high suicide risk that exists in psychopathic patients with a cyclothymic temperament.

The W.H.O. pamphlet describes programmes of suicide prevention that are being practised in different parts of the world and reviews special studies and developments in various countries. It also considers the organization of psychiatric services and of aftercare facilities and stresses the possible role of lay voluntary organizations such as the Samaritans. The authors make the case that, at present, with medical resources fully stretched, such developments must deserve support even though their efficacy has yet to be properly demonstrated. Recently, C. Bagley[6] has shown that the suicide rates in all 15 British cities in which a Samaritan service had been in operation for two years were lower than in 15 control towns. The pamphlet is least happy when considering educational programmes about suicide and its prevention. These may be necessary if aimed at medical and allied workers. In particular the protean manifestations of depressive illness should be taught to every doctor, since once the diagnosis is suspected it can fairly readily be confirmed by inquiry and examination for its positive features, and then be treated. Some doctors still fear to ask a patient whether he has ideas of dying or suicide, yet this question seldom disturbs and generally relieves him. Not to inquire can be a serious omission. The suggestion of directing education at the general public and of using mass media to do so is less acceptable. It is more likely to excite than to allay morbid preoccupations. However, the authors make plain that they are presenting what some have advocated and are not making recommendations for use everywhere. The book ends with detailed tabulations of the results of a large number of investigations into suicide and attempted suicide from all over the world.

The statistics presented in these publications clearly disclose a major public health problem in the rise in numbers of non-fatal cases of self-poisoning and a major tragedy in the continuing high number of suicides. Whether preventive measures can check either is not certain, but the suggestions in the W.H.O. pamphlet merit consideration. The Ministry's memorandum deserves to be acted upon quickly by regional boards. Any epidemic resulting in 50,000 admissions a year warrants a close look at the services and staffing, both in the accident room and in the ward, that are deployed to deal with it. Often these leave much to be desired. The need for proper therapeutic resources, both toxicological and psychiatric, is imperative and urgent.

Hookworm Infection

Hookworm infection due to *Ancylostoma duodenale* or *Necator americanus* is a disease especially found in the warm, moist parts of the world. Infection is direct from person to person, the infective stage of the parasite developing on the soil. Its temperature and moisture requirements presumably prevent transmission of the disease in the very hot and arid and the cold climates of the world. In the moist tropics the infection rate often approaches 100%. Though transmission occurred in tin mines in Britain in the past,[1] and it has been shown that ova can develop into the infective larval stage in an English garden during a warm summer,[2] infection in people who have never been out of this country is unusual. But it has been described within the past few years in children in close contact with infected adult immigrants.[3 4] The overall rate of infection in people coming from overseas is unknown, but 8% of immigrant schoolchildren examined in Bradford showed hookworm ova in the stools.[4]

Opinion on the effect of the worms on intestinal structure and function is divided,[5-7] but it seems that even in heavy infections the changes are mild. Abdominal pain, which may mimic ulcer dyspepsia, is generally to be noted. Loss of blood is the only important effect of ancylostomiasis, that resulting from *N. americanus* being about 0.03 ml. per worm per day,[8 9] that from *A. duodenale* rather greater, about 0.15 ml. per worm per day. The loss of iron resulting from the bleeding depends on the concentration of haemoglobin, and whether iron deficiency develops depends on the balance between iron loss and iron absorption. The gradual development of haemoglobin concentrations of 3–4 g./per 100 ml. is well tolerated. Worm loads of up to 6,000 may occur.[7]

Though skin tests for hookworm have been devised,[10] diagnosis depends on finding the ova in the stools, a procedure facilitated by a concentration technique such as the formol-ether method.[11]

If anaemia is present it should be treated first and by oral iron. The response is usually dramatic and parenteral preparations are rarely indicated. Few patients are unable to tolerate ferrous sulphate at the required dose, and the response to parenteral iron is no greater than to iron taken by mouth.[12] 400–600 mg. per day is adequate. Anthelmintic treatment consists in giving either tetrachlorethylene or bephenium hydroxynaphthoate, and the response is less good than is often thought. In *Necator* infections 4 ml. tetrachlorethylene may be expected to expel 22% of worms, whereas a single dose of bephenium hydroxynaphthoate (5 g.) eliminates 55% ; for three doses on successive mornings the respective figures are 56% and 81%.[13] These estimates have been based on the actual numbers of worms removed by successive doses. Though there is an impression that *A. duodenale* is more responsive to treatment with bephenium hydroxynaphthoate,[14] rigorous tests have not been carried out.

The economic importance of hookworm infection is difficult to estimate but is related to the degree of anaemia. Though low concentrations of haemoglobin are well tolerated, the severely anaemic patients often give a history of inability to work for a period before seeking medical attention, and this is reflected in rural areas in the neglect of farms which at best provide subsistence only. In women amenorrhoea and inability to conceive are not uncommon when the anaemia is fairly severe.

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