

## **ULCERATIVE COLITIS AND DYSPLASIA: WHAT IS BEST FOR THE PATIENT?**

### **UC and Risk of Cancer**

Mean age: 49 vs. 70 for general population (1)

Universal cumulative frequency:

- 3-5% @ 15 years
- 8% @ 20 years
- 9-10% @ 25 years (2,8)
- Sinai data showed prevalence of cancer in UC > 7 years = 16% (5)
- Median duration of active disease before diagnosis of cancer: 18 years (3)

### **UC and Choice of Operation (6)**

May depend on indications (% performed for these reasons):

Emergency situations (20%) (toxic megacolon, perforation, hemorrhage)

Chronic debilitating conditions (70%)

Cancer risk (10%)

- Long duration of disease with pancolitis
- Early age onset
- Concomitant primary sclerosing cholangitis
- Dysplasia

Subtotal colectomy with ileostomy

- Severe emergencies or indeterminate colitis

Colectomy with ileorectal anastomosis

- Risk of rectal Cancer in retained rectum:
  - 6% @ 10-20 years
  - 15-20% @ 20-30 years.(4)
  - decreased risk with less cuff length – (see below)

Proctocolectomy with Brooke ileostomy

- Once the gold standard.
- Eliminates risk of retained rectal cancer, cures disease.
- Permanent ileostomy – became unfavorable

Proctocolectomy with continent ileostomy

- Increases aesthetics, no visible pouch
- Valve slippage – 5% to 25%

RESTORATIVE PROCTOCOLECTOMY (see below)

- Surgery of choice (less than 1% mortality)
- Advantages: Cures disease, minimizes risk of Ca, avoids stoma, continent.
- Complications
  - Early (SBO (10-25%), sepsis (3-15%))
    - Select patients may require 2 or 3 -step procedure.
    - malnourished or TOXIC, tension
  - Late (pouchitis (10-28%), fistula (3-9%), stricture (8-14%))

- Contraindications:
  - incontinent patients
  - ?? preoperatively known distal rectal dysplasia.

### Dysplasia:

non-invasive neoplastic epithelial proliferation of colonic epithelium.

Precedes cancer development and now a marker for risk of colorectal carcinoma.

High grade (HGD) vs Low grade (LGD) vs Indefinite (ID) vs associated. mass (DALM)

### UC with dysplasia - is colectomy indicated? (5)

N=590, 161 with preoperative colonoscopy

77 (13%) found to have at least one focus of dysplasia

33/77 (43%) with dysplasia also had carcinoma.

513 cases without dysplasia associated only with 5 cancers (1%) (p<0.001)

conclusions:

1) Preoperative dysplasia (all grades) = 50% probability of associated invasive cancer

2) even LGD associated with up to 75% synchronous cancer (7/11 cases) with panUC > 8yrs.

Although colonoscopy may not be a good surveillance tool,

Not all cancer associated with dysplasia

Can miss focal areas of disease

Very clear: Dysplasia of any grade, when found preoperatively, significantly increases the likelihood of cancer. Patients should be given the option of immediate resection.

But what to do with UC and dysplasia - TPC vs Restorative proctocolectomy?

### 1) Proctocolectomy with ileal pouch-anal anastomosis (IPAA / HSRPC / IAPT)

(hand-sewn to dentate line after **mucosectomy**)

- mucosectomy removes denuded muscularis propria
- remaining muscular cuff = internal sphincter and 1-2cm of rectal muscularis propria.)
- may mask residual tissue between SB serosal and muscular cuff

**retained islands of tissue potential for malignant degeneration.**

**DATA? :** Scattered case reports appearing in literature (9)

**Bottom line:** we can not know with certainty if risk of malignancy left behind.

### 2) Proctocolectomy with ileal pouch-anal transition zone anastomosis (IPATZA / SRPC)

(Stapled to distal rectum preserving the anal transition zone)

- **preservation of ATZ may have increased risk of malignant degeneration / dysplasia**  
rare (only 10-20 case reports, may see many more in near future)

**estimate risk of 1-3% at 30 years / actual risk unknown (8)**

also: low risk of malignant degeneration of pouch, requires monitoring

**DATA?:**

### **Risk of dysplasia in the columnar cuff after stapled RPC (SRPC) (8)**

N=135 s/p SRPC for UC (history of UC for 9 (2-32) years) (none had HGD or Ca)

Biopsies (65% acc.) of cuff followed for 56 (12-145) months

**No dysplasia or carcinoma** with mean follow up of 12 years

- In absence of dysplasia or carcinoma in original specimen, surveillance in first 10 years may not be necessary.

- If HGD in original specimen, avoid SRPC and consider HSRPC (IAPT) or TPC.
- if LGD found in surveillance: repeat biopsies OK (not shown to progress to HGD religiously)
- if HGD found in surveillance: mucosectomy and pouch advancement

### **Incidence and Natural History of Dysplasia of the ATZ after ileal pouch-anal anastomosis (7)**

N = 210 s/p SRPC for UC followed for 5 years.

7 (3%) developed ATZ dysplasia (one had HGD preop and 6 had LGD)

in 5 cases, repeated follow up biopsies showed no dysplasia

2 cases, repeated biopsies consistent with dysplasia, patients converted to mucosectomy.

Conclusions: ATZ malignant degeneration is extremely rare unless preop dysplasia or cancer is found. ATZ preservation may be contraindicated in patients with rectal Ca and dysplasia in lower 2/3 of rectum.

### **Definitive recommendations still pending**

Some say SRPC is safe and risk of developing rectal cancer is much lower than the benefits that the operation offers over the permanent ileostomy(8,9).

Others strongly recommend mucosectomy for high risk patients (i.e. low rectal dysplasia) cautioning the need for continuous follow up (9). If recurrence found, repeated biopsy confirm, then APR.

Or, perhaps have we come full circle, and the TPC may be the most optimal initial option for UC and low rectal dysplasia.

Only time and better studies will tell.

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Brian Jacob, M.D.  
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