue by tying to the proximal „entry point“ of the suture

[1] Scheyer M. *Gastroenterol Clin Biol.* 2008 [2] Roka S et al. *Eur Surg.* 2013



HAL-RAR: review of the literature

h(a)emorrhoid(s)
5434 hits

„Limits“:
part of title;
CT or review;
last 10 years

427 hits

„Exclusion“ by analysis:
title; abstract

41 hits (1 double-pub.):
40 relevant publications

h. AND
„specific
terms“:
16

- Terms for **HAL**:

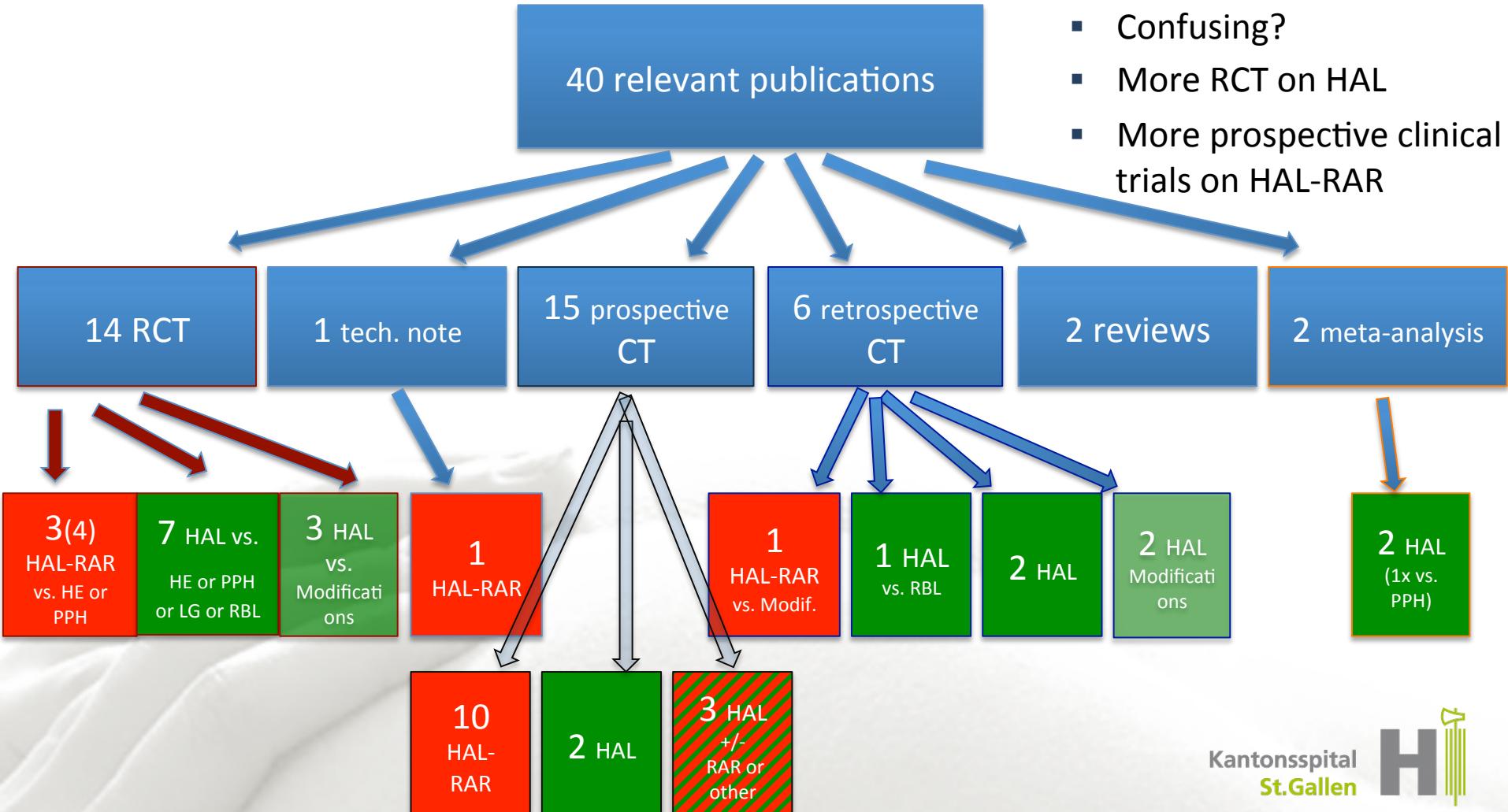
- Hemorrhoidal arterial ligation(HAL)
- Distal doppler-guided dearterialisation(DDD)
- Transanal hemorrhoidal dearterialisation(THD)
- Ligation of hemorrhoids

- Terms for **HAL-RAR**:

- Recto anal repair(RAR)
- Mucopexy
- Anopexy
- Doppler guided recto anal repair (DG-RAR)



Method: review of the literature





Discussion: HAL and HAL-RAR; what is known?

HAL:

- **Pain** ↓ + quicker return to normal activities(3-4days)^{1,2}
- **Effective in II° (>90%)^{3,4}**
- **Recurrent prolapses in III/IV°^{3,4}** ↑

HAL-RAR:

- **Effective in (II)III° > 92%^{5,6}**
- **Recurrent prolapses in IV° ↑ (18-26%)^{5,7}**

HAL & HAL-RAR:

- **No resection; complication rates ↓ (5-8%)^{4,5}**
- **Long term sequelae ↓ (Incontinence 0-1%; Stenosis 0-1%)^{4,5}**
- **Can be redone without problems or elevated risk⁴**

[1] Sajid M et al. *Techniques in coloproctology* 2012 [2] Bursics A et al. *International journal of colorectal disease* 2004
[3] Walega P et al. *Surgical endoscopy* 2008 [4] Giordano P et al. *Diseases of the colon and rectum* 2009
[5] Roka S et al. *European surgery* 2013 [6] Zagriadskii EA. *Khirurgiia* 2013
[7] Lucarelli P et al. *Annals of the Royal College of Surgeons of England* 2013.

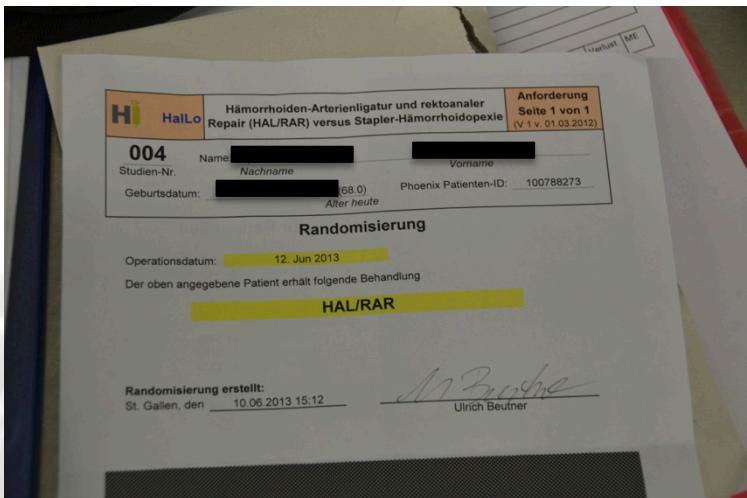


Discussion: HAL and HAL-RAR; what is *not* known?

- What's better for III° hemorrhoids?
 - HAL-RAR (probably less pain than PPH/Ligasure)
 - PPH (probably less recurrences than HAL-RAR)
 - HE (Ligasure) (probably best treatment for „prolapse“: but open wounds)



Randomized controlled trial: HalLo(recruiting since 1.5 years)



Primary endpoint: pain

Secondary: complications/recurrence

42 patients/arm; Follow-up 4 weeks; 12/24 months



New devices: Ligasure

- 2 Metaanalysis HE against HE with Ligasure:

	Studies	Patients	Less Pain	Success
Nienhuijs. ¹	12	1142	Ligasure (-2 on VAS) Significant at 1 day/week; less diff. 2 weeks	equal
Milito ²	8	608	Ligasure $p<0.001$	Better in Ligasure (?) $p<0.024$ (stenosis/relapse)

- HE mit Ligasure vs. Stapler:(Metaanalysis)

	Studies	Patients	Less Pain	Success
Yang ³	5	397	equal ($p=0.23$)	Ligasure (1.2 vs. 7.5%) $P=0.003$

- ⇒ Ligasure is equal to HE in respect of Success and to PPH in respect of pain
- ⇒ Ligasure is better than HE in respect of pain and to PPH in respect of success

[1] Nienhuijs S, de Hingh I. *Cochrane Database Syst Rev*. 2009 [2] Milito G et al. *Colorectal Dis*. 2010

[3] Yang J et al. *World J Gastroenterol*. 2013



New devices: Staplers



CPH34 HV High Volume Stapled Hemorrhoidopexy

Hemorrhoidopexy with new staplers:

- Old PPH 03 is as good as „Chinese“(needs more hemostasis)¹
- Newer stapler with detachable anvil needs less hemostasis and resects more and else?²
- Big is beautiful (**really?**) no RCT for high volume stapler³
(but why do a STARR on everybody?)

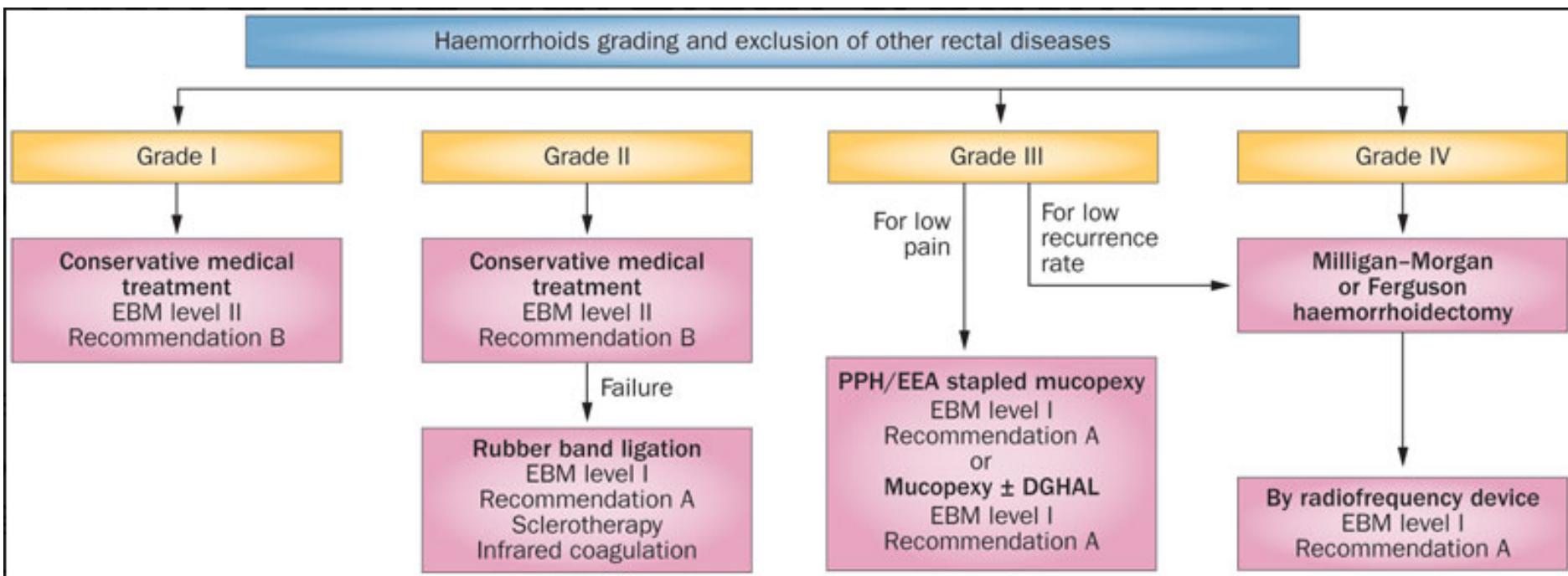
⇒ So no real, proved improvement yet .

[1] Dindo D, Hahnloser D. *Colorectal Dis.* 2013 [2] Giuratrabocchetta S et al. *Colorectal Dis.* 2013

[3] Reboa G et al. *Surg Res Pract.* 2014



State of the art: Whats known?



[1] Altomare DF et al. *Nat Rev Gastroenterol Hepatol*. 2013



State of the art: Possible algorithm for hemorrhoidal treatment

I°

RBL or topic treatment

II°

HAL/or RBL if small

III°

HAL-RAR or PPH; with skin tags HE-Ligasure

IV°

HE-Ligasure

High-risk
patients:
HAL-RAR?

Recurrence
(might) 

Risk 



Conclusion

Questions answered?:

- Something really **new?** “Evidence low: HET/SEC/Diode-Laser”
- What are the **new procedures** and how are the **results?** “HAL-RAR: o.k.”
- **New tools** worthwhile? “Ligasure: yes; staplers: ? ”
- What’s the “**state of the art**” today?

“HE: less recurrence; Pexy&HAL-RAR: less pain”

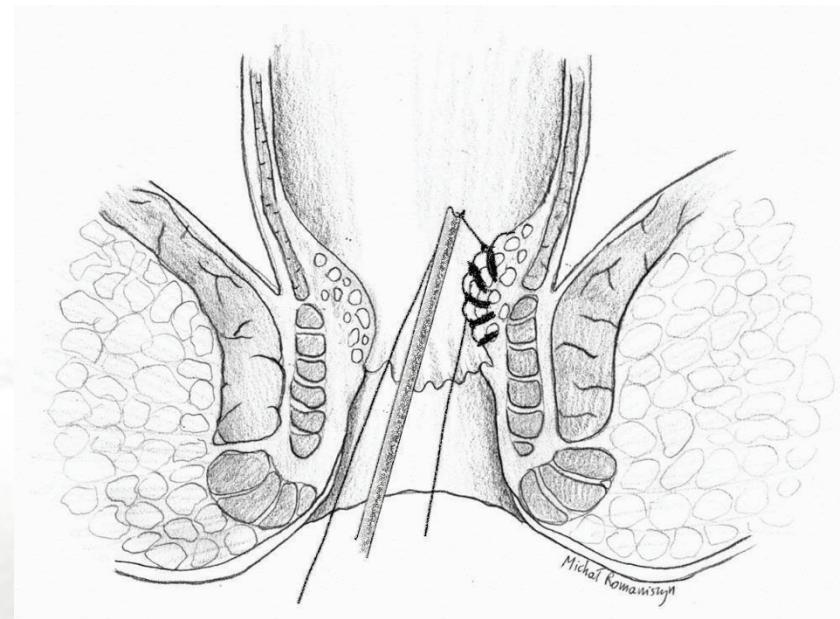




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Thank you for your attention!



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