investigative procedure that is unlikely to influence management. Respiratory physicians should not forget that bronchoscopy in these patients may be dangerous as well as pointless. A definite diagnosis of tumour may often be obtained from sputum cytology, which has become much more reliable in the past few years.

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Cryptosporidium and diarrhoea

Bacteriologists wishing to reduce the number of times they report "stool culture negative" should discover how to look for *Cryptosporidium* in patients with diarrhoea. The cryptosporidia are classified as coccidian parasites and are in the same group as organisms such as toxoplasma. They were recognised at the beginning of this century, but not until the 1960s and 1970s did veterinarians emphasise their importance in diarrhoea in animals. A wide population of domestic animals and birds is now known to suffer from cryptosporidiosis,[1] and these animals may be the source of infection in man.[2]

In 1976 Nime and colleagues reported a 3 year old child with *Cryptosporidium* in a rectal biopsy specimen and an associated enterocolitis.[3] Since this publication a deluge of case reports, outbreaks, and series have been reported from every continent in both immunocompromised and immunocompetent patients. What, then, is the clinical importance of this pathogen, where is it in the league table of organisms, and why the sudden interest?

The reason for the increasing number of publications is the development of easy and rapid methods for detecting the oocysts of *Cryptosporidium* in stools. In a comparison of 10 different techniques a Ziehl-Neelsen/carbol fuchsin stain came out best in one series.[4] Nevertheless, the Ziehl-Neelsen technique is slow, and oocysts do not always stain with carbol fuchsin, so that others prefer a 1% safranin/methylene blue method which can be performed in two minutes and is reliable.[5] Skill and experience are important, since the number of oocysts may be small.

The prevalence of cryptosporidosis in immunocompetent patients is very variable. Laboratory skills are needed whatever staining technique is used, and those laboratories known to be interested in the condition may receive stool samples because of that interest. Seasonal and geographical variation have a considerable influence. A report from Liverpool gave isolation rates varying from less than 1% in July to September to 5% in February to April.[6] In Canada a similar pattern has been seen, with a low baseline of 0·5-1·5% and summer peaks of 7%.[7] The same high figures have been reported from the rural areas of Britain.[8,9]

Despite the strong evidence of spread from animals to man, person to person contact is probably more common. Outbreaks are reported to occur in nurseries,[10] within families,[11] and in hospital staff caring for an infected patient.[12]

Cryptosporidia have also been responsible for travellers' diarrhoea in Finnish students visiting Leningrad.[13] In this particular report, the cryptosporidia were isolated from the stool along with *Giardia lamblia*. The association of the two organisms seems not to be by chance and has been the subject of further comment.[14]

The clinical manifestations vary. They are predictably severe in immunocompromised patients, who may develop life threatening diarrhoea—as is seen in those with the acquired immune deficiency syndrome[15]; more protracted diarrhoea may be seen in children with leukaemia being given chemotherapy.[2] The usual presentation in the immunocompetent patient is an unpleasant illness with diarrhoea lasting up to 14 days. Abdominal pain is common and may precede the diarrhoea, mimicking appendicitis. Treatment is entirely supportive; the condition is self limiting. The stools usually clear by two weeks, though transient asymptomatic carriage has been reported.[16] Failure to thrive has been described in two children with small bowel enteropathy and definite evidence of infection—oocysts in the stool in one case and cryptosporidial schizonts in the jejunal mucosa in the other.[16] In jejunal biopsy specimens the schizonts are attached to the mucosa without actual evidence of penetration. The diarrhoea, however, is presumed to be secondary to mucosal damage. Bloody diarrhoea is unusual, but it has been described once in a 9 year old girl with longstanding symptoms after contact with calves.[17] Treatment is considered necessary only in the immunocompromised, but no agent is known to be effective at present. In one report of cryptosporidiosis complicating the acquired immune deficiency syndrome the macrolide antibiotic spiramycin was of some benefit in six out of nine cases.[18]

Cryptosporidium is, then, an important organism epidemiologically. At some times of the year, in some parts of the world, it will be second only to rotavirus in frequency of isolation. Whether to search for the organism routinely depends on the type of patients in the hospital and the funds available.

In hospitals looking after immunocompromised patients or many children with gastroenteritis examining the stools for this organism should be routine. In the district general

hospital operating within economic restraints identification of cryptosporidia will not be high on the list of priorities.

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Employment for the sick

Perfect health is a gift not given to many of us. Many men and women continue in full employment—often reaching normal retirement age—despite having chronic disorders diagnosed and treated by their doctors.

Whether or not we all have a right to work is a political and not a medical question. Henry Ford I, after a tour of Detroit, ordered his management to employ the same proportion of blind, maimed, and disabled as were to be found in the city of Detroit. Possibly an employer has some moral responsibility not to cream off the best of the labour force; but moral responsibilities are not enforced by law and may be rejected as "unfair" to the shareholders or to the pension scheme.

Applicants for employment are usually required to complete a health questionnaire, which is then studied by either an occupational health physician or an occupational health nurse. In some cases the applicant may be asked to attend either to clarify the answers or to undergo medical examination, or both. In this, as in all other consultations with employees, the reasons for any examination ought to be explained; if further information is required it should be sought from the general practitioner with the consent of the individual. Clearly such a system does not, and cannot, work in organisations with neither a medical nor a nursing service of any kind.

We should like to see employers following a policy, paraphrasing Sam Goldwyn, of "including people in not including them out"—of looking always at residual ability as much as at disability. Broadly speaking work is becoming less manually and more cerebrally demanding. Long shifts are less common (almost alone among major industries the NHS still demands that nurses sometimes remain on duty for nearly 12 hours at a time).

Modern treatment is able to control many of the main chronic diseases[1-7] so that not only can the individual work satisfactorily but neither employer nor fellow worker need know of the problem.[8] In such cases, however, the occupational physician should be fully informed. He is, or should be, the person who knows both the problems of, for example, hypertension and the realities of the workplace. Having satisfied himself of the details of maintenance treatment he should then discuss work with the individual; secret fears and anxieties may emerge, and these must be met with candid explanation and reassurance—but only where it is appropriate. Notes of the consultation should include reference to these matters.

Inevitably in some cases the management and fellow workers will get to know the diagnosis; indeed, where personal bonds are strong it is natural for a worker to talk freely to his colleagues with whom he has worked for many years. But the occupational physician must always emphasise that, irrespective of what may be common knowledge, the confidences of the consulting room (albeit in the middle of a busy factory) are sacrosanct. If some modification of working conditions is advisable, and this is not common in white collar workers, it can be couched in general terms without a diagnostic label.

What about the problems? Progressive musculoskeletal disease leading to decreasing mobility is an obvious example. Here a different tactic is required. Part of the acquired skill of occupational medicine is an ability to foresee the pattern of increasing disability five or even 10 years ahead and to plan accordingly. The patient should be persuaded to agree to taking management into a triangular confidence of patient-doctor-management, emphasising the service and skills of the individual and explaining, in practical terms, that he has much to contribute for years ahead but that modifications may be needed—for example, less travelling on company business, or a medium term change from plant inspection to a more sedentary role in planning or marketing. The occupational physician needs to learn to perceive at the initial consultation the looming problems of chronic disability and to plan his strategy to conserve the resources of the patient while satisfying himself that he will still give service which is of value.

The implications of premature retirement on health grounds for a company pension scheme cannot be ignored, but these should not be used as an excuse for rejecting all applicants with any sort of disability. Indeed, in the case of one of the most difficult of all placement problems, epilepsy, once an appropriate job can be found the patient will not be an actuarial risk.[9] There will always be difficult individual cases where tact, patience, and clinical judgment are equally important. This is most true of people with psychiatric disabilities; here the occupational physician needs to keep a cool head and resist pressures for precipitate action while