September 1994

Dysplasia and surveillance in ulcerative colitis

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Pages with reference to book, From 223 To 224

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Chronic ulcerative colitis is a premalignant condition and predisposes to adenocarcinoma of the colon. The association between ulcerative colitis and colorectal cancer was first reported in 1920. Several subsequent studies[2-5] have since confirmed ulcerative colitis as a predisposing cause of large bowel cancer. The management of ulcerative colitis is never complete unless an appropriate surveillance protocol is established[6]. The concept of screening high risk group for colon cancer is based on the fact that cancers discovered and removed before they cause symptoms are more likely to be cured. Because the prognosis after surgical treatment in colon cancer complicating ulcerative colitis is Duke's stage dependent, survival would be improved if colitis - cancer is diagnosed earlier[7]. Ulcerative colitis is being more commonly diagnosed in our country and the period of follow-up is also increasing[8]. In Pakistan true prevalence of this disease is unknown. In a large referral centre the incidence of ulcerative colitis in patients presenting with rectal bleeding was reported to be as high as 25%[9].The risk of cancer in ulcerative colitis has been calculated to be 3-30 times that of the general population[3,10]. Duration of colitis and extent of disease are major risk factors influencing risk of cancer[4]. Early age of onset, a severe first attack and continuous activity of disease are other important risk factors[11]. Age and extent of disease at diagnosis are strong and independent risk factors for colorectal cancer; the absolute risk of colorectal cancer 35 years after diagnosis was 30% for patients with pancolitis and 40% for those given this diagnosis at less than 15 years of age[12]. Several studies have reported that patients with left sided colitis or proctitis have a relatively lower risk of colorectal cancer than those with pancolitis[13,14]. In younger groups, however, and especially among patients 15 to 29 years of age at the time of diagnosis, left sided colitis entailed a relative risk of colorectal cancer that was close to that for pancolitis. In older group the relative risk was close to 1.0[12]. We have a close system of follow-up at our institution and patients with history of active chronic ulcerative colitis of 5 years or more are closely followed regarding activity of disease. Traditional screening methods used for other high risk groups are not applicable to patients with ulcerative colitis. Tests for occult blood in the stool are useless because blood is commonly present in the stool of ulcerative colitis patient[16]. Serum levels of CEA (carcinoma embryonic antigen) are also often elevated in these patients[15]. Barium enema is not suitable for surveillance because the meticulous technique needed to detect small abnormalities are generally not available[17]. Dysplasia is present in over 80% of colectomy specimen in which a carcinoma is found[18]. Colonoscopy has emerged as a major technique providing a magnified view and tissue sampling capability for the entire colon[19]. In a review by Dobbins dysplasia was found in 88% of 108 colectomy specimens containing cancers while dysplasia was noted in the rectum in 66% of these cases[20]. Histologically dysplasia is classified as negative, indefinite and positive with positives divided into low and high grade classes. Dysplasia appears to be apre-neoplastic abnormality but the timing of its evolution and possible regression remain to be elucidated[21]. The reported incidence of dysplasia and cancer complicating ulcerative colitis in Pakistan is low mainly because of shorter duration of follow up and possibly due to a higher incidence of left sided colitis[22]. Biopsies should be performed on suspicious pseudopolyps and adenomatous polyps should be removed. In seeking dysplasia which is found most often in flat mucosa, about 12 biopsies should be taken systematically through the colon at 10 cms intervals. The most common approach is to take biopsies from caecum, ascending colon, hepatic flexure, transverse colon, splenic flexure, descending colon, sigmoid colon and rectum.

Biopsies from areas not actually inflamed are more easily interpreted for dysplasia2'. Based on multiple studies about one-third to one-half of patients with high grade dysplasia have a synchronous occult cancer[23]. Risk of cancer will not be affected by surveillance but early diagnosis would make them more amenable to treatment. The design of most surveillance programmes is essentially similar with variation in recommended frequency of colonoscopy and sigmoidos copy with mucosal biopsies. Surveillance need not be instituted before 7-8 years in pancolitis and 15 years in disease limited to left colon. Ileoproctostomy for severe pancolitis should be included in a surveillance programme. Pathologist experienced in interpreting dysplasias is essential for such a programem. Optimal timings are far from established. In many programmes colonoscopy every 2-3 years with annual sigmoidoscopy is recommended, others prefer annual colonoscopy. High grade dysplasia or any dysplasia associated with a lesion such as mass or stricture is a strong indication for colectomy and should be confirmed by repeat biopsy[20,21]. A difficult area is follow-up of low grade dysplasia in flat mucosa20. It needs frequent examination and aggressive treatment. A repeat procedure in the first 3-6 months is warranted since low grade dysplasias in flat mucosa may be accompanied by invasive carcinomas either at the site or elsewhere in 10-15% of these individuals[20]. It is felt that wider awareness amongst doctors working with inflammatory bowel diseases would help to sort out some of these contentious issues.

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