

## INSANITY AND DIABETES.

By M. J. MADIGAN, M.D.,

BROOKLYN, N. Y.,

FORMERLY ASSISTANT PHYSICIAN, NEW YORK CITY ASYLUM FOR THE INSANE.

THE relations between diabetes and the various neuroses have been very actively discussed, but contributions to its relations to the psychoses are comparatively few and very meagre.

Seegen<sup>1</sup> has noticed an inter-relation between the two, of which he gives a very brief description. Monneret,<sup>2</sup> Theury,<sup>3</sup> and Marechal (de Calvi) de los Santos<sup>4</sup> have described what they regard as true diabetic psychoses. Delpech<sup>5</sup> has described a case of progressive paresis coming on after an anthrax in a glycosuric; it is probable that in this case the glycosuria and the anthrax were merely premonitory symptoms of the progressive paresis.

Le Grande du Saulle<sup>6</sup> has observed cases in which the memory became enfeebled, the patient became depressed or extremely apathetic; a condition interrupted by hallucinations of a frightful character, leading to suicide. Moral manifestations, according to Durand-Fardel, are rare. He

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<sup>1</sup> Der Diabetes mellitus auf Grundlage zahlreicher Beobachtungen.

<sup>2</sup> Cited in *Archives de neurologie*, tome iv.

<sup>3</sup> Cited in *Archives de neurologie*, tome iv.

<sup>4</sup> De l'état mental chez certaines diabétiques.

<sup>5</sup> Cited by Leroux, *Thèse de Paris*, 1881.

<sup>6</sup> *Gazette des hôpitaux*, December, 1877.

finds that dementia is the predominant type. Cotard<sup>1</sup> is of opinion that many of these cases are simple coincidences. Luys<sup>2</sup> says that sugar is found in the urine of certain cases of insanity. He has found that in cases of this kind the insanity occurs in a more or less rapid manner, being subordinated to an old diabetes which has passed unnoticed. The course is, in his opinion, as follows: Under the influence of the thirst with which he is afflicted the patient becomes an alcoholic. Sudden intellectual effort upsets a brain weakened by the diabetes and the alcoholism which is its consequence, and an attack of insanity is the result. The urine is for the first time examined, and the diabetes discovered. Lailler<sup>3</sup> has had very similar experience, and both have observed cases in which diabetes produced erotic symptoms.

None of these, however, are analogous to the cases observed by myself. One case of insanity exhibited diabetes during the fever produced by vaccination. This, however, is not the relation between diabetes and insanity to which I wish to call attention. The cases in which a marked and definite relation was detectable were as follows:

CASE 1.—G. McC., aged thirty, Scotch extraction, entered the asylum in a condition of decided hypomania. He had exaggerated delusions, was much excited, and given at times to stealing. As the other physicians and myself were making urological examinations at the time, his urine was carefully examined; no sugar or albumen was detected. As he was markedly boisterous at night, he was given the usual sedative mixture of the asylum: R.: Ex. fl. conii, ex. fl. hyoscyam., āā m xv; chloral. hydrat., 3 ss; aquæ, q. s. ad 3 ss, at night. Owing to his peculiar delusions, a suspicion of the possible existence of progressive paresis arose, but the absence of all physical symptoms soon dissipated this sus-

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<sup>1</sup> *Archives générales de médecine*, 1877.

<sup>2</sup> *Maladies Mentales*.

<sup>3</sup> *Annales médico-psychologiques*, 1861, tome ii.

picion. The patient was, however, destructive, and, if interfered with, at times violent. As he paced restlessly up and down, and this tended to produce exhaustion, he was kept under the influence of conium, half-drachm doses being given thrice daily, in addition to the sedative mixture just mentioned. At no time during this period of excitement was there any evidence of glycosuria ; the urine being examined each day.

The patient at length became quieter. His expansive ideas were less prominent, and certain moral obliquities, at one time marking his conduct, disappeared. At this time, traces of sugar were found in his urine, which increased with his convalescence. His appetite also increased, but not abnormally, considering the circumstances. He passed urine in small quantities, but very frequently. The diagnosis of diabetes mellituria was made, although there was no marked emaciation. Within four months he was discharged recovered. In the spring of the year following his discharge, he was again admitted in much the same mental condition as at first. He had been arrested for stealing. On investigation it was found that a Chatham Street storekeeper had attempted to cheat him, supposing him to be a green countryman with plenty of money. On finding, however, that McC. was, as the storekeeper expressed it, simply a prodigious liar, the latter caused his arrest, as McC. insisted on taking the goods he had bought. On arrival at the "Tombs," he was recognized by the physician and sent to the asylum. Here he manifested the same wild, unsystematized, expansive delusions as before, and was as noisy and boisterous, requiring and receiving much the same treatment. On admission to the asylum, no sugar was to be detected in his urine, nor was there any to be found during the prevalence of the psychical disturbance. When convalescence occurred, sugar once more made its appearance, accompanied with the same phenomena as before. He was discharged, recovered, and remained away from the asylum for a prolonged period, returning to die there of diabetes and phthisis. During the intervals between the attacks of insanity, he had an excellent, but not an enormous, appetite. Thirst was not strikingly marked. The quantity of sugar was not comparatively large during the time it was present. He caught cold just previous to the last attack of insanity, which differed in character from the others, it being a species of melancholia. He had been exposed to much mental strain and had emaciated rapidly before the attack of insanity came on.

In this case there was an alternation between diabetes and the psychosis not previously noticed, to my knowledge. In the second case, a patient had attacks of epileptic insanity, which alternated with periods of calm, at which time, and no other, sugar was to be found in the urine. The patient finally died of tubercular phthisis. The third case was a man who had marked hereditary taint—a father, grandfather, and two brothers having died insane. He had, from his first admission, exhibited symptoms of circular insanity, in which melancholia, mania, and sanity alternated in the order just given. During the period of sanity and the period of melancholia, sugar was found in the urine which was entirely absent therefrom during the maniacal period. These cases justify me, I believe, in drawing the conclusion: That a species of alternation between diabetic and psychical symptoms is sometimes found in certain cases of mental disease.