ONE MINUTE CONSULT

BRIEF ANSWERS TO SPECIFIC CLINICAL QUESTIONS

Q: When should prophylactic colectomy be considered in patients with ulcerative colitis?

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A: Like all other interventions, colectomy should be considered when the benefits outweigh the risks.

Indications for total proctocolectomy in ulcerative colitis include:

- Disease refractory to medical therapy
- Corticosteroid-dependent disease
- Toxic colitis
- Toxic megacolon
- Colorectal cancer
- Mucosal dysplasia detected by colonoscopy.

Prophylactic colectomy refers to the decision for surgery when none of the usual indications are present.

WHAT ARE THE BENEFITS?

Surgery in ulcerative colitis is said to "cure" the disease—it eliminates problems with recurrent flares and the need for toxic and expensive medications and periodic colonoscopy for cancer surveillance. An additional benefit is that it reduces the risk of colorectal cancer to negligible levels.

Decreased risk of cancer

The risk of colorectal cancer is formidable in patients with panulcerative colitis. In cohort studies,[1–8] the cumulative incidence of cancer ranged from 5% to 13%, depending on the population. The mortality rate from colorectal cancer is about half the incidence.

While these numbers are not very different from those in the general population, colorectal cancer tends to strike earlier in patients with ulcerative colitis, boosting the estimated age-specific relative risk to more than 3.0.

The known risk factors for colorectal cancer in ulcerative colitis are extensive disease (pancolitis) and long duration of disease (> 7 years). The risk is particularly high in patients with primary sclerosing cholangitis, in whom the relative risk exceeds 3.0 compared with patients with ulcerative colitis without primary sclerosing cholangitis.[9]

Tung et al[10] found that ursodeoxycholic acid, which alters the bile acid composition, can decrease the incidence of cancer or dysplasia in patients with ulcerative colitis and primary sclerosing cholangitis. This chemopreventive strategy should not be used as a substitute for cancer surveillance, however.

CANCER SURVEILLANCE DOES NOT ELIMINATE THE RISK

Cancer surveillance, as we currently practice it, does not totally eliminate the risk of cancer in patients with ulcerative colitis.

If we perform colonoscopy with extensive biopsies every 1 to 3 years and recommend colectomy if dysplasia is detected in any biopsy specimen, we can expect to decrease the mortality rate by at least 50%. Provenzale et al[11,12] estimate that, in theory, surveillance can decrease the cancer incidence from 7.45% down to 0.47%. (This is a "best-case" scenario, and no actual program is likely to enjoy such success.)

Furthermore, mucosal dysplasia is not a perfect criterion for a positive test in cancer surveillance. It is distributed unevenly in the colon, thereby inviting sampling errors. Moreover, its detection is subject to much interobserver variability, and it may not reliably predict those who will develop aggressive malignancy and who will benefit from colectomy.

Benefit: No more risk of cancer
Risk: Lower quality of life

WHAT ARE THE RISKS OF SURGERY?

Although patients who undergo surgery for medically refractory disease or corticosteroid dependence can expect to have a better qual-

ity of life after surgery, those who undergo either prophylactic colectomy or colectomy for dysplasia certainly will have a lower quality of life afterward.

Patients with an ileal pouch-anal anastomosis, a sphincter-sparing procedure, can expect to have 3 to 5 bowel movements per day with continence. However, it is not rare to have some degree of incontinence and 6 or more loose bowel movements per day.

Pouchitis, an inflammatory disease characterized by diarrhea and usually treated with antibiotics, occurs in about 40% of patients within 5 years.[13]

Other complications of ileal pouches include cuffitis (inflammation in retained rectal mucosa), the irritable pouch syndrome, fistulas, and complications from unrecognized Crohn disease.[14,15]

WHEN DO THE BENEFITS OUTWEIGH THE RISKS?

No cancer surveillance colonoscopy program, no matter how good, is perfectly effective in eliminating cancer risk. For a variety of reasons, colonoscopy does not detect dysplasia in some patients who subsequently develop cancer. Patients who are averse to this risk of cancer and cannot accept the imperfect nature of cancer surveillance should have a prophylactic colectomy.

The tradeoff for eliminating cancer risk is a decrease in quality of life following colectomy. This decision is very personal but can be guided by a discussion of benefits and costs.

With colonoscopy, we can reduce mortality at least 50%

REFERENCES

1. **Karlen P, Lofberg R, Brostrom O, Leijonmarck CE, Hellers G, Persson PG.** Increased risk of cancer in ulcerative colitis: a population-based cohort study. Am J Gastroenterol 1999; 94:1047–1052.
2. **Wandall EP, Damkier P, Moller Pedersen F, et al.** Survival and incidence of colorectal cancer in patients with ulcerative colitis in Funen County diagnosed between 1973 and 1993. Scand J Gastroenterol 2000; 35:312–317.
3. **Triantafillidis JK, Manousos ON, Pomonis E, Cheracakis P.** Ulcerative colitis in Greece: clinicoepidemiological data, course, and prognostic factors in 413 consecutive patients. J Clin Gastroenterol 1998; 27:204–210.
4. **Pohl C, Hombach A, Kruis W.** Chronic inflammatory bowel disease and cancer. Hepatogastroenterology 2000; 47:57–70.
5. **Ishibashi N, Hirota Y, Ikeda M, Hirohata T.** Ulcerative colitis and colorectal cancer: a follow-up study in Fukuoka, Japan. Int J Epidemiol 1999; 28:609–613.
6. **Palli D, Trallori G, Saieva C, et al.** General and cancer specific mortality of a population based cohort of patients with inflammatory bowel disease: the Florence study. Gut 1998; 42:175–179.
7. **Bansal P, Sonnenberg A.** Risk factors for colorectal cancer in inflammatory bowel disease. Am J Gastroenterol 1996; 91:44–48.
8. **Delco F, Sonnenberg A.** Birth-cohort phenomenon in the time trends of mortality from ulcerative colitis. Am J Epidemiol 1999; 150:359–366.
9. **Shetty K, Rybicki L, Brzezinski A, Carey WD, Lashner BA.** The risk of cancer or dysplasia in ulcerative colitis patients with primary sclerosing cholangitis. Am J Gastroenterol 1999; 94:1643–1649.
10. **Tung BY, Emond MJ, Haggitt RC, et al.** Ursodiol is associated with lower prevalence of colonic neoplasia in patients with ulcerative colitis and primary sclerosing cholangitis. Ann Intern Med 2001; 134:89–95.
11. **Provenzale D, Kowdley KV, Arora S, Wong JB.** Prophylactic colectomy for surveillance for chronic ulcerative colitis? A decision analysis. Gastroenterology 1995; 109:1188–1196.
12. **Provenzale D, Wong JB, Onken JE, Lipscomb J.** Performing a cost-effectiveness analysis: surveillance of patients with ulcerative colitis. Am J Gastroenterol 1998; 93:872–880.
13. **Shen B, Achkar J-P, Lashner BA, et al.** Endoscopic and histologic evaluation together with symptom assessment are required to diagnose pouchitis. Gastroenterology 2001; 121:261–277.
14. **Shen B, Achkar J-P, Lashner BA, et al.** A randomized clinical trial of ciprofloxacin and metronidazole to treat acute pouchitis. Inflamm Bowel Dis 2001; 7:301–305.
15. **Shen B, Achkar JP, Lashner BA, et al.** Irritable pouch syndrome: a new category of diagnosis for symptomatic patients with ileal pouch-anal anastomosis. Am J Gastroenterol 2002; 97:972–977.

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