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ULCERATIVE COLITIS: CLINICAL ASPECTS

BY

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Ulcerative colitis was described by Hale-White in 1888 and Allchin in 1885, and discovered at necropsy by Samuel Wilks in 1875. It seems to have been known to Sydenham, who in 1669 described the "bloody flux." Although the disease has definite clinical and anatomical features, there is still controversy about the symptoms and treatment, and the cause has remained particularly obscure. It was the purpose of the present investigation to see, by studying the clinical aspects of a fairly large series of cases of ulcerative colitis, whether fresh light could be thrown on any of these points. The material consisted of forty unselected cases of "idiopathic ulcerative colitis." One additional case in which the illness had started with dysentery many years previously was excluded for reasons which will be explained later. The clinical examination included a carefully dated life history. The appearances of the colon were studied with the sigmoidoscope. The stools and blood were examined. Whenever possible, radiographs were taken both by barium meal and by barium enema, and test meals were made.

Definition

In idiopathic ulcerative colitis there is severe inflammation of the mucosa and submucosa of the colon, generally with superficial ulceration. The deeper layers are rarely affected. Although the whole colon is often involved, the lesion almost without exception predominates in its lowest part, and also in the upper part of the rectum, the lower portion of which is often normal. Clinically the disease is characterized by the frequent passage from the bowels of blood, mucus, and often pus. It tends to pursue a chronic course lasting many years, marked by a succession of relapses and remissions. An attempt was made, by considering the features in each case, to divide the disease into three groups: those where the lesion is localized to the recto-sigmoid region (the so-called granular proctocolitis); those where it starts in the recto-sigmoid region but later becomes diffuse throughout the colon; and those where it is diffuse from the start. It was found that no such real distinction could be made. Not only are all gradations of the one disease process seen in different patients, but often the type appears to change in an individual patient.

Incidence

The disease is one of early adult life. The illness in the present series started between the ages of 11 and 20 in nine cases, and in twenty-one others between the ages of 21 and 30. The youngest was a girl of 10 and the oldest a man of 61. There were approximately twice as many women as men. The sex had no relation to the age of the onset or to the type or severity of the disease. Most of the patients were sedentary and not manual workers, and were of a higher educational standard than the average hospital class.

Onset of Disease

The onset may be insidious (fourteen cases), but is more often sudden (twenty-six cases). The first symptoms are usually diarrhoea and the passage of blood and mucus. Occasionally there is constipation. Of the forty cases the onset occurred with diarrhoea (thirteen with blood) in twenty-seven, constipation (six with blood) in seven, and normal bowel actions, with blood, in five. Another common symptom is pain in the lower abdomen, relieved by opening the bowels. Although the onset is often abrupt, the initial illness is seldom acute. Only two of the patients had fever. In spite of the diarrhoea and the passage of blood and mucus from the bowels, the general health often remains at first surprisingly good. More than half the patients did not seek medical advice during the first month of their illness and five waited over a year. When asked the reason for the delay they said it was because they had felt relatively well and had taken little notice of the state of their stools. It is a common experience to see patients who have not reached an acute stage and later, during remissions, passing the most horrible stools and yet remaining in apparently good health.

It has been said that ulcerative colitis sometimes results from mucous colitis. This is not our experience, either in this series or elsewhere. This agrees with the opinion of Spriggs (1934) and others. Mucous colitis is a syndrome, which incidentally one sees far less often than some years ago, associated with chronic constipation and the misuse of purgatives. The nature of the onset has no relation to the subsequent severity of the disease. The most banal beginnings can herald the most serious symptoms.

Symptoms

General Symptoms.—Either at the onset, or after a period of mild initial symptoms lasting for weeks or years, the patient may become gradually or quite suddenly extremely ill. Then, after an illness continuing perhaps for months, in which the patient sometimes becomes

almost moribund, there is a remission, with recovery. Again after an interval varying from weeks to years there may be a further relapse, and so on. The profound loss of weight and strength during a severe attack is one of the outstanding features of the disease. In spite of this, as was pointed out by Hardy and Bulmer (1933), there are few diseases in medicine in which a patient may reach such a stage of exhaustion and emaciation and yet rapidly make so spectacular a recovery. During a remission the patient may feel quite well. Although, as has been explained, it is not really possible to differentiate between the various forms of the disease, it may be said that when the lesion seems diffuse throughout the colon the illness is often more severe and is characterized by grave constitutional symptoms such as fever and rapid emaciation. On the other hand, when the disease appears to be localized mostly to the recto-sigmoid region (abnormal sigmoidoscopic appearances but normal radiographs) the illness is often of long duration, milder in degree, and marked more by anaemia from haemorrhage than by severe general symptoms.

Fever (seventeen cases).—In severe cases there is fever. It may be continuous or intermittent, and may last for weeks or months. It is always accompanied by a worsening of the patient's condition. It is seen more in the diffuse cases than in those where the lesion seems localized to the recto-sigmoid region.

Abdominal Pain.—Abdominal pain is a common symptom (twenty-five cases), but is seldom severe. It is of several types:

(*a*) Pain in the lower abdomen, which is often colicky. It gradually becomes worse before passing a motion, which relieves it. The pain may be worse when the patient moves about.

(*b*) A sensation of a lump in the rectum or pain in the lower part of the sacrum.

(*c*) A discomfort in the rectum, with a desire to open the bowels, but often not relieved by so doing. This symptom is seen particularly in cases where blood and mucus are passed many times a day without any faecal material.

(*d*) Tenesmus is relatively uncommon, although the patient often has an unfinished sense, without pain, after passing a motion.

Other Gastro-intestinal Symptoms.—Flatulence, borborygmi, and a feeling of abdominal distension are common. During severe attacks there is often loss of appetite, nausea, and vomiting. Otherwise the appetite remains good.

Nervous Symptoms during the Course of the Disease.—It is an old saying that affections above the diaphragm tend to optimism and those below to pessimism. Ulcerative colitis is no exception. In severe cases there is marked prostration, depression, and anxiety. It is a matter of common clinical experience that the degree of this mental disturbance is related not only to the intensity of the physical disturbance but also to the previous personality of the patient. Although no clear distinction has commonly been made between the psychological characteristics and symptoms which precede and those which follow the bloody diarrhoea, those who have studied the condition have almost invariably noticed in these patients the presence of grossly abnormal mental symptoms. These points are discussed further in the following paper by Dr. Wittkower.

Bowels.—Diarrhoea is a common symptom. In some this is more marked after food and in others more in the morning and evening. Thirty patients in our series of forty stated spontaneously that emotional factors such as startling events, anticipation of embarrassing situations, or even fear of the symptom brought on attacks of diarrhoea. There may be as many as forty stools a day. When the lesion appears to be affecting the whole colon the stools are frequent, offensive, fluid, thin, and souplike, consisting of faecal material closely admixed with blood, mucus, and often pus. On the other hand, when the disease appears to be confined to the recto-sigmoid region, blood and lumps of blood-stained mucus and also pus may be passed many times a day separate from the motion or without any faecal material at all. Half the patients in this group were actually constipated, and although their bowels might be opened ten to fifteen times a day faeces would only be passed every second or third day. Ten of the forty cases in this series were constipated, although some of them had occasional attacks of diarrhoea. Nearly all the patients complained of urgency of defaecation. They all feared incontinence, but only five had any loss of control throughout the course of the disease.

Physical Signs

Considering the gravity of the disease the physical signs are slight. They are:

Abdomen.—The abdominal wall is often thin. Although there is a sense of fullness on palpation, visible distension is seldom seen. Occasionally there is retraction. Rigidity is rare. Tenderness, when present, is mostly in the lower part of the abdomen and along the course of the large bowel, particularly over the descending colon. The colon, usually the caecum or descending colon, was palpable in thirteen cases. The descending colon sometimes feels contracted and mobile.

Blood Pressure.—During the severe phase the blood pressure is often low, and the systolic pressure may be under 100.

Per Rectum.—The sphincter is often contracted, and digital examination painful to the patient. The mucous membrane may feel velvety and later rough.

Stools

Blood and mucus were always present in our series and pus less often. Frank pus is evidence of ulceration. The stools were carefully examined for parasites and organisms. Parasites and their products were never seen. Abnormal organisms were found in sixteen cases. They were thought to have little significance, as they differed from each other and belonged to types which are not normally pathogenic. They included ***B. asiaticus, B. alkaligenes faecalis, B. lactis aerogenes***, and haemolytic ***B. coli***, but were mostly unclassifiable non-lactose-fermenting coliform organisms of no known pathogenic group. Dysenteric organisms were never found. Anaerobic cultures for Bargen's coccus were seldom made, for reasons which will be later explained.

Blood

Most cases throughout the disease show a moderate anaemia, which becomes more marked during a relapse and recovers again with a remission. The anaemia tends to be greatest when the recto-sigmoid region is the part most affected. Only once did the haemoglobin fall below 40 per cent. The particular instance illustrates the great powers of recovery in the disease: the haemoglobin fell to 28 per cent. during a relapse and rose to 90 per cent. in the following remission. In half the cases there was no leucocytosis. During a severe relapse

the figure may rise to 12,000 or 15,000 per c.mm., but only in one case was it ever higher than 20,000. The differential count is either essentially normal or shows an increase in polymorphonuclear cells when the total white count is raised. Gross eosinophilia was not noticed.

Sedimentation Rate.—This was examined in twenty-one cases. The highest recorded figure was 43 mm. in the hour (Westergren), but the average was 16 mm. Owing to the anaemia and loss of fluid these figures must be regarded as inaccurate. They are surprisingly low, however, if the disease be regarded as a primary infection.

Agglutinations.—Occasionally agglutinins to various organisms, including dysenteric organisms, are found in low and insignificant titre in the blood (for example, Flexner Y: 1 in 25). It is possible that they are produced by the secondary invasion of the ulcers in the colon by organisms which may have acquired mildly pathogenic qualities.

Sigmoidoscopic Appearances

The mucous membrane of the upper part of the rectum and the lower part of the sigmoid has a reddened granular appearance and bleeds easily wherever the instrument touches it. Blood and muco-pus are seen coming down from higher in the bowel. The condition was found without visible ulceration in eighteen cases. In others the mucous membrane is more oedematous, and superficial ulcers appear (seven cases) which at first are tiny but later run together and form larger ulcers, often covered with a muco-purulent exudate. In more chronic cases there are callous ulcers with oedematous mucous membrane between. Less often the mucous membrane has a "cobblestone" appearance. During remissions healing ulcers may be observed with normal intervening mucous membrane, and in some there are linear or three-pointed scars of healed ulcers. It should be recognized that the presence or absence of visible ulceration bears no relation to the extent of the lesion or the severity of the disease. Furthermore, the mucous membrane is quite capable of healing. In two cases a perfectly normal mucosa was seen where previously there had been a granular appearance with superficial ulceration. Rectal strictures were observed in two cases of long standing.

X-ray Examination

Whenever possible, radiographs were taken before and after the evacuation of a barium enema and nine hours after the ingestion of a barium meal. The rectum is often small. The passage of the enema round the colon is sometimes very rapid, the barium reaching the caecum in twenty seconds and in some instances going a short way into the ileum. The caecum is often large and baggy. In mild stages of the disease, apart from this quick passage, there may be no other gross abnormality. The colon is usually irritable. Nine hours after a meal, in some cases, nearly all the barium will have been expelled, and in others, although the passage may be slow, parts of the colon will contain little barium.

The most characteristic feature is the complete lack of haustration seen in the distal part and sometimes in the whole colon. This tubular appearance is often found in mild cases, but if there is also narrowing the disease is usually severe. In such cases the bowel has a streaky appearance after evacuation. In parts of the bowel the outline may be spiky and irregular. When the disease is severe there may be a fine granular mottling of the bowel shadow and sometimes a moth-eaten, marbled effect, with numbers of translucent areas of various shapes and sizes. The appearances alter in individual cases according to the stage of the disease. Thus in one instance the whole colon was irregular and streaky, and six months later, when the patient had improved, it was smooth and tubular.

Test Meals

Fractional test meals were taken in twenty-three cases. In five there was complete achlorhydria, in four slight hypochlorhydria, seven were normal, and seven showed a high content of free hydrochloric acid. These findings conform with those of Spriggs (1934) and Hurst (1935), and do not lend support to a theory that the disease is usually associated with anacidity. However, four of the patients who had achlorhydria or gross hypochlorhydria showed, by radiographs or carmine, that food passed rapidly through the gastro-intestinal tract. In three of these a long period of diarrhoea had preceded the appearance of blood in the stools. It is an interesting speculation as to whether in these cases and some others the constant arrival in the colon of imperfectly digested food from higher up may give rise to a secondary colitis.

Evolution of the Disease

Ulcerative colitis pursues a chronic course, usually with a succession of relapses and remissions. The disease is of long duration. It had started more than a year ago in thirty-four of the cases, more than five years ago in thirteen, and more than ten years ago in nine. In one instance the disease had existed for thirty-four years. Twenty-eight of the forty patients had relapses, mild or severe. It is often thought that as time goes on the remissions become shorter and relapses more grave. This is not our experience. Remissions and relapses might last for days or years. The length of remissions was quite irregular, and bore no relation to the number or severity of previous relapses. Moreover, the severity of a relapse was not influenced by the length and severity of former ones. Of the twenty-eight patients who relapsed, twenty-three were well during their remissions—fourteen completely, six save for constipation, and three except for occasional diarrhoea. Others had looseness of the bowels with occasional blood in the stools, but otherwise remained in good health.

Causes of Relapse

It is generally recognized that a relapse may be brought on by an acute infection such as tonsillitis, an error of diet, a change in the weather, and so on. It is not, however, generally conceded that nervous factors play much part. Thus Hurst (1935) says that "relapses tend to occur with acute infections ... and, much less frequently, fatigue from mental or physical overwork"; and Spriggs (1934) states: "In one patient any emotional stress at home would be followed by bleeding from the bowel." In our experience nervous factors play a large and important part in bringing about a relapse. This aspect will be dealt with later in greater detail, but it is interesting to record here those factors which the patients themselves considered responsible and how many times they regarded nervous factors as the cause.

Table showing Causes of Relapse according to the Patient

	Cases		Cases
Food indiscretion	4	Menstruation..	3
Fruit	4	Menopause	1
Hot drinks	1	Emotional factors (shock, worry, anxiety)	20
Purgatives	1	Violent denial of emotional factors	2
"Colds"	2		
Change of temperature ..	2		

Complications

The complications in this series were few, although I have seen most of them from time to time in other cases. The direct complications may be severe or fatal. Severe haemorrhage, perforation (rare and often difficult to diagnose), perirectal suppuration, polypoid conditions, strictures, and malignant change are well known. The more remote complications are arthritis, septicaemic conditions, severe lesions in the mouth, and eye troubles. In the present series pseudo-polypoid conditions in the large bowel were sometimes seen. Two cases had rectal strictures. Iritis was present in one. Occasionally there was ulceration of the mouth. Two had arthritis synchronous with the colitis. None of the cases showed any evidence of pyelitis or cystitis, which is in agreement with the findings of Ball (1926-7).

Diagnosis and Prognosis

The diagnosis is seldom difficult if the investigation is thorough. It cannot be stressed enough that all cases of chronic diarrhoea, and especially those with blood in the stools, must be thoroughly investigated. Apart from piles and fissure there are no mild causes of bright blood in the stools, and patients may often ascribe blood as coming from piles which in reality is coming from higher up. In the course of routine sigmoidoscopy we have recently seen two operable malignant new growths, one in a woman thought to be suffering only from simple mucous colitis.

The prognosis of an individual case is difficult to assess, and must of course be reserved. We believe that it is not nearly so serious as regards life as is generally supposed. As has been said, there are few diseases in which a patient may become so ill and emaciated and yet recover. The number and severity of previous relapses has little relation to the prognosis. Hospital wards give an exaggerated idea of the gravity of the condition, as only the severe cases are seen. Many of the cases are much milder than these, particularly when the lesion appears to be localized to the recto-sigmoid region rather than diffused throughout the colon. At the present time all the patients in this series are alive and most of them in moderately good health. Some—and these include cases which have been very severe—seem almost to have recovered. Among the milder cases there was one woman who had had the disease for fifteen years. During all this time she had had diarrhoea, with occasional blood in the stools. Six months ago the diarrhoea stopped and she has been perfectly well since. However, complete recovery from the disease with no liability to future breakdown is probably uncommon.

Pathogenesis

As to the cause of this disease many theories have been advanced but none is satisfactory. In the present series only one patient admitted to a dietary indiscretion at the time of the onset. There was no evidence of lack of vitamins, of focal sepsis, or of allergic response. There was nothing important in the past or in the family histories, except that as children the patients did not appear to have been strong. Eight tended to have diarrhoea, four of them whenever nervous, and seven tended to be constipated, but there was seldom any history of long-standing diarrhoea or constipation preceding the disease. Only nine of twenty-three patients tested had subacidity of the gastric juice. Only one had had a previous rectal lesion—a perianal abscess ten months before.

There is no convincing evidence that the disease is the result of a primary infection of the colon. Neither the histological findings nor the clinical picture suggest it. No proved organism has been found. Bargen's coccus may be present in the ulcers, but it is not generally accepted that this organism is responsible for the disease. It appears to be a normal inhabitant of the bowel. Professor Garrod (1938) tells me that he found it not only in the stools of eleven out of seventeen patients with ulcerative colitis but also in the normal stools of fourteen out of twenty-six people not suffering from the disease. It is said that when obtained from the ulcers this organism is capable of producing a colitis when injected into rabbits; but this applies to other organisms similarly obtained, such as those described by Buttiaux and Sévin (1931), and Gallart-Mones and Sanjuan Domingo (1935). The probable explanation is that Bargen's coccus and other normal organisms enter the ulcers as secondary invaders. It is of course possible, when secondary invasion has taken place, that organisms which are normally benign may acquire more pathogenic qualities and still further add to the existing inflammation. Another argument advanced in favour of Bargen's coccus is the response of the patient to specific treatment. This is no guide as to the specificity of the organism, as it will be shown later that a wide variety of treatments can produce admirable results in the same patient.

There is considerable evidence that these cases were not caused by dysentery. One case of proved dysentery was deliberately excluded from the series. The disease was not contagious, infectious, or epidemic. It often began insidiously without fever. There was no history of dysentery in the past. Only four of the patients had ever left the country—three to the Continent and one to Palestine to recoup from a relapse of her colitis. Only three patients related that other members of the family had ever had bloody diarrhoea. The organisms were never found in the stools, though carefully looked for. Hurst (1935) suggests that dysentery bacilli are seldom found, as the cases are already chronic when the stools are first examined. I saw two patients, however, one week and three weeks from the onset of their symptoms, and in neither of these was Professor Garrod, after repeated examination, able to demonstrate the organisms in the stools. We believe that the reason so much stress has been laid on dysentery as a causative factor has been that many of the published series of cases were near the time of the great war, when dysentery was so common. The patients in the present series, however, had not had war experience, having mostly been too young. If the disease were due to dysentery the history should be easy, the organism should be found in early cases, and the disease would be more widespread.

For a long time I had a growing conviction that, apart from the nervous symptoms developed in the course of the disease, emotional disturbances superimposed on an unusual or abnormal personality frequently preceded the onset. For this reason I asked Dr. Wittkower to examine the emotional background of these patients. As this aspect of the disease is unfamiliar his findings are given in some detail in the paper which follows. The results are interesting. He states that in thirty-seven of the forty patients psychological abnormalities, well beyond the range of individual differences of the average population, antedated the colitis, and, further, that in twenty-eight cases clear-cut emotional trauma, serious enough to be regarded as a precipitating agent, immediately preceded the onset of the disease.

To summarize: while not suggesting that an emotional upset is the sole cause of the disease (if it were, ulcerative colitis would be far more common than it is), we do suggest that it is a most important factor in the aetiology. The mechanism remains obscure. It may be that with these people the bowel is particularly prone to the lesion, and that a similar emotional disturbance in others would produce, perhaps, simple diarrhoea. Once the disease is established, invasion of the mucosa by organisms secondary to the ulceration still further complicates the picture.

Treatment

Nearly all patients with ulcerative colitis, even when they appear almost moribund, will respond well to careful treatment. It is fair to say that no specific therapy has as yet been devised. The success of a particular remedy is no proof of its specificity. Individual patients may respond in an astonishing way to many and varied treatments, and it seems that suggestion plays a large part in their success. There are many examples in the present series, but a few will serve as an illustration.

Case 1.—First attack: recovery with general treatment. Second attack (very severe, and patient almost moribund): " During moments of consciousness the Rabbi came to see me and told me that I was being very selfish and making my parents ill. It was then that I wanted to get better and really did get better." Weight went up three stone. Third attack (following a mental upset): Recovery with appendicostomy. Now keeps well by passing catheter into the opening.

Case 2.—Recovered from six attacks. The first with general treatment; the second with wash-outs; the third with wash-outs and iron; the fourth with serum; the fifth with autogenous vaccine; the last with general treatment.

Case 3.—Recovery followed operation for a hernia.

Case 4.—First attack relieved by an appendicostomy; the second by reopening it; the third by stopping the appendicostomy wash-outs; the fourth and fifth by general treatment.

Symptomatic Treatment

Various treatments were used with these patients, but the following seem to us the important points:

1. Rest in bed and warmth whenever there is fever or general illness.

2. In the acute stage the diet should be bland and simple, but later, although it is important that it should have a low residue, the diet should be nourishing and high in calorie value. Seasoned foods, spices, and hot or effervescing drinks should be avoided. Large quantities of milk are seldom well borne.

3. Vitamins should be added to the diet—for example, radiostoleum (10 minims twice a day), marmite, and orange juice, or, if preferred, ascorbic acid (100 mg. a day) by mouth.

4. Iron should be given for the anaemia. Even in large doses by mouth it seldom seems to aggravate the condition of the bowel. Thirty grains of ferri et ammon. cit. thrice daily or dry ferrous salts are useful. Iron combined with liver, as in some of the proprietary capsules, is often valuable.

5. Adsorbents such as kaolin, kaylene-ol, lacteol, and charcoal are given when the stools are offensive. Two or three teaspoonfuls of " carbantren " (composed of iodochloroxyquinoline-bismuth 10 grammes, pectin 20 grammes, active charcoal 70 grammes) may be administered twice a day in water. We have given this preparation an extensive trial and are pleased with the results.

6. Wash-outs should be used with caution; they often do more harm than good. When there is much pus in the stools saline wash-outs gently given may occasionally be of value. When there is much haemorrhage from a " weeping " mucous membrane 0.5 per cent. tannic acid may be used.

7. Atropine or tincture of belladonna may be given when there is spasm of the colon. Opium may be necessary, but should, if possible, be avoided. When there is achlorhydria, half a drachm of dilute hydrochloric acid made up in half a pint of orange drink may be sipped slowly with meals. In the less acute stages patients should be given general tonics such as strychnine and glycerophosphates.

8. Two special measures, as part of the general treatment, are sometimes of considerable value:

(*a*) The Raw Apple Diet.—The patient is given twelve pounded raw apples without core, pips, or skin each day with a little water to drink but nothing else to eat. This is continued for several days. It often greatly improves the stools, and any improvement will show itself within two days.

(*b*) Cod-liver Oil Retention Enemata.—At the end of the day 4 oz. of crude cod-liver oil are injected slowly and gently into the rectum. The patient wears a towel and retains the oil, if possible, throughout the night. Best (1938) advises that a 20-oz. normal saline enema should precede the injection. When the saline has been expelled the oil should be run in with the patient in the knee-chest position. The treatment may be continued daily, or on alternate days, for a period of three to six weeks.

9. Agar, normocol, and isogel are sometimes helpful in giving bulk to the stools.

10. Patients who are constipated should take liquid paraffin indefinitely.

11. Blood transfusions are not only of great value as an emergency measure when there is severe anaemia, but also small transfusions (250 c.cm.) serve as useful tonics during the more severe phases of the disease.

12. Of the various surgical treatments, ileostomy seems to us the rational operation. Only by this operation can the colon be put at complete rest. The decision, however, should be made with great care, for not only do the most severely ill patients frequently recover with careful medical treatment but the mortality from this operation is probably still in the region of 50 per cent.

Dr. Wittkower's results suggest that selected cases might be amenable to psychotherapy. Two patients who had had the disease for many years practically recovered after relating the story of their difficulties.

In conclusion, it may be said that the secrets of successful treatment depend upon the meticulous consideration and care of each individual patient, the symptoms being treated as they arise. Specific methods have been successful in the hands of enthusiasts and less so in the hands of others, and this implies that suggestion plays a powerful part in the remission of the disease. An optimistic attitude is essential, and it is necessary that both the doctor and the patient should have complete faith in the efficacy of the treatment.

Summary

The clinical aspects of forty unselected cases of idiopathic ulcerative colitis have been studied.

The lesion is nearly always greatest at the recto-sigmoid region, and no sharp distinction can be made between those cases in which it is localized to this region and those in which it is diffused throughout the colon.

The disease mostly affects sedentary workers under the age of 30—women more than men.

The onset may be mild or severe. The disease does not follow mucous colitis.

The symptoms and signs are described. When the lesion is diffuse there is often severe illness, with fever and emaciation; when the lesion is localized the disease tends to be milder and characterized more by anaemia

from haemorrhage. In the latter type constipation is not uncommon.

Pathogenic organisms were never found in the stools.

The blood picture is discussed.

The sigmoidoscopic appearances of the bowel are recorded. The presence or absence of visible ulceration bears little relation to the severity or the extent of the disease. Healing is sometimes observed.

The radiological appearances are characteristic. The passage of a barium enema throughout the colon is usually rapid: the rectum is small. Lack of haustration in the colon may be seen in mild cases; if there is also narrowing the disease is usually severe. Other appearances in severe cases, such as fine granular mottling or "marbling," are discussed.

Achlorhydria is infrequent. It is possible that very occasionally the colitis may be secondary to achlorhydria and the rapid passage of food through the stomach and small intestine.

The disease runs a chronic course, with remissions and relapses. The relapses occur at irregular intervals and bear no relation in their severity or duration to previous ones. They are often precipitated by emotional traumata.

Complications in this series were few.

Diagnosis is not difficult if all patients who are passing blood in the stools are thoroughly examined.

Prognosis must be reserved; but the disease is not so serious as regards life as is generally supposed. Occasionally there is complete healing of the lesion.

The pathogenesis is discussed. Although it is obvious that there is secondary infection of the colon, evidence that the disease is caused by a primary infection is unconvincing. While not suggesting that an emotional upset is the sole cause of the disease, it is suggested that this is a most important factor in the aetiology.

Methods of treatment are described. Meticulous care of each patient and an optimistic attitude on the part of both patient and physician are essential.

I am grateful to Professor Garrod, Mr. Naunton Morgan, and Dr. J. V. Sparks for their aid in a number of the examinations of the stools, the sigmoidoscopies, and the radiographs. Some of the patients were under the care of my colleagues at St. Bartholomew's and the Woolwich Memorial and Gordon Hospitals, and we thank them for their courtesy in allowing us to examine these patients.

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The friends and pupils of Dr. Laignel Lavastine, professor of the history of medicine in the Paris Faculty, have decided to offer him a medal on the occasion of his election as member of the Académie de Médecine. Subscriptions should be sent to the publisher, Georges Masson, 120, Boulevard Saint-Germain, Paris, VI.

ULCERATIVE COLITIS: PERSONALITY STUDIES

BY

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In continuation of previous psychosomatic researches, I gladly accepted the invitation of Dr. E. R. Cullinan of St. Bartholomew's Hospital to investigate the relative significance of physical and personality factors in what is known as ulcerative colitis.

Ulcerative colitis is a comparatively rare disease, characterized by bloody diarrhoea, with a typical proctoscopic and *x*-ray picture. There is a tendency to relapse and remit, and a bad prognosis; in contrast to dysentery, ulcerative colitis has been described as "non-specific" colitis. It was chosen for the present study because such patients commonly refer its onset and relapses to "worry," and often appear mentally abnormal even to the casual observer.

Material and Method of Examination

A biographical study was made of forty unselected patients with ulcerative colitis, physically examined by Dr. Cullinan. Usually the patients were submitted to two or three interviews, each of two or three hours' duration. If necessary, the data were checked by an objective anamnesis, obtained from relatives. A detailed report on each patient has been kept available. The ages of the patients at the time of examination were from 12 to 65, the onset mainly between 20 and 40. Fifteen were men, twenty-six women. As compared with the average hospital class, they were better educated.

Findings

In the majority of the patients studied psychological abnormalities and disorders far beyond the range of individual differences in the average population were found to antedate the initial onset of the colitis. In relation to other investigations control groups of patients have been examined by methods which are identical with those used in the present research. In the ulcerative colitis patients the degree of difference from average individuals was so gross as to make a special control group unnecessary. A dated clinical history and a dated life history, taken independently and verified from relatives, showed that disturbing events in the patient's life had preceded the onset, return, and increase of symptoms more often than can be due to chance.

Personality of Patients suffering from Ulcerative Colitis

CHILDHOOD ADJUSTMENT

As will be shown below, in their characteristics as children these patients showed clearly psychological patterns which in adult life became intensified to an unmistakably abnormal degree. The patients did not fall into any one psychological group. An attempt was made to clarify the diverse symptoms present by a study of the childhood characteristics, since these might be expected to be simpler. As these at first sight showed no obvious common factors a simple statistical approach was used. A chart was prepared on which was marked