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INSULIN FOR SCHIZOPHRENIA

Encouraged by the favourable influence of insulin on withdrawal symptoms occurring in the treatment of morphine addiction, Manfred Sakel[1] started the insulin treatment of schizophrenics in the Vienna Psychiatric Clinic, and made the first communication on his results in 1933. Since then the interest aroused has been great, and the treatment, which rests entirely on an empirical basis, has now been tried in Switzerland, Poland, Hungary, Yugoslavia, Germany, Russia, France, and Norway, as well as in this country and the United States. The subject had advanced so far by May of last year that an international congress was held in Münsingen, Switzerland, at which workers from different countries compared their results; it was computed that by then some two thousand schizophrenics had been treated by Sakel's method. The atmosphere of enthusiasm at the congress pervades nearly all the addresses published in the report,[2] and subsequent publications seem to show no slackening of interest. But it has not yet been possible to reduce the difficulties and dangers of insulin treatment below a certain level. The attempts of some workers, particularly in America, to obtain results with hypoglycaemia insufficient to produce coma, with treatment at longer intervals than once every two days and with a reduced number of treatments, have been attended with but indifferent success.

Enough insulin must be given in the fasting state to produce coma, which should last one to one and a half hours before being interrupted; from sixty to ninety such comas may be required before all possible benefit has been obtained. Sakel has laid it down that the corneal reflexes must be absent, or at least that there should be an extensor plantar response, before the coma can be considered deep enough. In such a state the patient is for all practical purposes in a state of profound anaesthesia and has to be watched continuously by eyes skilled to detect any change in his condition. Such complications as epileptic fits and failure to come round after glucose has been given by intranasal tube, as well as the fortunately rare cardiovascular collapse, require the immediate intravenous administration of glucose. If the risks are great the rewards may be considered to outweigh these in view of the intractable nature of the disorder. Those who have employed this method of treatment have observed that a change in the patient's mental state coincides with the daily hypoglycaemia and that this change tends to last for a period that increases progressively after the termination of each coma; finally, in the favourable cases the change for the better persists. Dr. Müller reported to the Swiss congress that of the 495 cases which had then been treated in Switzerland 40 per cent. had made a full social recovery. The recovery rate was 57 per cent. in those patients who had been ill for less than one year. Alleviation of the symptoms is claimed even in patients obviously beyond hope of recovery; withdrawn and difficult patients have become more social and able to behave in a more normal manner. It is suggested that treatment with insulin produces a better type of remission—and this has been estimated to occur naturally in from 5 to 25 per cent. of cases—but whether it also prolongs the length of the remission is at present not known: much further research will be required before this point, and many others, can be established.

The voices of warning and scepticism have not been wanting amidst the general enthusiasm. Professor Adolph Meyer has drawn attention to the difficulties of making an accurate prognosis and to the impossibility of saying how a treated case would have progressed without treatment. It is clear that if the schizophrenics have been specially selected for treatment their hypothetical recovery rate in the absence of special treatment cannot be fairly deduced from that of an average group. It has even been suggested that not all the patients treated have been genuine cases of schizophrenia, and that their recovery rate has been enhanced by the inclusion of cases with a pronounced affective element. It is, however, difficult to suppose that such a large group of psychiatrists as were represented at Münsingen had so radically altered their standards of diagnosis, when it came to the selection of cases for insulin treatment, as to include many cases of affective disorder; and most psychiatrists would hesitate to back their judgment to the extent of selecting a group of schizophrenics of whom as many as 57 per cent. would make a full social recovery. Less benefit is obtained in patients who have been ill for a long time. In cases of over two years' duration Müller found only 11 per cent. of recoveries; and in twenty-seven cases of over five years' duration Plattner and Frölicher[3] did not observe one. If, then, the treatment is to be of value it should be started as soon as the diagnosis of schizophrenia can be made with confidence. The early diagnosis of schizophrenia

[1] *Neue Behandlungsmethode der Schizophrenie.* Perles, Vienna, 1935.
[2] *Schweiz. Arch. Neurol. Psychiat.* (1937). Ergaenzungsheft zum Band **39**.
[3] *Z. ges. Neurol. Psychiat.*, 1938, **160**, 735.

will become of increasing importance. The attention of medical practitioners will have to be directed to this point, and it will be desirable for students to have special training in the early recognition of the disease. If facilities for treatment are adequate it would not seem justifiable in an otherwise suitable case to postpone treatment with the possibility of a spontaneous remission in mind. Some authors have found a marked worsening of the prognosis with treatment when the illness passes into its second six months. As a corollary, it follows that where the facilities for treatment are less than adequate for the potential demand the most recent cases should in general be preferred.

What the ultimate importance of insulin treatment may be we cannot yet forecast. Much depends on whether it shows any decided advantages over convulsion treatment with cardiazol. The latter, though frightening and disagreeable for the patient, is certainly simpler and safer, and it appears to give comparably favourable results. It is likely to become the method of preference in mental hospitals in which adequacy of medical staffing might easily become a difficult administrative problem with the introduction of insulin treatment. The percentage of failures with both methods, even with recent cases, is considerable; but it may perhaps be hoped that the failures of one method will provide some of the successes of the other. The two methods are not mutually exclusive, and many workers have reported encouraging results from a combination of both. Insulin treatment is drastic and costly in the time and attention it demands of both medical and nursing staffs. It is a method only for employment in a hospital or properly equipped institution and by a fully trained personnel. With increasing experience and skill many of the dangers become less real, but some there will always be. Nevertheless it has stimulated therapeutic activity by what has already been attained, and it will encourage research by the problems it has raised and leaves still unanswered.

SHIPS AND SEAMEN

We are accustomed to think of our Merchant Navy as the finest in the world, and to boast of our ships and our seamen. There is much justification for pride, for our ships are well found and our men still live up to the highest traditions of the sea. The passenger in a British ship has no cause for anxiety as to his safety or comfort, and the merchant ships his goods with confidence in British bottoms. In every respect save one our ships are unexcelled. Save one! Where, then, have we failed to maintain our pre-eminence? In two articles entitled "Ships and Men" the Labour Correspondent of the *Times* has answered this question with full knowledge of his subject, a full sense of responsibility in his criticisms, and a desire to be fair to both owners and men.

It is in the standards of living accommodation for the crews of our ships that we have fallen behind. For many years port medical officers have drawn attention to this, but neither port medical officers nor even the Ministry of Health have anything whatever to do with ships under construction. They are not consulted in matters of hygiene or sanitation, and not until a ship is completed and actually in commission have they any opportunity of inspecting the housing of passengers or crew. While the ship is building everything is controlled by the surveyors of the Board of Trade, who in relation to the hygiene of ships must carry out the Board's "Instructions as to the Survey of Master's and Crew Spaces." The Board has recently revised these instructions, and in new ships crew quarters will be vastly improved, though, as the *Times* Labour Correspondent points out, British ships which do no more than comply with the new requirements will yet be inferior in this respect to the ships of the Northern European countries and the United States. Moreover, well qualified as the Board of Trade surveyors are to deal with everything concerning the seaworthiness of ships and the safety of life at sea, they have no special training in hygiene, and consequently, in the future as in the past, they will, so far as crew accommodation is concerned, often fail to make the best practical use of the instructions which are issued for their guidance. If a Port Health Authority criticizes the crew quarters in a new ship the owner at once replies that they have only recently been passed by the Board of Trade. He feels aggrieved, as do also the Board of Trade surveyors, who no doubt have carried out their instructions literally, but perhaps without a real appreciation of their significance and therefore without careful thought as to how the space allocated to the crew in a particular ship may be fitted out so as to provide the healthiest and most comfortable conditions for the men who will have to make it their home for weeks or months. There still remain a few surveyors, as also some masters, whose standards are those of their own early days at sea, who take the view that what was good enough for them is at least good enough for the present-day seamen: the number of such reactionaries is fortunately dwindling.

Neither the Board of Trade, however, nor its surveyors are primarily responsible for the deficiencies in crew quarters. The former can only issue general instructions, and the latter, though