

measured and with which it can be compared." When more is known about the functional results of a similar present-day group of fractures we shall be in a position to judge how valuable modern methods are. It is to be hoped that further statistical inquiries will be made: it would not be surprising to find emerging from such an inquiry the fact that it is often the grosser errors of treatment and the faulty application of principles that in uncomplicated cases are the causes of slow union, mal-union, and poor functional recovery.

" IN THE DISCARD "

Just over two months ago a statement by the Secretary of the B.M.A. about the consultations to take place between the Government and the medical profession was published in this *Journal* (March 20, p. 359). It was said that an undertaking had been given that discussions would proceed not on the basis of any preconceived plan of the Minister's, but "from the ground." The meaning of this rather obscure phrase is now becoming clear. The Representative Committee during its brief two months of existence has met several times both as a committee and in discussion with the Ministry of Health. Quite recently it had placed before it a memorandum from the Ministry which made it plain just how far off the ground the Ministerial plan had got. Owing to an indiscretion on the part of someone who had attended the discussions, the lay press got an inkling of the Ministerial plan. The disclosure of one item in this made it impossible to continue concealing the rest. At a largely attended meeting of the Metropolitan Counties Branch on May 16 Dr. Charles Hill, the Deputy Secretary of the B.M.A., in a vigorous and well-marshalled speech, told the audience of the substance of the exchanges of views between the Representative Committee and the Ministry of Health. Those who did not read the account of the meeting in our *Supplement* for May 22 would be well advised to refer once more to last week's *Journal*. The suggestions that have been put forward are, of course, non-committal—that is to say, the Government is not committed to take any action on them. But they are committal in the sense that they show clearly the direction in which the Ministerial mind is moving and its conception of what should happen to the profession of medicine in this country. Put briefly and bluntly it is this, that medical men should cease to exist as freely practising doctors and should become instead whole-time employees of local authorities. If this happens, then doctors will no longer constitute an independent, learned, and liberal profession, but will instead form a service of technicians controlled by central bureaucrats and by local men and women entirely ignorant of medical matters.

As was to be expected, the Minister has rejected the idea that medicine should be administered by a corporate body. A special compartment of the present Ministry would be set up to run the show, with the Minister—a political figure with a high degree of insecurity of tenure—responsible to Parliament for the health policy of the nation. Professional advice at the centre would be secured by a Medical Service Council, three-quarters of whose members would be nominated by the profession. This would be a statutory body with the right to make public its recommendations and proposals and to issue reports. A Central Medical Board would have executive authority over domestic matters, and would act as an appointments bureau for the whole-time State salaried domiciliary service. At the periphery local authorities, for health purposes, would be grouped by means of joint boards. General practice would be based on health centres staffed by, say,

a dozen doctors working on a whole-time, salaried, pensionable basis with no right to treat private patients outside the service: men who had been in practice for a given time before the beginning of the scheme could exercise an option for part-time service in it. Practitioners newly qualified would have no such option, but would be compelled either to enter the service on the whole-time basis or stay out of it. Compensation for loss of practice would be paid. After qualification and preliminary house-officer experience the doctor would enter the service at a salary of £400 a year, at which rate he would remain for three years, thereafter rising by yearly increments of £30 to a salary of £1,200 a year. Thus a man who qualifies at the age of 24 would not ordinarily be earning £1,200 a year until he is 46. The proposals for a consultant service are as yet vague, but the appointment of consultants and specialists would be by the local authority, and would be whole-time or part-time "according to circumstances."

The Representative Committee faced these proposals with dismay—dismay that the Government Department officially connected with health should treat the much-vaunted comprehensive medical service in such a parochial manner. The absurd anomalies of splitting up health functions among different Government Departments is, for example, to remain, and the mental health services are excluded altogether from the scheme. Locally, confusion is added to confusion. The joint boards to be set up are to be responsible only for some of the local health services—for domiciliary practice and certain hospital services. The health of the school child will be looked after by the local education authority. Rural, urban, and county borough councils will share responsibility for environmental hygiene. The possibility of unifying the administration of health services both centrally and locally is ignored.

As Dr. Hill said on May 16, "Why the hurry?" It appears to many that political expediency has dictated the hurried—and, from the profession's point of view, ill-considered—moves that have been made by the Ministry of Health, as a direct outcome of the Beveridge report. The least politically dangerous move would be to act upon Sir William's Assumption B. Is this an attempt of the Government to win quick popularity with an impatient electorate by saying: "We have nationalized the doctors, and so given effect to Assumption B"? Has the Minister not noticed that the word "comprehensive" appears before "health service"? It is more than probable that immediately this war is finished the public, especially those returning to civilian life, will take a lively interest in Assumptions A and C. If, under continued pressure of public opinion, the Government then finds itself compelled to give that security against loss of income which is at the basis of the Beveridge proposals, it will naturally have to keep a sharp eye on the amount of money going out of the Social Security Fund. An important item in this would be medical certification. It almost looks as though the Government wishes to gain absolute control of the general practitioner for at least one purpose—strict supervision of certification by the doctors. It is not surprising, therefore, that the Representative Committee informed the Minister and the Joint Parliamentary Under-Secretary representing the Secretary of State for Scotland on May 17 that further discussion on the basis of the Ministry's proposals would be unfruitful. Faced with the suggestion that a Royal Commission be set up to consider the whole question, the Minister agreed to withdraw the proposals, and observed that he was not bound to any time-table in the issue of a White Paper. He agreed to a re-examination of the whole position, and to look upon the proposals outlined above as "in the discard." This, we understand, is

a term used in the game of poker. It is well to remember that cards in the discard are re-shuffled and find their way back into subsequent games.

CEREBRAL REACTIONS TO ANTISYPHILITIC THERAPY

Severe cerebral reactions during antisymphilitic therapy are fortunately rare but have a high fatality rate. Of these reactions the most important is so-called "haemorrhagic encephalitis." The name is not a good one, as the condition is mainly not inflammatory but rather one of increased permeability of the capillaries; in this it has features in common with purpura. Causation is unknown, but most observers agree that it is the toxic action of arsphenamine derivatives on the smaller blood vessels of the brain and possibly allergic in nature. Others consider that syphilis itself is the cause, but this is to some extent negated by the observation that the condition has been recorded in other diseases treated with these drugs. Symptoms usually come on rapidly after the second or third injection, and are characterized by nervous irritability, headache, epileptiform convulsions, and unconsciousness. Treatment is likely to be successful only if energetic and undertaken without delay: venesection, repeated spinal fluid drainage, and injections of adrenaline are indicated—the last-named is probably the most important, and injection should be repeated as often as once every hour. The pathological features are congestion of the brain, with multiple haemorrhages and in some cases areas of necrosis. An increased protein content of the cerebrospinal fluid has been described, but otherwise the fluid is usually normal.

Two articles elsewhere in this issue record more or less typical cases. Halcrow describes a case which might be a textbook picture. He considers the cause to be a toxic action of the benzol radical on the capillaries and advocates the use of the term "haemorrhagic encephalopathy." Nelson and his colleagues describe 4 cases, 3 of them pregnant women, only one of whom recovered. They also regard the condition as due to a toxic action on the capillaries, but consider that syphilis itself cannot be excluded and that in pregnant cases toxæmia of pregnancy may be an additional factor. Thomas *et al.*¹ have reported 8 cases, 2 fatal, out of a series of 764 treated with massive dosage of mapharsen. It is generally agreed that haemorrhagic encephalitis occurs more frequently with intensive therapy than with the more time-honoured methods, but the fact that in the latter the condition usually comes on very early in treatment suggests that it is due to idiosyncrasy rather than to heavy dosage. Courville and Marsh² record 12 cases, in 7 of which multiple symmetrical foci of haemorrhagic necrosis were found and in one a gross haemorrhage into the brain; they regard the condition as due to a peculiar susceptibility to arsphenamine of certain blood vessels of the brain. In a case described by Lichtenstein³ the parenchyma of the spinal cord was mainly affected—in fact a demyelination. He regards the condition as due to sensitivity of the nerve tissues or the vascular bed to the arsenic. The demyelination may be the result of vascular changes, but the author regards it as a direct poisoning of the nerves by the drug. This case appears to be in a different category from those already quoted.

Haemorrhagic encephalitis is fortunately very rare, occurring only once in some thousands of cases; all are agreed that it cannot be foreseen or provided against and that it may follow relatively small doses of arsenicals. Certain blood vessels of the brain appear to be susceptible to the toxic action of the drug, some individuals showing

a particular idiosyncrasy. The walls of the capillaries give way, leading to haemorrhage and perhaps necrosis. The symmetrical distribution of the lesions bears out this theory. It is of interest to note that mapharsen, which is claimed to be generally so much less toxic than most of the arsphenamines, appears to be unduly so as regards this condition.

DIET AND TRINITROTOLUENE POISONING

The relation of diet to the manifestations of T.N.T. poisoning in human beings has not hitherto received close attention. If the results of animal experiments can be translated in terms of human reaction, some investigations recently carried out by Himsworth and Glynn¹ may make a most important contribution to the prophylaxis of T.N.T. poisoning in munition workers. In any case, they shed much light on the mode and site of action of T.N.T. in producing its well-known toxic effects. The development of toxic symptoms in rats after the administration of T.N.T. appears to depend to a remarkable degree on the nature of their diet: a high-fat diet is accompanied by severe symptoms and pathological lesions, while with a high-carbohydrate or high-protein diet these ill effects are slight or absent. The two most striking manifestations of T.N.T. poisoning in human beings—cyanosis and toxic jaundice—are not of course reproducible in rats, while the aplastic anaemia which has accounted for a certain number of deaths in T.N.T. workers is modified in rats into a severe erythroblastic hyperplasia of the bone-marrow. But lesions of the liver, comparable to those found in human cases of toxic jaundice, and the excretion of T.N.T. derivatives in the urine, point to a fairly close parallelism in the toxic process in both species. The "fat" diet on which the complete picture of chronic T.N.T. poisoning alone developed contained 50% of fat in the basic mixture, while the "protein" contained 60% of casein and the "carbohydrate" 90% of wheatmeal bread. The first and most striking manifestation of the toxic process was the appearance of a bright red pigment in the urine within half an hour of administration of T.N.T. mixed with the food. The composition of this pigment and its relation to the colourless pigment giving the Webster test in the urine of T.N.T. workers are uncertain, but the fact that it was absent from the urine of one animal with severe liver damage, just as the Webster test becomes negative when T.N.T. jaundice develops, suggests that the red pigment and the Webster chromogen may have a similar significance. The dependence of the appearance of the red pigment on the nature of the diet was shown by its specially prolonged excretion by rats on the fat diet. With very small doses of T.N.T. (0.01 g. per kilo body weight) none was excreted by rats on the fat or carbohydrate diet but a trace by those on the protein diet—a fact explained possibly by the diuresis always present on this diet and the consequent washing out of the pigment before it can be changed into a colourless compound. It is suggested that the pigment is formed at an early stage in the disposal by the body of T.N.T., and represents a dosage larger than the body can deal with.

The remaining features of chronic T.N.T. poisoning in rats are loss of weight, increased appetite, changes in the blood picture, hepatic lesions, and loss of hair. Loss of weight, in spite of a higher total food intake, was characteristic only of the rats on the fat diet, and, from experimental exclusion of other possible explanations, it is concluded that the fat diet in some way influences the animal's metabolism so that its ability to dispose of the T.N.T. within

¹ *Amer. J. Syph. Gon. V.D.*, 1942, 26, 529.

² *Arch. Derm. Syph.*, 1942, 46, 512.

³ *Arch. Neurol. Psychiat.*, Chicago, 1942, 48, 740.

¹ *Clin. Sci.*, 1942, 4, 421.