TREATMENT IN GENERAL PRACTICE

This article is one of a series on the management of some diseases of the digestive system met with in general practice.

THE TREATMENT OF ULCERATIVE COLITIS

BY

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The most important factors in the successful treatment of ulcerative colitis are patience and perseverance on the part of both doctor and patient. Even in early cases several weeks of strict treatment are generally required ; in chronic and late cases the patient may have to be in bed under continuous supervision for a year or more. It is natural that patient and doctor should wish to celebrate any improvement by relaxing the rigour of treatment. But it is essential to control by endoscopy any apparent improvement, as the disappearance of symptoms may precede the disappearance of the last trace of ulceration and inflammation by several weeks. Relapse is almost certain to occur unless treatment is continued until all signs of inflammation have disappeared.

Rest

The patient should be kept completely at rest in bed so long as there is any pyrexia and so long as more than two or three stools are passed in twenty-four hours. After that he may be allowed to get up for a warm bath and to lie on a couch during the day, but he must not take any more exercise than is involved in walking from one room to another until recovery is complete.

Diet

The small intestines are rarely involved in ulcerative colitis. It is therefore quite unnecessary to make any restriction in diet beyond the avoidance of pips and skins of fruit and fibres of vegetables. This is a matter of extreme importance, as the disease is likely to last for a long period, and too limited a diet not only results in loss of weight and strength, but the food taken may contain insufficient iron to compensate for the loss of blood in the stools, and microcytic anaemia then results. The anaemia and malnutrition, and particularly any deficiency in vitamins, aggravate the colitis and may lead to serious cutaneous and ocular complications, all of which respond rapidly to a change to a more liberal diet. Patients with ulcerative colitis often have quite a good appetite, and there is no reason for limiting their allowance of meat and other foods containing no indigestible residue. Fruit is best given in the form of strained juice and "fool," and green vegetables as purées.

Local Treatment

Except in the most acute stages of ulcerative colitis local treatment is often useful. The fluid should be run in through a soft catheter introduced only just beyond the anal sphincter. The quantity should depend upon the extent of the disease as shown by *x*-ray examination. If the whole colon is involved a pint and a half is needed ; when introduced slowly at a pressure not exceeding eighteen inches of water, it reaches the caecum without difficulty and is almost as effective as if given through an appendicular or caecal stoma. If only the pelvic colon and rectum are involved half or three-quarters of a pint are sufficient, and the patient should remain in a semi-sitting position so that the fluid cannot run into the more proximal part of the colon. The most useful solution is tannic acid, the strength being gradually increased from half to two grains to the ounce ; it should be retained, if possible, for half an hour. When the disease is localized to the rectum, the most effective treatment is to blow bismuth subgallate powder on to the mucous membrane through a proctoscope.

Drugs

Codeine.—When the diarrhoea is severe the patient is likely to become exhausted by want of sleep. A dose of codeine sufficient to keep the bowels from acting more than once in the night should be given at 10 p.m.

Belladonna.—In most cases the muscular coat of the colon is extremely irritable, and healing is much retarded by its continuous activity. Tincture of belladonna should therefore be given every six or four hours, the dose being gradually increased from five minims to the maximum the patient can take without getting his mouth uncomfortably dry.

Charcoal.—Pain is not a common complaint in ulcerative colitis. Colicky pains may, however, occur owing to distension with gas, especially shortly before the bowels act. This can always be relieved by giving a tablespoonful of charcoal two or three times a day.

Iron.—Most patients with ulcerative colitis are more or less anaemic ; thirty grains of iron and ammonium citrate should be given three times a day till the haemoglobin is at least 80 per cent. If the haemoglobin percentage is less than 70 per cent., transfusion not only improves the patient's general condition, but often greatly hastens the healing of the ulcers.

Serum and Vaccine Therapy

Believing that the majority of cases of ulcerative colitis are the result of infection with a dysenteric organism (*Guy's Hospital Reports,* 1935, lxxxv, 317) I have used polyvalent anti-dysenteric serum in treatment for the last fifteen years. In my first case the result was little short of miraculous.

A young man, aged 21, had been ill for over a year with severe diarrhoea and the passage of much blood and pus. When I first saw him on October 1st, 1920, he was very emaciated, having lost over three stone in weight during the previous six weeks ; he had a high temperature, was very anaemic, and had a sacral bed-sore. Sigmoidoscopy showed that the mucous membrane was severely ulcerated. An appendicostomy was performed the next day, but he rapidly became worse and appeared to be moribund when on October 18th he was given his first intravenous injection of polyvalent anti-dysenteric serum. By October 21st blood had already disappeared from the stools, which rapidly became more solid ; on the 23rd the sigmoidoscope showed that the mucous membrane was entirely free from ulcers. On November 1st the mucous membrane was perfectly normal. Except for occasional slight recurrences, rarely lasting more than a few days, he has remained well ever since, and was very fit when I last saw him in July, 1935.

After preliminary desensitization 20, 40, 60, 80, and 100 c.cm. of serum are injected intravenously on consecutive days; sometimes a few additional doses of 100 c.cm. are given. The treatment can only be undertaken safely in a hospital or nursing home, where the patient is under continuous supervision, owing to the possibility of delayed anaphylaxis. If the patient is treated at home 10 c.cm. of serum should be injected intramuscularly daily for about ten days; good results are sometimes obtained, though less frequently than with intravenous injections.

The great disadvantage of treatment with serum is the possibility of a dangerous reaction. An anaphylactic reaction may occur during the injection of serum, but it is occasionally delayed several hours. Prompt treatment with adrenaline, one minim of which should be injected every half minute, after an initial injection of three minims, until complete recovery takes place, is almost always effective. Rapid recovery is most likely in the early stages, but it is occasionally very striking even in the long-standing cases. More frequently the serum produces a certain degree of improvement, with the result that other treatment leads to recovery more rapidly than it otherwise would have done. In a small number of cases, especially the very chronic ones, the serum has no effect. Though the improvement which follows serum treatment is probably, in part, due to protein shock, especially in cases in which there is much general reaction, yet in many cases it is probably in part or entirely specific. Thus in one of my cases the serum was very effective, although no improvement had followed a series of injections of the same quantities of ordinary horse serum.

Jerwood (1921), Ryle (1928), Bindon Brew (1930), and many others in England, and Bell (1924) in Melbourne have obtained very satisfactory results with anti-dysenteric serum. Crohn of New York has several times reported on the good results he has obtained with anti-dysenteric serum, which he has now used for several years as the routine treatment for ulcerative colitis. The following is an abstract from a recent report on a follow-up of seventy-five cases reported by him with Rosenak (*Amer. Journ. Dig. Dis.*, 1935, ii, 343).

"Since 1921, following the suggestion of Arthur Hurst of London, we have employed the intravenous injection of polyvalent anti-dysenteric serum; this, regardless of whether dysentery organisms were isolated, or agglutins were or were not present in the patient's blood. . . . In order to determine whether the effect of this serum was a specific or a non-specific one, we attempted, in a number of cases, to duplicate the results by the intravenous injection of typhoid vaccine. . . . Other methods of treatment were tried at various times in the course of years, including autogenous vaccines of faecal organisms, Bargen's serum and vaccine, transfusions, etc., some with good results, many of them without any noticeable effect. . . . It soon became obvious that any protein agent which would produce a protein shock and a febrile reaction could bring about a beneficial change in the chronic course of this disease. . . . Those using Bargen's serum, and Bargen himself, have observed that the best results were seen where the serum created severe protein shock, indicating that the serum acted as a non-specific protein as well as a specific antitoxic agent. . . . Our personal experience convinced us of the superiority of the use of polyvalent anti-dysenteric serum. Whether the disease is a mild endemic dysentery or not, splendid results followed the specific serum method of treatment."

I have never seen the slightest benefit follow any form of vaccination, and in some cases the local condition has been definitely aggravated. Several American physicians have told me that they have been quite unable to confirm Bargen's enthusiastic reports about treatment with the vaccine or serum (so-called "ulcerative colitis serum") produced from his organism, which most bacteriologists both in England and in America regard as a non-pathogenic enterococcus.

After-treatment

The danger of recurrence is much reduced if treatment is continued until the sigmoidoscope shows no trace of inflammation, even if symptoms have already disappeared for some weeks. Associated conditions, such as oral and pharyngeal infections, and anal complications must be treated, as a relapse may follow an acute sore throat, or the development of a peri-anal abscess or a fistula-in-ano. The patient should keep permanently on a roughage-free diet and take sufficient paraffin to keep his stools soft.

Surgical Treatment

Forty patients with ulcerative colitis were admitted into New Lodge Clinic between 1921 and 1934.[1] None died in the Clinic, although in the large majority of cases the disease was of a severe character, and only three died after leaving it, in each case as a direct sequel of operation—appendicostomy, colostomy, and colectomy—the last in direct opposition to my advice, as the case was an acute one and it should have been obvious that a one-stage operation would prove fatal. Neither appendicostomy nor caecostomy was performed on any of the patients whilst in the Clinic, though one attributed his final recovery to an appendicostomy performed after he left. In four the operation had been performed before coming to the Clinic, but in each case without any benefit. As the whole of the colon can be satisfactorily washed out with a pint and a half of fluid introduced per anum, and as in many cases only the distal half of the colon is involved, it is clear that appendicostomy or caecostomy is rarely indicated.

A short-circuiting operation has been performed with success in three of my patients (including one of the Clinic series) for fibrous stricture. When, in very chronic cases, a large part of the colon has become disorganized, with the formation of fibrous strictures and multiple polypi, all potentially malignant, the ideal operation is, I believe, a temporary ileostomy followed by colectomy. The end of the ileum is cut across; the proximal end is brought to the surface in order to divert the faeces from the colon, and the distal end can either be closed or brought to the surface so that the colon can be washed with normal saline solution introduced by a tube passing through the ileo-caecal sphincter. After several weeks, when all active inflammation has disappeared from the colon, colectomy is performed; if endoscopy shows that there is no stricture within nine inches of the anus the lower part should be left so that the ileum can be anastomosed with it at a later stage. I have had the operation performed five times with one death (Dunhill, Hughes, Ogilvie, Gaymer-Jones); in only one of the four was it necessary to remove the rectum and to leave a permanent ileostomy. Any polypi in the rectum and the remaining part of the pelvic colon are destroyed by diathermy cautery. The ultimate result in each case was completely satisfactory.

REFERENCE

[1] Hurst, A. F.: Prognosis of Ulcerative Colitis, *Lancet*, 1935, ii, 1194.

It is now just ten years since the Department of Clinical Investigation and Research was founded in Manchester under the joint auspices of the University and the Royal Infirmary. Under the directorship of Dr. J. F. Wilkinson it has made rapid progress and has contributed much to medical knowledge, particularly with regard to the treatment by liver therapy and hog's stomach of pernicious anaemia and kindred conditions. In addition to support from such bodies as the Medical Research Council, the Department has received a grant of £300 a year for three years from Boots Pure Drug Co. Ltd.