## THE TREATMENT OF MANIA.

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DURING 1931, 1932 and 1933 at least 20 female cases of mania were admitted to the Warwick County Mental Hospital, and I propose to review the treatment of these cases, omitting melancholia because of the difficulty of excluding involutional illnesses, because mania is more difficult to treat (1), and finally because the results of treatment are easier to follow.

I have been very careful to exclude cases of confusion with excitement from this group, of which every case has shown at some time while under observation the typical manic triad of symptoms. Association with pathological depression, evidence of heredity and a typical mode of onset marked most cases.

The ages varied evenly between 20 and 60, but the 5 patients in their first attack were under 25, and excluding 3 where the history was uncertain, the first attack occurred before 30 in all of them.

The cases occurred in a successive series of 410 admissions, a rate of 1:20 compared with the usual proportion of 1:12, but the care exercised in selection probably accounts for this. They can be divided into two groups, firstly pure mania, 7 cases, secondly mania complicated or precipitated by toxic confusion, 13 cases. Such a division is artificial and the groups grade into each other, but the results of treatment are so different and indicate points of such importance that I think the division is worth while.

Of the 7 cases of pure mania, 6 recovered and were discharged after an average stay in hospital of 14 months, and one is still in a state of chronic mania after 4 years. Two of the 6 discharges have returned with further attacks, and one other committed suicide.

Of the 13 with confusion, one died in 9 days, and the remaining 12 were discharged in an average time of 4 months. None of them has yet returned. Precipitating factors were common in this group: 4 were puerperal psychoses and one of these had had Cæsarean section; an attack followed the death of the father twice and of the husband once; rheumatic fever, operation, loss of hair and facial palsy were found in the recent history of different patients. Unhappy home life with sexual dissatisfaction was common.

The standard treatment in both groups was the prescription of soluble

barbitone (medinal), gr. x morning and evening as suggested by Black (12), supplemented by small doses of morphia and hyoscine during the first days of treatment. In two cases dramatic improvement occurred such as one sometimes sees in cases successfully treated by prolonged narcosis.

Many patients showed evidence of some toxic process. The skin lacked clearness or was unnaturally moist, the mouth dirty, the bowels constipated, the pupils small or dilated and sluggish in reaction, the tendon-jerks exaggerated. Enemata were administered, followed by salines, until the bowels were loose and thereafter the bowels were kept acting regularly. A course of rectal wash-outs was given to 4 patients, and eliminative treatment was assisted by continuous bath treatment in 7 cases.

The diet was restricted to milk, water, fruit-juices and glucose at first, and as long as the blood-urea was above 30 mgrm. %, every effort being made to give at least 100 fluid ounces daily, tube-feeds being necessary at some period in 8 cases. The blood-urea was above 45 mgrm. % in 11 cases, and I regard this estimation as important (3). In stubborn cases where the blood urea remains high despite the restricted diet, nephritin (4) is a useful drug.

Albumen was found in the urine in eleven cases, but cleared up in every instance. Renal casts were found once and disappeared under treatment.

I regard the renal changes as evidence of a general toxæmia affecting many organs and not as a single effect causing the symptoms. A tremendous excess of urates in the urine of several cases, the presence of acetone in 9 and sugar in 5 specimens are indications of general metabolic upsets. More than half were anæmic and needed iron. The blood-pressure was raised in 9 and was treated by rest; it was abnormally low in 2, and here ephedrine may have been of service. The treatment here outlined was usually followed by rest on an open verandah, graded exercises, occupational therapy, and in the winter a course of ultra-violet light.

## FOCAL SEPSIS.

Excepting the local treatment of puerperal cases (5), the eradication of septic foci seemed of very little service. Urogenital infections were attacked by local treatment, autogenous vaccines and T.A.B. vaccine without appreciable effect on the mental condition, and although hysterectomy was not performed on anyone while in hospital, the attack of mania had supervened soon after this operation in 2 instances (6).

Eight patients were edentulous, 6 of them having had a total clearance during previous attacks, 3 more had a total clearance, and the others treatment as indicated. Tonsillectomy was performed on 4, and 5 others had had this operation, no tonsillar tissue remaining. A routine exploration of the sinuses was done in 5 cases, and in each they were found clear and sterile (7). Such treatment was followed up by a course of T.A.B. vaccine, but results were not obviously of value.

The failure of the eradication of septic foci was all the more striking, since the purely manic cases who were in hospital for such long periods were those whose teeth, tonsils, sinuses and so on were treated most thoroughly, and for whom vaccines were used most frequently and assiduously.

## SUMMARY.

The evidence I have described suggests that cases of mania complicated by confusion do well on sedatives, such as medinal, eliminative measures and attention to the general health—in other words, if the toxic element is treated the mania can be left to itself. Where an attack of mania arises for little or no apparent reason and persists in a state of clear consciousness, the outlook for early cure is poor.

## PROLONGED NARCOSIS.

My experiences with this form of treatment have been described elsewhere (8), and I have treated 7 cases of pure mania by this means. One was a chronic patient and no benefit followed a full course. Another was a chronic parole patient with a history of two previous attacks in hospital, each lasting two months. She was apparently normal after 14 days' treatment.

The remaining 5 were recent acute cases, all of whom had been in hospital with a previous attack. One died under the treatment. Two who received a full course each were discharged in 4 months and 20 months respectively, whereas their previous attacks had lasted 10 months and 40 months respectively. In the remaining 2 treatment was abandoned because of toxic symptoms after 5 and 7 days. In each case the period in hospital (6 months and 1 year) was the same as in the previous attack. These results are favourable enough to warrant much further trial.

In each case glucose and insulin were used as recommended at Cardiff, and I believe this to be an advance in treatment, which, however, remains dangerous. I do not think that urinary acetone would be found nearly so frequently as is reported from Cardiff if the intake of fluid food was always sufficient.

Wagner (9), in a detailed description of the bodily effects of barbiturates, merely says that "acetone has been found in small amounts", and fails to mention it when discussing the effects on carbohydrate metabolism.

The dosage of somnifaine recommended at Cardiff has fallen from 6 or even 8 c.c. daily (10) to 4 c.c., and this reduced dosage probably has more to do with the very low morbidity-rate than has the insulin and glucose.

References.— (1) Leroy, A., Journ. de Neurol. et de Psychiat., 1932, xxxii, p. 77.—(2) Black, N. D., Gronlund, A. A., and Webster, W. R., Psychiat. Quart., 1932, vi, p. 657.—(3) Parfitt, D. N., Journ. Ment. Sci., 1933, lxxix, p. 501.—(4) Idem, ibid., 1933, lxxix, p. 371.—(5) Idem, ibid., 1934, lxxx, p. 43.—(6) Idem, Lancet, 1933, ii, p. 292.—(7) Idem, ibid., 1935, i, p. 429.—(8) Idem, ibid., 1936, i, p. 424.—(9) Wagner, C. P., Journ. Amer. Med. Assoc., 1933, ci, p. 1787.—(10) Ström-Olsen, R., Journ. Ment. Sci., 1933, lxxix, p. 638.