of the cervix is required than in the conventional operation. Certainly the bleeding is usually less. But it is questionable whether the method is less traumatic to the uterine mucosa, and perforation of the uterus has occurred on occasion. None the less it is likely to be used more often.

In summary, when the decision has been taken to terminate pregnancy it is best carried out in the first fourteen weeks by a conventional one-stage evacuation or by vacuum suction, and later in pregnancy by abdominal hysterotomy. But therapeutic abortion is not a simple operation. Those who would extend the scope of legal abortion on purely social grounds would do well to remember that no method of terminating pregnancy is entirely devoid of risk. The operation is only as safe as the surgeon who performs it. Mishaps will occur, and they will be kept to a minimum only when operations are performed in well-equipped hospitals by skilled gynaecologists who are well aware of the dangers.

Treatment and Prevention of Poisoning

A report[1] published by the Ministry of Health and the Scottish Home and Health Department draws attention to the large number of deaths from poisoning in Britain. In 1966 there were nearly 6,000. Though rates are not always comparable internationally, those for England and Wales and for Scotland do seem to be uncommonly high. Two-thirds of these deaths are classed as suicide and self-inflicted, with equal numbers of males and females. Even so, the report considers that the proportion of deaths attributed to accidental poisoning may be overestimated. "As far as ingested poisons are concerned we believe that the majority of the deaths in adults are the result of deliberate self-administration. Accidental death from ingested poisons is met with almost exclusively in children under 10 years of age."

Since 80% of deaths from poisoning occur outside hospital, even the most perfect treatment after admission cannot dramatically affect the suicide rate. Nevertheless there are about 1,000 deaths in English and Welsh hospitals each year, 18.9 per 1,000 poisoning admissions. The number of these admissions is rising steeply. In 1957 there were 15,900 in England and Wales. In 1964 the number was 50,400, amounting to 6.8% of all admissions to general medical and surgical beds. The largest single cause is barbiturate poisoning, but a recent development is the increase in numbers taking antidepressant tablets and tranquillizers, for which the numbers of prescriptions issued have risen in parallel. Increasingly people are being admitted having taken a variety of drugs.

The main purpose of the report is to make clear the necessary arrangements for the treatment of the patients at hospital. Resuscitative and eliminative techniques are not detailed, but the requirements of hospitals receiving poisoned patients are stated. Ambulances carrying poisoned patients should have a trained attendant as well as the driver. Patients should normally be received only at hospitals with accident and emergency centres, and these should be staffed and equipped for dealing with cases of acute poisoning, children as well as adults. There is agreement with an earlier report[2] that "one general hospital in an area should be designated as the preferred receiving centre for cases of poisoning, to be known as the District Centre," but the present report goes much further: "All accidentally poisoned patients requiring inpatient management and all self-poisoned patients, whether or not seriously ill physically, should ultimately go to the appropriate designated poisons treatment centre—or paediatric unit in the case of children." This recommendation stems from the subcommittee's firm belief that psychiatric aspects must be dealt with as thoroughly as the toxicological ones. "All cases of deliberate self-poisoning should therefore receive psychological and social evaluation and help. The physical condition of the patient is no indication of the extent to which such help is needed." Designated centres for the treatment of poisoning should therefore preferably be sited in hospitals with a psychiatric unit able to provide the emergency services. Where this is at present impossible, "arrangements must be made for psychiatrists and social workers to be available every day of the week, whether these personnel are employed by the general hospital or detached for a considerable part of each day from the local psychiatric hospital."

The report recommends that at each centre there should be a consultant specially interested in clinical toxicology and that the admission of all poisoned patients into one or two particular wards would be advantageous both for medical and for nursing reasons and also for psychiatric supervision. There must be a 24-hour laboratory service, "able to carry out at short notice qualitative and quantitative tests for blood carbon monoxide, salicylates, alcohol, barbiturates (with group identification), and iron, and qualitative urinary phenothiazines." Most patients need constant skilled observation, but only 1 to 2% of all admissions require elaborate techniques—for example, haemodialysis—for eliminating the drug. Facilities for intensive respiratory care should also be available in the hospital. Aftercare by the psychiatric services, local authority services, and the general practitioner is stressed. As the report puts it, "The occasion of a self-poisoning act is no more than an incident of crisis in a psychological illness or in a social predicament." Any statement from the patient implying suicidal intention should be taken seriously. Prevention was not within the terms of reference of the report, though in the section on arrangements after discharge the authors enjoin great caution in prescribing large quantities of drugs. The accumulation of drugs in a patient's home can present a temptation to a mentally disturbed person as well as a hazard to children.

The World Health Organization has also recently published a report on the prevention of suicide.[3] In a brief compass this valuable publication draws attention to those groups of the population at high risk of suicide. The old, the widowed, and the separated, those living alone, offspring of broken homes, and those in certain occupations (including doctors) are singled out for mention. Alcoholics and depressed patients are also specially noted as at risk. Recently P. Sainsbury[4] has claimed that "one in six patients suffering from a manic-depressive depression can be expected to take his own life." N. Kessel and W. McCulloch[5] have drawn attention to the

[1] *Hospital Treatment of Acute Poisoning*, Report of the Joint Subcommittee of the Standing Medical Advisory Committee, Ministry of Health and Scottish Home and Health Department, 1968. H.M.S.O.
[2] *Emergency Treatment in Hospital of Cases of Acute Poisoning*, Report of the Subcommittee of the Standing Medical Advisory Committee of the Central Health Services Council, Ministry of Health, 1962. H.M.S.O.
[3] *Prevention of Suicide, Wld Hlth Org. Publ. Hlth Pap.*, 1968, No. 35.
[4] Sainsbury, P., in *Recent Developments in Affective Disorders*, ed. A. Coppen and A. Walk, *Brit. J. Psychiat.*, Special Publication No. 2, 1968.
[5] Kessel, N., and McCulloch, W., *Proc. roy. Soc. Med.*, 1966, **59**, 89.
[6] Bagley, C., *Soc. Sci. Med.*, 1968, **2**, 1.

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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