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## An Appraisal of Ulcerative Colitis

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### Abstract

In writing about a subject like ulcerative colitis, it would be comforting to imagine oneself to be somewhere near the "growing edge," if not just exactly in the front line. And yet, this "growing edge" is so often disappointing, if not positively misleading, for too many of the new advances are reminiscent of the Seed which fell on stony ground:

"and because it had no root it withered away."

This is particularly true about researches into the aetiology and nature of ulcerative colitis. The fact that the disease is a cruel scourge of healthy young people, treatable to some extent, and yet imperfectly understood, has produced the attitude of mind that ulcerative colitis is a challenge. Although many valuable advances have resulted, it is probable that more pet theories have gained hold in this disease than in any other, and consequently there is considerable diversity of opinion regarding its nature and its treatment. Ideally, there should be a team, consisting of physician, surgeon and psychiatrist, each with something to offer in the treatment of the patient, but, in the international congress on ulcerative colitis, co-operation was curiously lacking, and the individual members seemed unable to concern themselves with approaches which were not their own.

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# AN APPRAISAL OF ULCERATIVE COLITIS

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By C. M. MAILER

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## ULCERATIVE COLITIS

Ulcerative colitis is an inflammatory disease of obscure aetiology, primarily involving the colon and rectum. It is a disease of young people, perhaps slightly commoner in women than men, characterised clinically by persistent attacks of diarrhoea, accompanied by blood, mucus and pus. The condition is prone to remissions and exacerbations and death may occur during an attack.

## HISTORY

The condition was first described in 1875 by Wilks and Moxon of Guy's Hospital, who, in their "Lectures on Pathological Anatomy," declared that, "Our usual language has been too indefinite, nay incorrect, in speaking of all infections of the large intestine as dysenteric. For the true dysenteric process, though like ulcerative colitis, is a disease with definite characters." Previously, the term "Bloody Flux" as used by Thomas Sydenham in 1609, had covered all conditions associated with diarrhoea and bleeding.

## INCIDENCE

Every conceivable channel has been used in the attempts to discover the cause of ulcerative colitis. Quite recently, it has been suggested that the condition should take its place alongside myocardial infarction, peptic ulcer and diabetes as one of the stress disorders and with the knowledge that these disorders were more common in civilised countries, Melrose attempted to

correlate the numbers of such patients admitted to European general hospitals with their countries or origin. It was known already that ulcerative colitis was uncommon in the Tropics, and that it was more prevalent in the north than in the south of the United States. Melrose obtained the following results:

Switzerland	....	....	....	5.8
Scotland	....	....	....	6.9
Finland	....	....	....	7.0
Denmark	....	....	....	7.8
Belgium	....	....	....	10.8
England and Wales	....	....	....	14.8

**Diverticulitis**

While these figures suggest that geographical factors may be significant, and that the disease is more prevalent in the North of Europe, they may simply reflect difference in management. It is possible that a higher percentage of cases are never admitted to hospital in Switzerland, though the divergence between Scotland and England is difficult to explain on that basis, unless there is, in fact, greater stress South of the Border.

**NATURE OF ULCERATIVE COLITIS**

Brook is of the opinion that ulcerative colitis is not a single condition, but rather a group of diseases: true idiopathic ulcerative colitis, ileocolitis and proctosigmoiditis. Whereas proctosigmoiditis is rare as an independent condition, Brooke stresses that it is important to differentiate ileocolitis from ulcerative colitis, as their treatment differs. Ileocolitis responds favourably to vagotomy, whereas such a procedure is harmful in patients with true colitis. In ileocolitis, the process starts in the ileum and extends to the colon. Differentiation is made from the fact that in ileocolitis, there is continuous diarrhoea, without blood and mucus, steatorrhoea is present, and there is marked ileal involvement as shown by barium follow-through X-ray studies.

True ulcerative colitis affects the descending and sigmoid colon maximally. It extends into the rectum and back towards the ileocaecal valve or beyond, for a short distance, if that valve is incompetent.

**SYMPTOMATOLOGY OF ULCERATIVE COLITIS**

The important symptoms of ulcerative colitis are diarrhoea with blood and mucus, crampy abdominal pain, anorexia and marked loss of weight. There may also be fever. The onset is either insidious or sudden and in the acute fulminating variety, the condition develops within a few hours. The commonest presentation however is that of low grade diarrhoea with frequent remissions, spanning a period of months or years. The longest remission recorded lasted 25 years! Many of the patients admitted to surgical wards have been sent up to Out-Patient departments as sufferers from piles, while the more acute cases are referred from the medical side.

**DIAGNOSIS**

Diagnosis depends more on special investigation than on ordinary clinical examination. Sigmoidoscopy is the key investigation, whilst radiology serves to define the extent of the disease and show the presence of complications, e.g. pseudopolyposis and strictures. Stool examination is performed to eliminate possible specific factors, particularly the shigella of dysentery. In the tropics, new concentration methods have been developed for the improved detection of *E. Histolytica*, *Ascaris*, *Ankylostoma* and *Schistosoma*.

The mucosa, as seen by sigmoidoscopy, is virtually diagnostic in this country, and is hyperaemic, oedematous and finely granular. Raw and angry in appearance, it may bleed on gentle swabbing.

### DIFFERENTIAL DIAGNOSIS

The principal disorders from which ulcerative colitis should be differentiated are:

1. Carcinoma of the Colon and Rectum
2. Diverticulitis
3. Amoebic and bacillary dysentery
4. Crohn's Disease
5. Familial Polyposis
6. Radiation Proctitis
7. Antibiotic Colitis
8. Tuberculosis Colitis

#### Carcinoma

The commonest age of onset of carcinoma of the colon is between 40 and 60 years, but it may occur in younger people. There is a short history of altered bowel habit, with bleeding per rectum and mucus on occasion. Characteristically, diarrhoea alternates with constipation. Some growths are palpable, and the majority can be visualised by rectal and sigmoidoscopic examination. A barium enema X-ray examination often demonstrates the lesion, though not always, and a proportion are first diagnosed at laparotomy.

This is also a disease of the older age groups, associated with a long history of pain commonly in the left iliac fossa. The passage of blood and mucus is uncommon. Diagnosis is usually made by X-ray examination after barium enema, and occasionally by sigmoidoscopy.

#### Dysentery

With amoebic dysentery, there will be a history of residence abroad, and diagnosis is made by demonstrating *E. Histolytica* in the stool, using concentration methods if necessary. The fact that ulcerative colitis is often confused with bacillary dysentery is shown by the large number of patients with ulcerative colitis, who are admitted to fever hospitals.

#### Crohn's Disease involving the Colon

This condition may be confused with ulcerative colitis. The "string stricture sign" of the X-ray examination may reveal the correct diagnosis, but laparotomy is often performed.

**Familial Polyposis Coli** may present with diarrhoea, blood and mucus, but there is usually a strong family history of bowel disturbance, with frequent death in midlife of colonic cancer. The polypi may be seen through the sigmoidoscope. **Radiation proctitis** results from the use of X-rays, radium, or radioactive cobalt. There is congestion of the mucosa, but the history of radiotherapy and the concomitant telangiectasis should signify the correct diagnosis. Antibiotic Colitis is associated with diarrhoea following the taking of antibiotics for some unrelated condition. Stool Culture may reveal staphylococci or monilia. **Tuberculous Colitis** is comparatively uncommon, but by no means rare. It is a sequel of pulmonary tuberculosis, and may be "ulcerative" or "hyperplastic" in type. Diagnosis is difficult for the mycobacterium is but infrequently isolated.

Finally, ulcerative colitis should be distinguished from simple mucous colitis, the ileocolitis described by Brooke and colitis due to bilharzial dysentery.

## AETIOLOGY

The study of aetiology is important, because, without a knowledge of this, treatment must be non-specific. The study, however, is unsatisfactory. Innumerable theories have been put forward since 1924, when Bargen isolated the notorious "diplostreptococcus" and announced to a credulous medical world that he had found the cause of ulcerative colitis. From the possibility of an infective aetiology, there have been the allergic and lysozyme theories and an interesting suggestion by Robertson and Kernohan, that ulcerative colitis might be due to a hypertrophy of the ganglia of the myenteric plexus—the reverse of what the same workers discovered in Hirschsprung's disease, where spastic obstruction is produced by absence of the same ganglia.

It is perhaps encouraging to note that the most discussed theory, at the moment, was first put forward by a medical student in 1930. This psychosomatic theory is the only one with any standing now, and it has considerable supporting evidence:

1. A history of emotional conflict preceding the onset of symptoms.
2. Personality Studies.
3. Various physiological observations on the colon, which show mucosal reaction to emotional stress.

The supporters of this theory, a group including many psychiatrists, sometimes become so lyrical in its praise that a few have advocated leucotomy before colectomy. French surgeons are performing this operation using electrocoagulation of the grey matter. It is no doubt a consolation to note that this is conducted under the supervision of "psychiatristes qualifiés."

The opponents of the psychosomatic theory of causation hold the so-called "common sense view" that a patient who is passing up to 20 dribbling motions a day is bound to be emotionally disturbed. Result rather than cause, they say.

## THE TREATMENT OF ULCERATIVE COLITIS

A discussion about treatment is difficult, owing to the wide variation in expert views. This is partly due to the fact that the surgeons are, on the whole, seeing more severe cases than the physicians. Psychiatrists in Britain seldom receive the chance to cure, though success "with 50 hours of continuous psychotherapy" has been reported from America.

## MEDICAL TREATMENT

It is hard to judge the comparative merits of different forms of treatment, as the disease may remit spontaneously. The usual measures of rest and supportive therapy (e.g. parenteral fluids, whole blood, protein hydrolysates) will usually suffice, the diarrhoea being controlled by belladonna, tincture of opium and agar or tragacanth. The Americans are impressed by a multiple intestinal absorbent called Resion. This is supposed to remove toxic amines, leaving essential minerals, vitamins and amino acids.

Both sulphonamides and antibiotics can be given in the hope that they will sterilise the bowel of secondary invaders. Their use has undoubtedly been stimulated by the possibility that ulcerative colitis might after all be caused by an undiscovered bacterial agent. Bargen, though he is reputed not to believe in his own theory that the condition is caused by a bacterium, finds sulphonamides more effective in treatment than any other single drug, including the steroids. His favourite is a new drug, "salazopyrin," a com-

bination of sulphonamide with salicylic acid with a special affinity for the submucosa, hence rationalising the treatment of a disease localised here.

Most clinicians regard cortisone and A.C.T.H. as the sheet anchor of treatment in the severe case. In some cases, 300 mg. of oral cortisone can be used. In very acute cases, intravenous corticotrophin is very valuable, and recently rectal hydrocortisone has been used by Truelove, in the form of water-soluble hydrocortisone hemisuccinate sodium. Why steroids are effective is not known. One might have expected their contraindication in what appears to be an inflammatory affection. Probably the sense of well-being, and a strong desire to "get well" is at least contributory, and in this euphoric mood, the patients have improved appetites and tend to gain weight. The combination of cortisone with A.C.T.H. is thought to enhance the action of the former, but it is important not to persist with steroid therapy, if there is no response within 14 days, as operative risks are otherwise considerably increased. If operation becomes necessary in a patient who has been having steroid therapy, it is important to cover the operation and recovery period with cortisone. This is to avoid post-operative collapse through adrenal insufficiency.

### SURGICAL TREATMENT

The indications for surgical treatment are:

1. Chronic invalidism: failed medical treatment
2. Acute fulminating disease
3. Presence of complications (arthritis, stricture etc.)
4. The risk of carcinoma (particularly in patients with longstanding disease)

Operative treatment is based on two principles. The faecal stream must be diverted (hence ileostomy) and the damaged bowel should be removed. Undoubtedly, the most widely practised operation is total proctocolectomy, with a permanent ileostomy. This is done in one or two stages, depending on the condition of the patient. The first stage should include the establishment of the ileostomy and removal of the colon, with excision of the sigmoid colon and rectum as a second stage. There is a possibility that lesions in the rectum, if present, might heal after diversion of the faecal stream, and this possibility has prompted attempts to preserve the rectum, with subsequent ileorectal anastomosis. Aylett has produced the most favourable results with this latter procedure and has saved patients from condemnation to the ileostomy life. In Aylett's series (38 cases), the average number of bowel motions is 5 in the 24-hour period, but unfortunately few other surgeons can equal these good results. Dukes considers that the procedure is only valuable in children and mentally defective patients, who could not manage an ileostomy. Many such anastomoses have had to be taken down, owing to the daily passage of an incapacitating number of motions and to the resurgence of the disease in the rectum. The new "Chiron" disposable ileostomy bag has found great favour, and the various ileostomy associations ("O.T. Associations") have done much to help their members. Ileostomists can live full and happy lives, and, with sensible management of their ileostomy, they are scarcely handicapped in any way.

And yet, this is not the final answer to the ulcerative colitis problem, for as one French writer put it, "colectomy is merely the extirpation of an anatomically destroyed organ, and not the cure of the disease."