percentage of laxative-takers in the two populations can be largely ascribed to differences in age distribution of the subjects. No children under 10 were being given laxatives and no person under the age of 20 was taking laxatives more often than once a week.

Only two other comparable surveys have been published (Parks 1943, Hardy 1945) and their findings were similar to those presented here. It seems that half to three-quarters of normal subjects have their bowels open once a day. A frequency greater than once a day is more common than a frequency less than once a day. Constipation, in terms of frequency alone, might thus be defined as less than 3 bowel actions weekly, and diarrhœa as more than 3 bowel actions daily.

A comparison of the present findings with those of Parks (1943), Hardy (1945) and Reid (1956) suggests that the frequency of laxative taking is decreasing.

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Irritable Colon

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Definition
Basically the 'irritable colon' consists of colonic dysfunction, with pain, diarrhœa, or constipation, and excessive mucus production, with an absence of demonstrable organic disease.

History
The condition was recognized about seventy years ago, the earliest publication traceable being by Charles Ball (1894). He used the term 'irritable rectum', giving as an illustration a clergyman who always desired to defæcate before divine service.

Later new symptoms appeared in the syndrome which became known as mucous colitis or catarrhal colitis; Tuttle (1903) used these terms in referring to a condition characterized by passage of mucous tubes and tape-like masses of mucus, accompanied by constipation, depression and chronic anxiety. His treatment included a regime of laxatives, washouts, and glycerin with cottonseed oil retention enemas. Lockhart-Mummery (1910) referred to chronic mucous or membranous colitis as an ill-defined disease occurring in introspective and neurotic persons. He records a substance called intestinal sand, which was found in the patients' stools; 51% of this sand was inorganic matter, mostly salts of calcium, magnesium, phosphorus and iron. I have never seen stools containing intestinal sand. Membranous colitis became the fashionable term (for example, Earle 1911) and the introduction of new names must be responsible for some of the confusion at that time, for Gant's (1923) description of catarrhal colitis was more like that of milder ulcerative colitis. In 1931 Pruitt used the term 'mucous colitis' in describing a syndrome of alternating constipation and diarrhœa with the passage of mucous casts, accompanied by toxæmia of the putrefactive variety. He recognized it as being an obstinate but rarely fatal disease and advised that treatment should be colonic irrigation, mild laxatives and preparations containing atropine, and that patients benefited by the relaxation of a holiday.

When modern diagnostic techniques came into use it was possible to distinguish between the various organic diseases of the intestines and the disorders of colon function which in the absence of organic disease we call 'irritable colon'. It seems certain that the lack of precise diagnostic facilities explains the former confusion. For the time being we must accept that this is a diagnosis by exclusion. For example, Lockhart-Mummery's 80 cases comprised 66 who had some organic disease of the bowel and 30 had chronic inflammation of the colon demonstrated pathologically. The probability is that some of these patients were suffering from ulcerative colitis.

Classification
I agree with Chaudhury & Truelove (1962) that these patients are divisible into two groups: (1) Patients who complain of abdominal pain, with or without constipation or diarrhœa, or with alternating constipation and diarrhœa. We consider these to be suffering from 'spastic colon'. (2) Patients with painless diarrhœa; these we label 'irritable colon'. Chaudhury & Truelove, describing 130 cases of this syndrome, noted that more than half belonged to the spastic group whilst the remainder had irritable colons. Many of their patients blamed articles of diet for attacks of their discomfort but about half noticed no such connexion. These authors noted that one-third

of these patients had been operated on for their symptoms, without relief.

Ætiology

The clinical impression that psychological stress is important as a causative or a precipitating factor was borne out by Chaudhury & Truelove's studies, because three-quarters of their patients in each group had noted a substantial psychological factor, some stress factor in their environment or circumstances. This stress was sometimes self-imposed, e.g. unnecessary anxiety about their finances.

Chaudhury & Truelove also speculated that the condition may be caused by autonomic imbalance. They state that the intestines of these patients, even when in remission, show an exaggerated response to neostigmine as compared with healthy persons.

Wangel & Deller (1965) studied intraluminal pressures in patients with these syndromes. From their studies they felt that there was nothing diagnostic about the response to psychological stress. They showed that the intestines of patients with other diarrhœa syndromes responded in the same way, i.e. more briskly than a normal bowel. They also felt that response to neostigmine was not as definite as Chaudhury & Truelove implied.

Another ætiological factor is that of infection. Occasionally the illness follows an attack of infective diarrhœa or dysentery. This is not easy to explain on the lines of the foregoing but in the absence of organic disease of the bowel transient hyperirritability of the colon following the organic inflammatory process might be presumed.

Diagnosis

When pain is important in the history it is notable that it may be variably sited. We tend to regard pain in the left iliac fossa as probably being due to spastic colon but it can also be in either loin, the epigastrium, the hypogastrium or in more than one place. Because of this the condition mimics other intra-abdominal disease. If the pain is relieved by passage of flatus or fæces (which is not always so) this may help to settle the diagnosis. If patients have had symptoms for a long time this can help in the exclusion of serious disease. The difficulty in diagnosis is illustrated by Heffernon *et al.* (1960) who reviewed 260 patients who had had cholecystectomy. One hundred and forty of these had suffered with multiple gastro-intestinal symptoms such as flatus, bloating, belching and intestinal dysfunction; these continued to have similar symptoms after cholecystectomy and the authors felt that they really had spastic colons. Heffernon (1963), again referring to the difficulty in diagnosis, pointed out that a barium enema may reproduce the symptoms in a patient with a spastic colon. Repeated spasms can often be seen radiologically, sometimes temporarily obstructing the flow of barium.

It is important to be aware that whilst spastic colon or irritable colon can imitate other intra-abdominal disease the contrary is as true. For example, an introspective and worried 34-year-old man habitually made a study of his abdominal functions. He developed painless diarrhœa. Sigmoidoscopy revealed semi-formed fæces of normal colour and a slightly reddened rectal mucosa. It was tempting to assume that irritable colon was the diagnosis. A 20 lb weight loss remained unaccounted for, however, so a barium enema was done. This showed an ileo-colic fistula which operation proved to be due to a carcinoma of the colon. This illustrates the dangers of relying on intuitive diagnosis. Complete gastro-intestinal investigation is necessary to establish that serious organic disease is absent.

Treatment

This needs to be both psychological and physical. These are people who react in a physical way to chronic mental stress by producing frequent bowel actions or colon spasm in much the same way as a normal person reacts to acute apprehension. Probably their bowels react to physiological stimulation more vigorously than those of ordinary persons. Reduction in the physiological stimulation of the bowel really means avoiding irritating foods such as spices and curries, hot or cold drinks, excessive alcohol and strong laxatives. A low-residue diet is reasonable for patients with painless diarrhœa, but those who are constipated or who have painful colon spasm should be on a high-residue bland diet and it may be advisable to supplement the residue with a high-residue breakfast cereal or by the addition of cellulose or psyllium seeds. Where constipation is a problem the patient should be encouraged to drink freely. The excessive mucus is probably associated entirely with constipation.

Where diarrhœa is a feature there seems no reason why we should not use codeine phosphate; 60 mg four times a day is tolerated well by most. It sometimes helps the patient to take one or two tablets of codeine phosphate after each bowel action, so that the dosage is self-regulating according to need. Diphenoxylate with atropine has no particular advantage over codeine but sometimes the latter causes nausea. Cramp or colic can usually be reduced or abolished by propantheline 15–30 mg three or four times a day but therapeutic dosage sometimes produces blurred vision or dryness of the mouth.

From the psychological standpoint Chaudhury & Truelove (1962) recommended the study of the patient's background and removal of stress where

possible. This is not always easy and tranquillizers can be helpful. Wolf (1962) treated 11 patients with prochlorperazine. Patients who did not respond were treated with promazine or chlorpromazine. He claimed symptomatic cure, but they relapse when taken off the tranquillizer. My experience with chlordiazepoxide has been satisfactory in about half the patients.

This disease will be difficult to treat satisfactorily until more is known about the physiology of colon motility, the response of the bowel to physiological and drug stimuli and its reaction to the functions of the small intestine and the ingestion of food.

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The Wind

by Robert Cooke ChM
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This is intended to be a light, almost frivolous contribution. Whilst there is enough for an evening's discussion, I shall touch upon only a few aspects, particularly those emphasized by personal experience.

The famous tombstone in the churchyard of Whitby Parish Church reads:

'Let wind go free
Where 'ere you be
For it was wind
That killèd me.'

There are others which are similar in different parts of the country and without doubt this is sound advice. I am indebted to Mr Dickson Wright for drawing my attention to the story of the seventeenth Earl of Oxford, from Aubrey's 'Brief Lives'.

Our family doctors know all about the newborn, how much air they swallow, either by sucking too hard or gulping too quickly. We know what relief is afforded by a good burp and the homely methods which are used to bring about the desired effect. I am indebted to Dr Beryl Corner for an instructive story. A premature baby, 48 hours old, was admitted as a case of acute intestinal obstruction, presumed to be due to a congenital malformation. There was gross abdominal extension with effortless vomiting. The history revealed that the mother had been taking hypotensive drugs during the later stages of pregnancy. The child was treated as a case of paralytic or neurogenic ileus and recovered completely.

Children may be aerophagists. In a child of 5 years, under the care of Dr John Apley, there was a history of attacks of abdominal pain during which the belly became distended. Straight X-rays showed most of the gut blown up with air. This boy swallowed enormous quantities of air whenever he became worried, and this occurred frequently as his parents were often at loggerheads.

Perhaps the most extraordinary case of abdominal distension that I have seen was that of a girl who would suddenly complain that her clothes were getting tighter and tighter and that she could hardly breathe. Her mother told us that this might happen when they were shopping, and she would have to take the child somewhere to lie down and loosen her clothes because the abdomen was so severely distended that she literally could hardly breathe. There had been no evident air-swallowing and during the next hour or two the condition gradually passed off without evident passage of wind. I disbelieved this story, but extracted a promise that on the next occasion I should be telephoned. The call came during an operating session, and I sent the university photographer, post-haste, to a grocery store where the child was lying on a couch. The distension was past its zenith, but a photograph shows enormous distension, whereas, when I examined the child two hours later the abdomen was flat and soft. Neither then nor now can I explain the condition. I took the child in and administered a fairly high spinal anæsthetic, and the condition has never recurred. She is now grown up, married and has a family.

Pin-point perforations are known to occur in the bowel as well as in the biliary tract. I once