EDITORIAL

INFLAMMATORY BOWEL DISEASE AND CANCER SURVEILLANCE

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Colonic carcinoma has been known to be a complication much more frequently associated with ulcerative colitis than with Crohn's disease, and has been found to be associated with a long duration of disease and total colon disease.

Two important advances in the understanding of cancer development in ulcerative colitis have been the evolution of the concept of dysplasia and the development of the technique of fiberoptic colonoscopy to carry out a surveillance program. Dysplasia has been known to occur in ulcerative colitis for many years (1) and these lesions have been regarded as premalignant (2) and have included epithelial atypia, villous change and reduced epithelial mucous content. Recent work has clarified the concept of dysplasia as a premalignant lesion which does not arise from normal mucosa, somewhat analogous to the polypcancer sequence and greatly increased the knowledge regarding its clinical significance (3). It has also been recognized that dysplasia is a patchy lesion so that a single rectal biopsy may not detect it, nor does a negative rectal biopsy preclude the presence of an invasive carcinoma in the more proximal colon. Several studies (4-7) have looked at grading of dysplasia and its clinical significance as well as the importance of a mass lesion (8). Our 1980 study (9) emphasized the significance of these characteristics of epithelial dysplasia: atrophic mucosa, goblet cell depletion, pseudo stratification of the nuclei, enlargement of nuclei, increased mitotic activity and minimal inflammation.

Our most recent study (10) was performed to evaluate the efficacy of surveillance colonoscopy with biopsy for the detection of high-grade dysplasia (HGD) or colonic carcinoma in patients with chronic ulcerative colitis. We undertook a retrospective review of 248 patients who underwent 370 examinations (mean duration of disease 12 years). High-grade dysplasia or carcinoma was found in 24 examinations in 16 patients, with a mean duration of disease of 16 years. There were 15 patients with HGD. Nine patients had HGD alone, 6 had HGD and carcinoma, and 1 had carcinoma without HGD. The overall incidence of HGD was 6%. Dysplasia-associated lesions or mass were the most consistent indicators of carcinoma, the combination being present in four instances. Of the 7 patients with cancer, 6 were recognized by colonoscopy, and 1 patient with negative visual endoscopic findings was discovered using surveillance biopsies. The conclusions of this study are that dysplasia is a reliable histopathologic marker and correlates with the presence of cancer in chronic ulcerative colitis; the absence of dysplasia correlates with the absence of cancer. The presence of dysplasia-associated lesions or mass with HGD is the strongest indication for operation. This study supported the use of surveillance colonoscopy in managing high-risk ulcerative colitis patients.

With the development of fiberoptic endoscopy and the ability to apply these techniques on a prospective basis to patients with ulcerative colitis, it is now possible to obtain data on a retrospective, continuing and prospective basis to evaluate the chance of risk. It is now generally accepted that total colon colonoscopy should be carried out at an appropriate (probably every two years) interval for patients determined to be at high risk for development of colonic carcinoma. Multiple sequential biopsies are then taken for histologic presence and grading of dysplasia. Thus, it is now possible to follow patients with ulcerative colitis both on the basis of duration of disease as well as its extent.

Because of the rarity of colonic carcinoma in Crohn's disease, as well as the rarity of mucosal dysplasia in Crohn's disease, surveillance programs are not recommended for patients with colonic Crohn's disease at the present time. Carcinomas in Crohn's disease have typically been found in bypassed loops of the small intestine but do not occur with numerical frequency to warrant a surveillance program at the present time. We have recently submitted a paper for publication reporting 11 cases of cancer in Crohn's disease, 7 of which occurred in patients who had large bowel Crohn's disease. The finding of dysplasia in four cases has made the situation more complex, and, obviously, further studies are indicated.

For any surveillance program in ulcerative colitis to be successful, there must be adequate patient compliance, understanding, and follow-up. Therefore, explanation of the problem to the patient is important so that an appropriate perspective is kept by the patient and his family. It also should be emphasized that carcinoma in ulcerative colitis is a numerically uncommon lesion despite the statistical frequency, when compared to the general population. Likewise, the possibility of carcinoma must be put in perspective for the patient with long standing total ulcerative colitis. Therefore, the approach to the problem by the physician must be as scientific as possible and the approach to the patient must be as sensitive as possible given the set of circumstances involved.

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