


ACG ANNUAL SCIENTIFIC MEETING AND POSTGRADUATE COURSE • OCTOBER 23-28, 2009



**Pouchitis: How to Treat Recurrent and Refractory Disease**

**Darrell S. Pardi, MD, MSc, FACC**  
*Consultant: Salix*  
*Grant/Research Support: AstraZeneca, Ocera, Salix*

ACG Postgraduate Course • Saturday and Sunday, October 24-25, 2009

---

---

---

---

---

---

---

---

**Pouchitis: How to Treat Recurrent Disease**

**Darrell S. Pardi, MD, MSc, FACC**  
Mayo Clinic Rochester

---

---

---

---

---

---

---

---

**Disclosure**

- Research
  - Astra Zeneca, Procter & Gamble, Salix, Ocera
- Consulting
  - Salix
  - Biobalance

---

---

---

---

---

---

---

---

## Outline

- Anatomy
- Outcomes after IPAA
- Pouchitis
- Differential Diagnosis
- Treatment

---

---

---

---

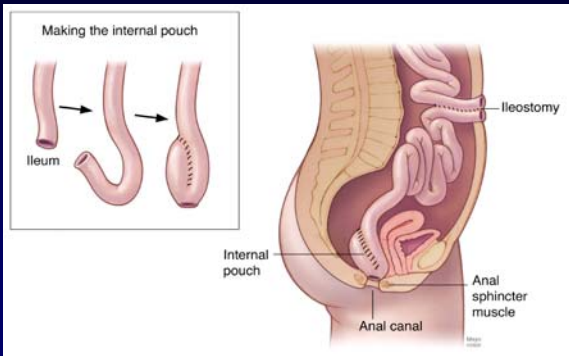
---

---

---

---

## Two Stage IPAA Technique



---

---

---

---

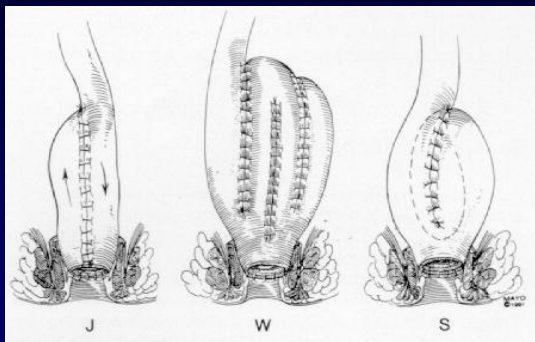
---

---

---

---

## Types of Ileal Pouches



---

---

---

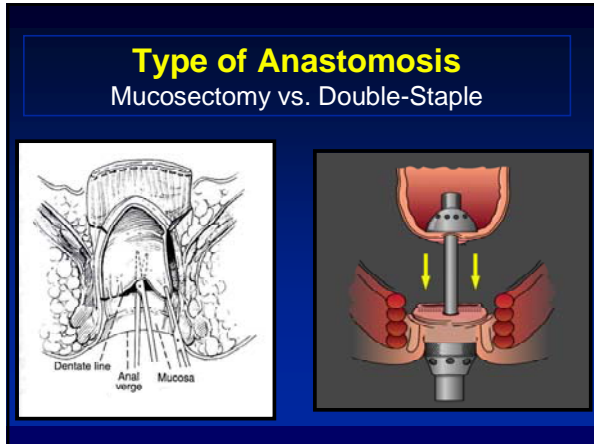
---

---

---

---

---



---

---

---

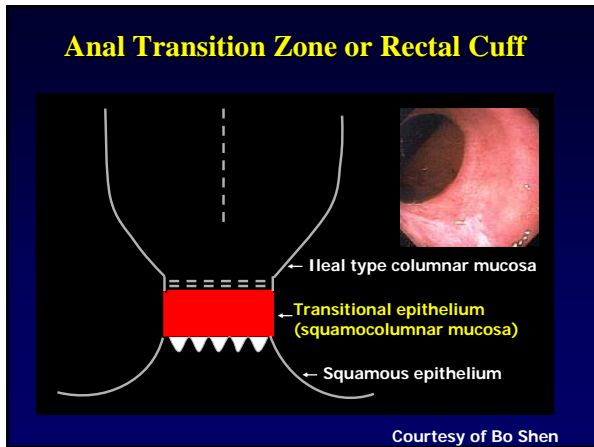
---

---

---

---

---



---

---

---

---

---

---

---

---

### Outcomes after IPAA

• Pelvic sepsis	10%
• Strictures	9%
• Fistulas	6%
• Sexual dysfunction	4%
• Pouch Failure	7%

Huetting Dig Surg 2005  
Meta-analysis of 43 studies

---

---

---

---

---

---

---

---

### Outcomes after IPAA

- Mild FI (day/night) 17% / 13%
- Severe FI 4% / 5%
- Pouchitis 20%
- SBO 13%
- Stool frequency 6-8/d

Huetting Dig Surg 2005  
Meta-analysis of 43 studies

---

---

---

---

---

---

---

---

### Bowel function after IPAA

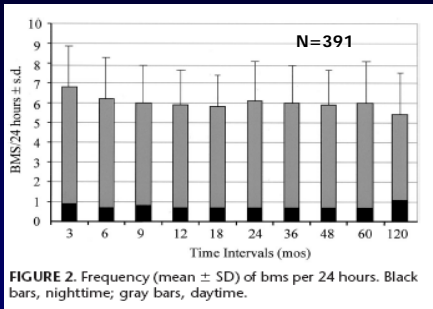


FIGURE 2. Frequency (mean  $\pm$  SD) of bms per 24 hours. Black bars, nighttime; gray bars, daytime.

6 BM daytime; 1 BM nocturnal

Annals of Surgery 2003  
University of Chicago

---

---

---

---

---

---

---

---

### Long term Follow up after IPAA

- 1885 IPAA over 20 year period
- Mean follow up 11 years
- Pouch failure 4% 5 yrs, 8% 20 yrs
- Mean BM (day / night)
  - 5.7 / 1.5 at 1 yr, 6.4 / 2.0 at 20 yrs
- Significant fecal incontinence
  - 5% / 12% at 1 yr; 11% / 21% at 20 yrs

Hahnloser Br J Surg 2007 (Mayo)

---

---

---

---

---

---

---

---

### Quality of Life after IPAA

- QOL improves after IPAA
- QOL tends to be excellent after IPAA
  - Similar to healthy cohorts
- QOL correlated with functional outcomes
- QOL and functional outcomes related to age in some studies, but not all

Carmon Colorect Dis 2003    Hahnloser Ann Surg 2004  
Richards Colorect Dis 2001    Hahnloser Br J Surg 2007  
Berndtsson Colorect Dis 2003    Weinryb Am J Surg 2003

---

---

---

---

---

---

---

---

### Pouchitis

- Clinical Features
- Definitions
- Epidemiology
- Risk Factors
- Differential Diagnosis
- Testing
- Treatment

---

---

---

---

---

---

---

---

### Clinical Features

- ↑ stool frequency, liquidity
- Urgency, tenesmus
- Cramps, incontinence
- Less commonly fever, bleeding, EIM

---

---

---

---

---

---

---

---

### Pouchitis Definitions

- **Duration** (acute, chronic)
- **Pattern** (infrequent, relapsing, continuous)
- **Response to antibiotics** (responsive, dependent, refractory)

---

---

---

---

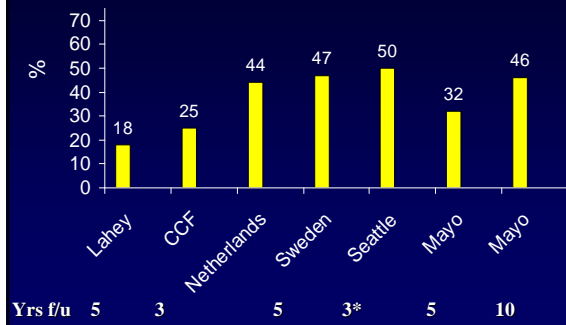
---

---

---

---

### Cumulative Risk of Pouchitis



---

---

---

---

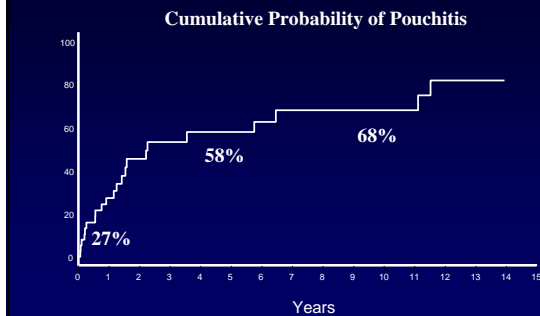
---

---

---

---

### Olmsted County Data, through 2005



---

---

---

---

---

---

---

---

### Risk Factors for Pouchitis

- Extensive or severe UC
- EIM, particularly PSC
- Backwash Ileitis
- pANCA +
- Non-smoking
- NSAIDs (?)

---

---

---

---

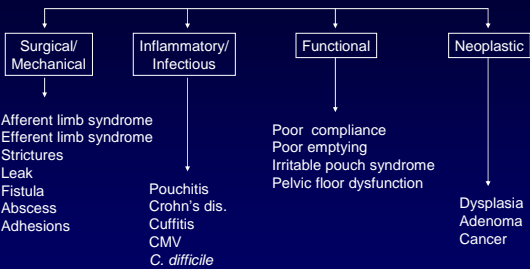
---

---

---

---

### Diseases of the Ileal Pouch



Courtesy of Bo Shen

---

---

---

---

---

---

---

---

### Non-pouch Causes of Symptoms

- Small bowel bacterial overgrowth
- Bowel obstruction
- IBS
- Lactose Intolerance
- Celiac disease
- Pseudo obstruction

---

---

---

---

---

---

---

---

### Diagnostic Testing

- Pouchoscopy with biopsy
  - also examine pre-pouch ileum, cuff
- Pouchography
- Pelvic MRI
- Exam under anesthesia
- Anorectal manometry with BE
- Anorectal ultrasound
- Pouch emptying study

---

---

---

---

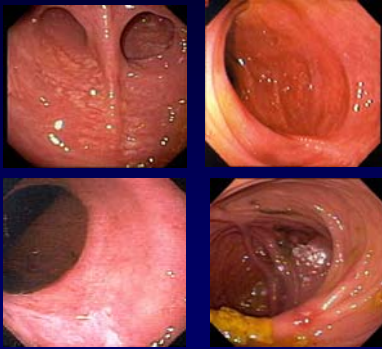
---

---

---

---

### Normal Pouchoscopy



---

---

---

---

---

---

---

---

### Pouchitis



---

---

---

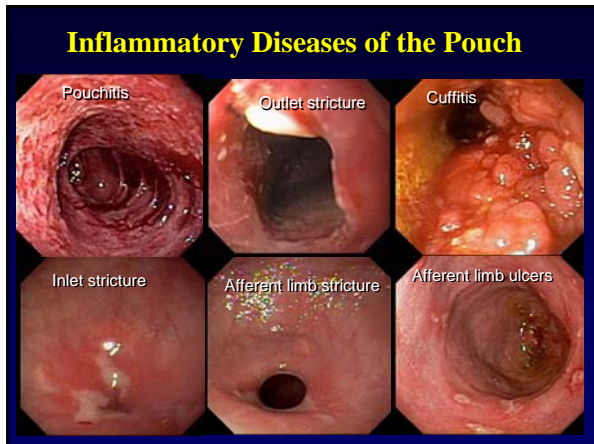
---

---

---

---

---



---

---

---

---

---

---

---

---

- ### Treatment of Acute Pouchitis
- Single Antibiotics
    - Metronidazole
    - Ciprofloxacin
    - Others
  - Combination antibiotics
  - Budesonide
  - Other steroids (oral, topical)
  - Mesalamine (oral, topical)

---

---

---

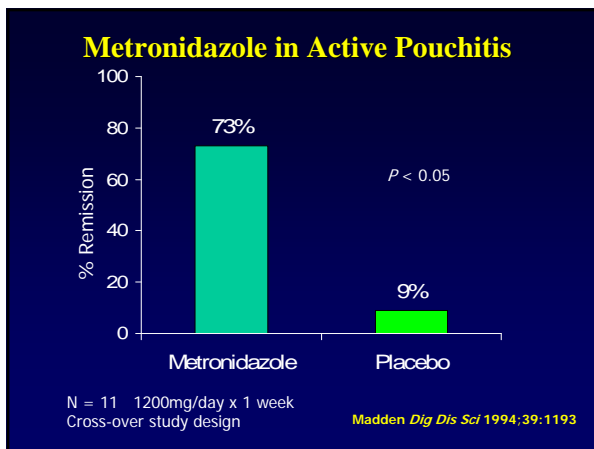
---

---

---

---

---



---

---

---

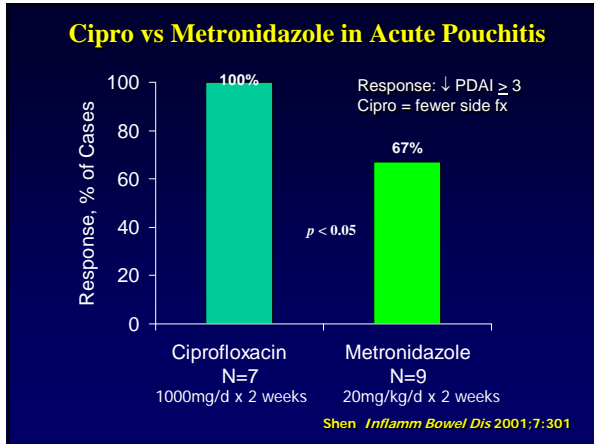
---

---

---

---

---



---

---

---

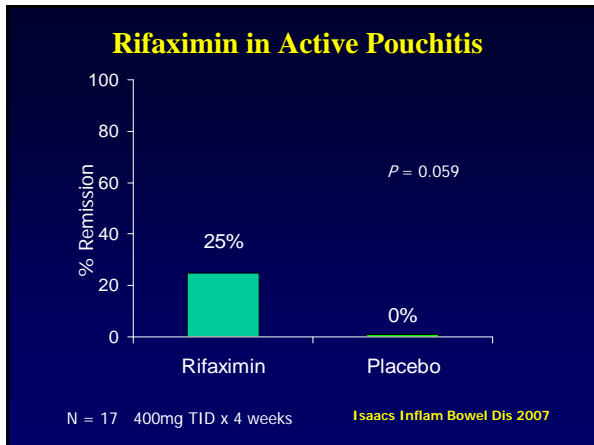
---

---

---

---

---



---

---

---

---

---

---

---

---

- ### Chronic Pouchitis
- Differential diagnosis
- CMV infection
  - *C. difficile* infection
  - NSAID use
  - Crohn's disease
  - Celiac disease, BOG
  - Pouch outlet stricture

---

---

---

---

---

---

---

---

### Treatment of Chronic Pouchitis

- Antibiotic Dependent
  - Chronic Antibiotics
    - cipro > metronidazole
  - Probiotics
- Antibiotic Refractory
  - Combination antibiotics
  - Budesonide
  - Immunosuppressants

---

---

---

---

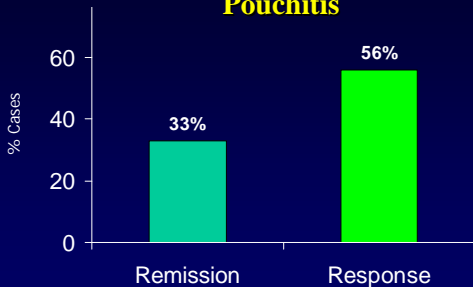
---

---

---

---

### Combination Antibiotics in Chronic Pouchitis



N=18, refractory to single antibiotics  
Cipro 1 gm/d + Rifaximin 2 gm/d x 15 d

Gionchetti APT 1999

---

---

---

---

---

---

---

---

### Combination Antibiotics in Chronic Pouchitis

- Open-label, 15 refractory, 29 relapsing
- Ciprofloxacin 800-1000 mg/d + metronidazole 1 gm/d x 4 weeks
- Remission in 82%
  - 60% in refractory pouchitis
  - 93% in relapsing

Mimura APT 2002;16:909

---

---

---

---

---

---

---

---

### Combination Antibiotics in Chronic Pouchitis

- Open-label, N = 16
- Ciprofloxacin 1000 mg/d + tinidazole 15 mg/kg/d x 4 weeks
- Remission in 88%
- 1 neuropathy, 1 dysgeusia

Shen DCR 2007

---

---

---

---

---

---

---

---

### Budesonide in Chronic Pouchitis

- Gionchetti: N=16, refractory to Met
- Oral budesonide 9 mg/day x 8 weeks
- Remission in 75%
  
- Chopra: N=13, refractory to abx
- 60% favorable response, 20% moderately favorable

Gionchetti *Gastroenterology* 2004;126:A123  
Chopra *Inflamm Bow Dis* 2005

---

---

---

---

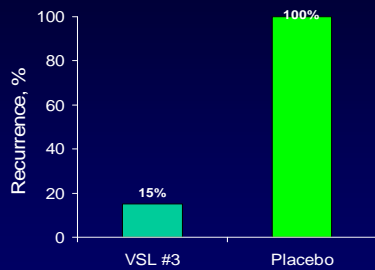
---

---

---

---

### Probiotics for Maintenance of Remission in Chronic Pouchitis



Cipro 500 mg BID + Rifaximin 1 gm BID x 4 wk → VSL 6 gm/d x 9 mo (N=40)

Gionchetti *Gastroenterology* 2000

---

---

---

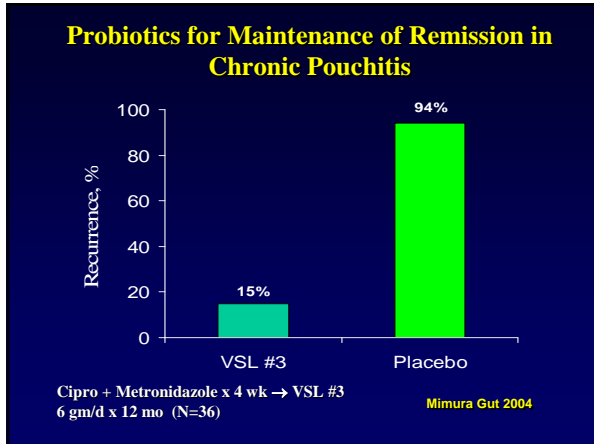
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

### VSL#3 in Antibiotic-Dependent Pouchitis: Cleveland Clinic Experience

Outcome	Cases (%)
Discontinued because not effective	23 (74.2%)
Discontinued due to adverse effects	2 (6.5%)
Remained on VSL #3	6 (19.4%)
Total	31 (100%)

N=31, 9 month follow up Shen B, et al. APT 2005

---

---

---

---

---

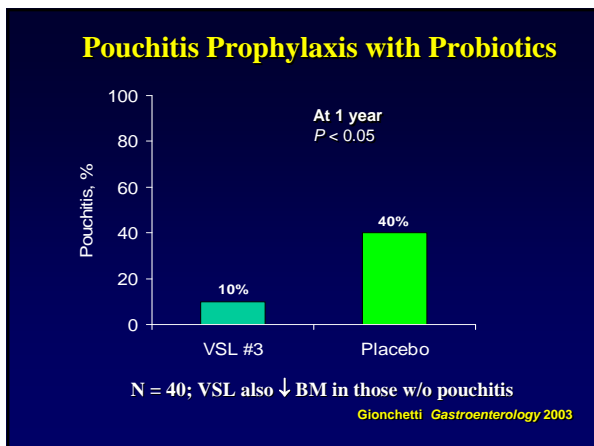
---

---

---

---

---




---

---

---

---

---

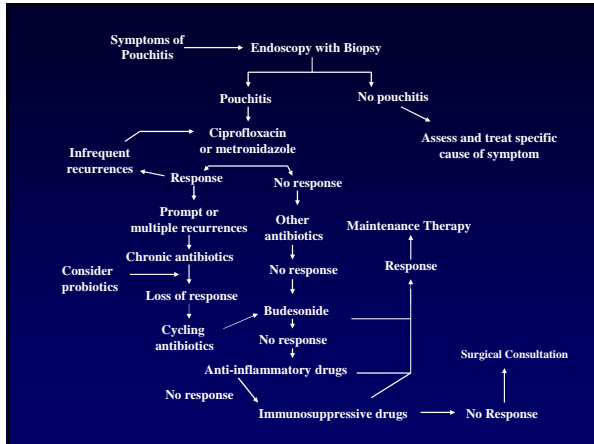
---

---

---

---

---



---

---

---

---

---

---

---

---

## Summary

- IPAA is procedure of choice when colectomy needed for UC
- Variety of diseases may occur post IPAA
- Pouchitis most common
  - Typically responds to antibiotics
- Even with pouchitis, most pts satisfied with pouch outcome

---

---

---

---

---

---

---

---

Thank you

---

---

---

---

---

---

---

---