# When is definitive surgery for peptic ulcer diathesis appropriate and what procedure.



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## Pavlov



## Dragstedt



#### Anterior Vagus

#### **Posterior Vagus**





Andre Laterjet French anatomist 1877–1947



## Nobel Prize 2005



**Barry Marshall** 

**Robin Warren** 



Becoming increasingly frustrated with the negative response

nse to my work I realized I had to have an animal model and decided to use myself. He did not discuss it with the ethics committee or his wife

When I came home with my biopsy results showing colonization and classic histological damage to my stomach, Adrienne suggested it was time to treat myself

I had proved my point.

Peptic Ulcer Disease - Paradigm shift in management

#### *H pylori* eradication = Surgical vagotomy





# The main aim in Peptic Ulcer surgery

• Is to

- treat the life threatening complication

- Is not
  - to effect surgical "cure" of the diathesis
    - a vagotomy and drainage procedure
    - gastric resection

## Its all about the complications

# **Peptic Ulcer Epidemiology**

**Peptic ulcer Complications** 

Hemorrhage 19.4–57.0 per 100,000

- Perforation 3.8–14 per 100,000
- **PUD** admissions
- 29.9% reduction
  - 222,601in 1993156,108in 2006

Wang R et al Trends and Outcomes of Hospitalizations for Peptic Ulcer Disease in the United States, 1993 to 2006. Annals of Surgery 2010

#### **Dutch Study**



Groenen et al Candian Journal of Gastroenterology 2009

### Developments in treatment modalities













Acid suppression	A meta-analyses	
	ODDS RATIO	p value
Reduction in rebleeding	0.727	< 0.001
surgery	0.707	< 0.001
mortality	1.140	0.49

Selby et al Alm Pharm Ther 2000 Barkum et al NEJM 2012

# Endo Therapy

#### Inject



Easy Perforate the channel Safest Adrenaline dose Histocryl tricky Contact Non Contact Easy Safe Energy setting is key

**Burn** 







Three types Size and prongs Release mechanisms

#### Endoscopic therapies – a meta-analyses (33 trials)

Reduction in:

ODDS RATIO

- rebleeding 0.38
- surgery 0.36
- mortality 0.55

#### Cooke DJ Gastroenterology 1992

#### Endoscopic therapy and omeprazole treatment

	No	rebleeding	surgery	mortality
Lau et al (NEJM 2	2000)			
Treatment	120	8	3	5
Control	120	27	9	9
Javid et al (Am J	Med 2001)			
Treatment	82	6	2	1
Control	84	18	7	2
		P = < 0.001	NS	NS

## prevention of recurrent bleeding - H pylori eradication

Antisecretion therapy	H pylori eradication
(n=41)	(n=84)

<ul> <li>Ulcer relapse</li> </ul>	13 (31.7%)	6 (7.1%)	p< 0.001

rebleeding

5 (12.1%)

2 (2.3%)

Santander et al AJG 1996



#### Less operations

- endoscopic therapies
- acid suppression pH >4 PPI's
- endoscopic therapy combined with PPI's
- •H pylori eradication

## **Perforated Peptic Ulcers**

- simple patch closure *H pylori* eradication
   > 90% cure rate
- non-operative treatment *H pylori* eradication ?

• laparoscopic patch closure ?





## **Perforated Peptic Ulcers**

## Simple patch closure

- Open versus laparoscopic repair - randomised trails

Laparoscopic approach:

- Less pain and respiratory infection
- shorter hospital stay
- earlier return to work

Marginal benefits

#### **Trends in Diagnosis and Surgical Management of**

**Patients with Perforated Peptic Ulcer** 



114 over 6 years Norway

J Gastrointest Surg 2011

## **Gastric outlet obstruction**

#### questions

- Does *H pylori* eradication change the natural history?
  - conflicting reports
- Are the results of pyloric dilatation improved by *Hp* eradication?

- possibly

- Is stenting better than dilitation
  - probabley
- When required is a definitive operation still necessary ?





## **Technique:**



Bilateral head-type Proximal end bare Covered shaft and distal head



Proximal head-type Proximal end bare Covered shaft, no distal head



15 patients have had retrievable SEMS placed since Oct 2010 6 Females, 9 Males Average age 53.8 yrs (range 27 – 77 yrs)



#### Groote Schuur Experience

	Pathology	Stent removal	Outcome successful	Further Mx	Follow -up
1.	PUD - GOO	Yes	No	Pyloroplasty	18/12
2.	PUD - GOO	Yes (Prox. migration)	Νο	Pyloroplasty	6/12
3.	PUD - GOO	Yes	Yes	-	14/12
4.	PUD - GOO	Yes	Yes	-	14/12
5.	PUD – GOO	Yes	Yes	-	18/12
6.	PUD - GOO	Stent stuck	Stent stuck	Pyloroplasty	1/12
7.	PUD - GOO	Yes	Νο	Pyloroplasty	7/12

Gastric outlet obstruction

Surgical management after *H pylori* eradication

- " burned out ulcers" with fibrosis
  - pyloroplasty (Finney, Jaboulay)



#### **Peptic Ulcer Disease Surgery**

#### **Finney Pyloroplasty**



This is the authors preferred operation for burnt out peptic ulcer with gastric outlet obstruction as it creates a wider posterior and anterior lumen.

The recalcitrant ulcer

#### Surgical management after *H pylori* eradication

Limited excision "pylorectomy"

- Vagotomy & Antrectomy ?



**Peptic Ulcer Disease Surgery** 

**Bleeding Peptic Ulcer** 

#### **Duodenal ulcers**

#### under run vessel - pyloroplasty



#### Gastric ulcer

- gastrotomy under run vessel
- excision
- gastrectomy large ulcers

## **Distal Feeding Access**

#### Peptic Ulcer Disease Surgery



#### **Treatment of complicated peptic ulcer**

Practice in United Kingdom – include vagotomy ?

#### Survey of 697 surgeons

	Perforated ulcers	Bleeding ulcers	
	%	%	
<ul> <li>always</li> </ul>	0.3 (0.6)	2.6 (2.9)	
• usual	2.8 (1.2)	15.6 (11.8)	
<ul> <li>occasional</li> </ul>	42.8(46.5)	42.5 (44.1)	
• never	54.5(51.8)	39.3 (41.2)	

( ) upper GI surgeons

Gilliam et al Br J Surg 2003

# Role of surgery

less emergency operations (bleeding ulcers)

• definitive operations -"something of the past"

• mostly - "damage control"/ alleviating obstruction







#### **A Requiem for Vagotomy**

- Despite the last ditch efforts of surgeons

" I predict that vagotomy for ulcers will soon go the same way of vagotomy for tabes: made obsolete by the conquest of spiral organisms"

"Perhaps Laterjet is now laughing at us as peptic ulcer surgeons joining the ranks of the unemployed"

John Alexander- Williams BMJ 1991