CHRONIC INFLAMMATORY BOWEL DISEASES IN SINGAPORE

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The Chronic Inflammatory Bowel Diseases include Ulcerative Colitis and Proctitis, and Crohn's Disease of the Gastrointestinal Tract. Their causes remain unknown, and incidences vary from country to country. In the West, the incidence of Ulcerative Colitis ranges from 4.5 to 7.3 per 100,000 per year, and prevalence ranges from 80 to 100 per 100,000 per year. In Singapore, both Ulcerative Colitis and Crohn's Disease are rare. In reviewing the local literature on this subject, there were seven reports (1-7) from 1970 to 1987. Crohn's Disease is about six times less common than Ulcerative Colitis. Incidence of Ulcerative Colitis in Singapore is estimated to be around 0.02 per 100,000 and a prevalence of 2 per 100,000 (1, 2).

DEFINITION AND DIAGNOSIS

Ulcerative Colitis is a recurrent inflammatory and ulcerative disease of the colon and rectum. It is characterised by rectal bleeding, diarrhoea, abdominal pain and weight loss. Histological findings include ulceration, crypt abscess, diminished goblet cells and cellular infiltration of lymphocytes, plasma cells, and polymorphonuclear cells.

Crohn's Disease is a chronic inflammation of the digestive tract from mouth to anus, presenting especially in the terminal ileum, colon and anorectal region. Symptoms include fever, diarrhoea, abdominal pain, weight loss, and slowing of growth in children. The inflammation tends to be focal, and histological findings include microerosions, fissuring ulcerations, lymphoid aggregates, dilatation of submucosal lymphatic vessels, cellular infiltrate. Granulomas are present in about 60% of patients.

Diagnosis of Chronic Inflammatory Bowel Diseases is made based on:

1. Typical clinical picture
2. Characteristic radiological feature
3. Colonoscopic appearances of colonic mucosa
4. Histological findings – colonic biopsies or resected specimens
5. Exclusion of infective diarrhoeas
6. Dramatic response to therapy

In about 20% of patients, differentiation between Ulcerative Colitis and Crohn's Disease is difficult. In the local context, bacterial infection must always be excluded before a diagnosis of Chronic Inflammatory Bowel Disease is made. Tuberculosis of the gut may mimic the clinical presentation and radiological features of Ulcerative Colitis and Crohn's Disease (8, 9). Treatment with steroids without proper exclusion of tuberculosis would be disastrous. Yersinia enterocolitica and Campylobacter jejuni infection may mimic Crohn's ileitis.

PATIENT CHARACTERISTICS

A total of 61 cases of Ulcerative Colitis were seen between 1971 and 1986, and 9 cases of Crohn's Disease were seen between 1978 and 1986 in the Department of Medicine, Singapore General Hospital.

Of the 61 patients with Ulcerative Colitis, 30 were males, and 31 were females. Mean age was 38.2 years (range 18 to 73). 45 patients (73.8%) were between 21 and 50 years. Racial distribution was – 68.9% Chinese, 21.3% Indians, 4.9% Malays, and 4.9% others. Ulcerative Colitis occurs more commonly among Indians, as in previous reports (1, 2). Local medical impression of bloody diarrhoea as an infective illness was reflected in the pattern of referral to the Department of Medicine. The Communicable Disease Centre, Tan Tock Seng Hospital provided the largest source of referrals (26.2%). Other sources were: General Practitioners (23%), Surgeons (21.3%), Admission from the Accident and Emergency Department (19.7%), and others (9.8%).

Of the 9 patients with Crohn's Disease, 5 were males, and 4 were females. Mean age at presentation was 30.5 years (range 12 to 50). Seven patients (77.8%) were below 35 years. Racial distribution was – 55.6% Chinese, 22.2% Indians, 11.1% Malays, and 11.1% Eurasians. Again, Crohn's Disease, like Ulcerative Colitis, is more common among Indians. This was noted in previous reports (4, 5).

CLINICAL FEATURES AND COMPLICATIONS

The three most common presenting symptoms of patients with Ulcerative Colitis were Hematochezia (95.1%), Diarrhoea (95.1%), and Mucoid stools (83.6%). Other important symptoms were: weight loss (48.7%), abdominal pain (45.9%), pallor (26.2%) and fever (19.7%). Extra-intestinal manifestations of the disease such as backache (8.2%), peripheral arthritis (6.5%), iritis (6.5%), clubbing (4.9%) and liver disease (1.6%) were uncommon. Skin manifestations (erythema nodosum, pyoderma gangrenosum) were absent. Severe intestinal complications were megacolon (1.6%), colonic perforation (1.6%), and massive gastrointestinal haemorrhage (1.6%). 52 patients (85.7%) had symptoms for at least 1 month before presentation to hospital. 33 patients (59.1%) had mild disease at presentation, and 2 patients (3.2%) presented with acute diarrhoea of less than 1 week had moderate to severe disease. 12 patients (19.7%) had limited disease, involving only the rectum and sigmoid, 16 patients (26.2%) had

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disease up to the splenic flexure, and another 16 patients (26.2%) had disease up to hepatic flexure. 17 patients (27.9%) had total colitis. 5 patients (8.2%) died, 4 patients' deaths were directly related to the disease.

Abdominal pain (88.9%), Diarrhoea (66.7%), and Weight loss (66.7%) were the three most common presenting symptoms of Crohn's Disease. Weight loss was profound in 4 patients (more than 10 kg). 3 patients (33.3%) had a right iliac fossa mass. Malabsorption was present in 3 patients. Extra-intestinal manifestations were — clubbing in 2 patients, sacroiliatis in one, perianal disease in another patient. The mode of presentation was acute in 2 patients, and chronic in 6 patients. In patients with chronic onset, the average duration of symptoms prior to presentation was 30.5 months. 4 patients had Crohn's Disease of the small intestine, 2 of the large intestine, and 3 with both. There were no deaths from the disease. All patients are alive to date.

TREATMENT

Medical treatment was sufficient in 57 patients (93.4%) with Ulcerative Colitis. Salazopyrine was well tolerated in all patients but one who developed Stevens Johnson Syndrome. Salazopyrine with steroids formed the mainstay of treatment in 30 patients (49.2%). Azathioprine was prescribed in 10 patients (16.4%) who require prednisolone in excess of 15 mg/day for maintenance. Azatioprine allowed a reduction of prednisolone to 5 mg/day in all 10 patients. No side-effects were noted. Four patients (6.5%) required surgery. All four had total colitis. Indications for surgery were: fulminant disease (1), chronically active disease (2). and severe gastrointestinal bleeding (1).

Seven patients (77.8%) with Crohn's Disease were adequately controlled and maintained on medical treatment. All 9 patients received salazopyrine, 7 received steroids as well. Azathioprine (1) and Metronidazole (1) were used for steroid sparing and perianal disease respectively. 2 patients required surgery, 1 had right hemicolectomy for caecal inflammatory mass, while another had ileal resection for obstruction.

CONCLUSION

Ulcerative Colitis and Crohn's Disease are rare diseases in Singapore. Nonetheless they exist in Singapore, and are represented in all the three major races, with a predilection for Indians. The incidence of Ulcerative Colitis may be rising, as increasing numbers of Ulcerative Colitis are seen in the Department of Medicine over the last 8 years.

There is no single specific diagnostic test for Chronic Inflammatory Bowel Disease. As a result, diagnosis is frequently made late, especially in Crohn's Disease. This often increases morbidity and costs to patients.

Gastrointestinal Tuberculosis is an important differential diagnosis in the local context. It can mimic clinically and radiologically Ulcerative Colitis and Crohn's Disease (8, 9). It is therefore absolutely necessary to exclude Tuberculosis before making a diagnosis of Crohn's Disease and before starting treatment with steroids.

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