

It is better for the patients if they are not singled out, sequestered, and so stigmatised. Similarly I doubt whether it is practical to have special nurses, some with psychiatric training, to look after them, or for specialist social workers to devote a substantial part of their time to such patients. On the other hand, the report gives sound advice on developing a network of medical, nursing, and social work services, including the primary health care team, to provide any necessary aftercare and follow up. This is where present arrangements are weakest.

This sensible report takes account of the changing medical situation and advocates simple policies for seeing that patients are properly evaluated and treated. Purged of its overzealous organisational urgings, as it surely will be in practice, it deserves widespread support. I hope that it will come to be recognised that these patients need treatment not just to prevent later suicide but because they are presently distressed and suffering.

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## Functional diarrhoea: the acid test

Many physicians dislike making the diagnosis of functional diarrhoea—the painless diarrhoea variant of the irritable bowel syndrome. They view the diagnosis as one made by excluding all likely organic disorders; indeed, they may be tempted to regard it as a diagnosis of last resort made by a doctor who is intellectually destitute.

Certainly there are so many organic causes of diarrhoea that the physician often worries that he may have missed one. But the temptation and this worry are based on ignorance—ignorance of the commonness of chronic painless diarrhoea. Nearly 4% of apparently healthy people questioned in Bristol and Gosport admitted that their stools were frequently loose and passed with urgency,<sup>1</sup> while functional diarrhoea was the main diagnosis in over 5% of 2000 patients referred to gastroenterology clinics in Bristol.<sup>2</sup> The outpatient investigated in hospital for persistent loose stools is most likely to have functional diarrhoea—after inflammatory bowel disease has been excluded.

For the doctor the difficult question is always how far to investigate the patient. No investigations except sigmoidoscopy and rectal biopsy are needed when the patient is under 40, has had diarrhoea off and on for many years, when his symptoms are closely related to stress and anxiety, and when his weight is steady and his stool is free of occult blood. Many patients need a few investigations and a few need many;

clinical judgment must decide. The severity of the diarrhoea gives some guidance. Patients with functional diarrhoea do not get dehydrated or hypokalaemic, and their stool weight is seldom more than 200 g a day in women or 300 g a day in men.<sup>3,4</sup> Some patients, especially women, actually have normal sized stools but are troubled by urgency of defecation and feelings of incomplete evacuation.

Food intolerance, especially to wheat, corn, and dairy products, seems to be a common cause of functional diarrhoea in Cambridge,<sup>5</sup> but this is yet to be confirmed in other centres. Nevertheless, it is reasonable to try an exclusion diet in selected cases.

While he is thinking about the diagnosis the physician must ask himself two questions. Firstly, is the diarrhoea self induced? Laxative abuse is probably the most common cause of obscure diarrhoea, at any rate when there is hypokalaemia.<sup>6</sup> The personality of the patient will usually give a clue to this. The second question is whether the cause might be bile acid induced diarrhoea. The laxative properties of bile have been known and exploited for hundreds of years.<sup>7</sup> Dried ox bile was a popular laxative until the present century, and even today preparations containing extract of ox bile are available over the counter. These laxative properties are due to the dihydroxy bile acids—deoxycholate and chenodeoxycholate. Some authors have argued that bile acids are the body's "built in" preventive of constipation.<sup>8</sup> They certainly promote water and electrolyte secretion in the large intestine,<sup>9</sup> and there is some evidence that the colon of patients with the irritable bowel syndrome is excessively sensitive to their action.<sup>10</sup>

Spontaneous bile acid diarrhoea occurs whenever the terminal ileum fails in its job of reabsorbing bile acids so that the amount of bile acid escaping into the colon increases. The most important causes are extensive Crohn's disease and surgical resection of the ileum. In the early 1970s occasional patients with structurally normal intestines were found to have malabsorption of bile acids and diarrhoea.<sup>11,12</sup> Previously these patients had been labelled as having functional diarrhoea, but with the cause uncovered effective treatment proved possible with cholestyramine, a resin which binds and inactivates bile acids.

Until recently no simple test had been available to detect malabsorption of bile acids and physicians had to resort to a therapeutic trial with a bile acid binding agent. They may now use SeHCAT, a radiolabelled bile acid analogue which emits  $\gamma$  rays and so can be counted easily with little or no handling of stools. In a recent issue Merrick and his colleagues reported the use of SeHCAT to confirm that bile acid malabsorption is frequent in patients whose chronic diarrhoea had until then been put down to the irritable bowel syndrome.<sup>13</sup>

This is a useful reminder to doctors to think of idiopathic malabsorption of bile acids in all patients with chronic diarrhoea of unknown cause. But it is far from certain that it is a disease in its own right; the defect of bile acid absorption may be non-specific. Patients with functional diarrhoea tend to have rapid small bowel transit,<sup>4</sup> and in some there may simply not be enough time for bile acids to be absorbed in the terminal ileum. Bile acid diarrhoea often responds to standard antidiarrhoeal drugs such as loperamide, which slow down transit in both the small and the large bowels.<sup>14</sup>

The "logical" treatment for bile acid diarrhoea is a bile acid binding resin such as cholestyramine, but in its usual form this has disadvantages. Cholestyramine is unpalatable, and it interferes with the absorption of lipids by inactivating bile acids in the proximal small intestine. These objections

may be ingeniously overcome by coating the resin with an indigestible material which is degradable by bacteria so that the resin is dispersed only where it is needed, in the colon. On p 1315 Einar Krag's group in Copenhagen shows that such tablets work well and are free of the undesired effects. Should tablets of this type be marketed they will provide a useful alternative to standard antidiarrhoeal drugs in some patients with "functional diarrhoea."

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## Pneumonia in the acquired immune deficiency syndrome

To date there have been 130 cases of the acquired immune deficiency syndrome (AIDS) in Britain. Although this is far short of the 7000 diagnosed in the United States, the projection suggests as many as 400 cases by the end of 1985: the number is doubling every six months.<sup>1</sup> Most cases in Britain have presented to departments of genitourinary medicine in central London because these departments have many homosexual men as patients. As the disease spreads among the homosexual community patients with AIDS may be expected to present to their general practitioners throughout the country rather than directly to a London hospital. In turn, because AIDS is a multisystem disease, the general practitioner may refer the patient to a respiratory physician, gastroenterologist, neurologist, general surgeon, dermatologist, or genitourinary physician. Sooner or later, however, most patients develop respiratory problems.

AIDS is thought to be caused by the retrovirus human T cell lymphotropic virus III/lymphadenopathy associated virus (HTLV-III/LAV), which specifically attacks and destroys OKT4 (helper) T cells.<sup>2,4</sup> Virtually all patients with established AIDS have antibodies to HTLV-III in their serum.<sup>5</sup> This test is not diagnostic, however, because of the high positivity in asymptomatic homosexuals. Three quarters of all cases of AIDS occur in homosexual or bisexual men. Other smaller groups at risk are intravenous drug abusers; haemophiliacs given commercial factor VIII; patients transfused with infected donor blood; the female sexual partners

of male intravenous drug abusers, bisexual men, and haemophiliacs; babies of infected mothers; and some patients from central Africa and the West Indies. Haitians account for 3% of the cases in the United States but are rarely seen in Britain. About 4% of cases do not fit into any of these groups.<sup>6-8</sup>

An acute pneumonic illness with cough, breathlessness, and fever may be the presenting feature of AIDS, but nearly always there is a preceding history of several months' ill health characterised by loss of weight, intermittent or prolonged fever, and malaise. In our experience some patients have been well informed and aware of the possible meaning of their symptoms. They have volunteered that they believed they might have AIDS. This is not always the case, however, particularly in those who deny their sexual orientation. The pneumonia may or may not occur in association with other features of AIDS such as generalised lymphadenopathy, Kaposi's sarcoma, or oropharyngeal candidiasis.

The organism most commonly responsible for AIDS related pneumonia is the multiflagellate protozoa *Pneumocystis carinii*, which accounted for 373/441 (85%) cases of pneumonia in one large series from the United States<sup>9</sup> and a similar proportion of the cases seen in Britain to date.<sup>10</sup> Pneumonia caused by this organism is usually associated with an insidious but progressive dry cough and increasing breathlessness, usually over one or two weeks but sometimes up to eight weeks.<sup>11</sup> Fever is normally present but is not striking. On physical examination typically there are a few bilateral scattered crackles over the affected lobes, but the chest may sound clear in the presence of definite infection. The chest radiograph characteristically shows diffuse bilateral alveolar or interstitial shadowing, but it may be normal in a few cases (probably those seen very early in the disease). In all cases, however, there is hypoxaemia, which may be profound, especially if the patient ignores the warning symptoms, in which case he may present in hypoxic respiratory failure.

Even in early pneumonia due to *P. carinii* the corrected transfer factor for carbon monoxide is reduced, but interpretation of this finding may be difficult if there are other possible causes such as intravenous drug abuse or smoking. The gallium-67 lung scan is positive, but in one series there were also many false positives.<sup>9</sup> In practice these additional tests are required only when the chest x ray film is normal in a patient whose clinical features suggest *P. carinii* pneumonia. One additional test usually suffices. We use the Pao<sub>2</sub> because it provides a rapid answer and the apparatus can be sterilised. Great care should be taken in obtaining the sample.<sup>12</sup>

Other opportunistic organisms which have been associated with AIDS related pneumonia in the United States include *Mycobacterium avium intracellulare* and cytomegalovirus. Whereas cytomegalovirus has frequently been found in Britain, *M. avium intracellulare* has not. It must also be remembered that patients with AIDS are at increased risk of developing more conventional pneumonias with organisms such as *Streptococcus pneumoniae*.<sup>9</sup> In these circumstances, however, the patient is more acutely ill with the sudden onset of high fever, purulent sputum, and signs of consolidation in the chest and with radiological evidence of lobar or segmental consolidation. Multiple organisms are detected in many patients with AIDS. In the combined American experience 118 of 373 patients with *P. carinii* pneumonia had coexisting pathogens including legionella, *M. tuberculosis*, aspergillus, cryptococcus, herpes simplex, and