THE BOSTON MEDICAL AND SURGICAL JOURNAL.

MASSACHUSETTS GENERAL HOSPITAL.

VOL. I.

TUESDAY, FEBRUARY 3, 1829.

No. 51.

I.

Notes of a Case of Diabetes Mellitus.

Communicated for the Boston Medical and Surgical Journal,

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August 28, 1828.—THIS was a middle aged man, who had two months before I saw him been attacked with diarrhœa, which, two weeks after it occurred, gave place to paruria mellita, diabetes mellitus. When first seen, he exhibited the external symptoms of this disease, and his history made its character sufficiently obvious. The body was greatly emaciated; the temples and eyes hollow; circumscribed flush on the cheeks; tongue red, with patchy white coat; dry; inside of mouth and lips dry, making speaking and protrusion of tongue awkward and difficult. Thirst great; appetite canine; bowels costive; pulse nearly natural; skin dry and rough; temperature irregular; pain in the chest; dyspnœa; urine

120 ounces a day; sleep wretched, and broken to evacuate urine. On examination, the urine was found to be in color a light straw, transparent, like highly clarified wine, wholly without odor, of a very pleasant sweet taste, resembling exactly a solution of loaf sugar in pure water; and, on boiling, eight ounces deposited one ounce of pure molasses.

It was obvious, from all that has now been stated, that a very severe form of diabetes existed in this case. I had again and again observed the progress of this disease, and did not forget how little medicine had done for it. This was a more recent case than I had before seen, and in this single circumstance there seemed a promise that more might be hoped from medicine.

The indications were not obscure. Very obstinate costiveness was to be overcome,—a voracious appetite controlled,—the quantity of urine to be diminished,—its sensible qualities and its

chemical constituents altered,—and, finally, healthful assimilation, secretion and excretion, restored. It was attempted to answer these indications by active cathartics, by a strictly animal diet, and by such an use of opium as might be taken with safety. The cathartics were, rochelle salts, infusion of senna, and croton oil, made into pills with powdered aloes. He began with two grains of opium once in two hours through the day, and five grains at bed-time. The dose was gradually increased from two grains to six in a pill, and from four times in the twenty-four hours to seven,—making the whole quantity of opium in one day, forty-two grains. This was on Oct. 4th. This quantity produced but little sleep, and a discharge from the bowels was procured by an enema. He ate on that day an unusual quantity of food, and vomited copiously. The urine was 52 ounces. The greatest quantity of urine was on the 10th of September, and amounted, by measure, to 144 ounces. He took on that day three pills of opium of five grains each, and nitrous acid, largely diluted with water, which somewhat increased the ordinary daily fluid ingesta. This acid was prescribed from known effects when added to urine. The ordinary liquid drank daily was about forty ounces.

What were the effects of opium in this case? The quantity taken was large, and the inquiry is an interesting one. At first, the patient slept better. Instead of being called from sleep very often in the night, from six to nine times, to relieve the bladder, the calls were diminished to one or two at most. The appetite was lessened, and the ravenous craving

at times was entirely wanting. The change in the appearance of the tongue was striking. It was most healthful when opium was most freely given. The thirst was not increased; the circulation and respiration were natural; costiveness was perhaps not more obstinate than when he began the treatment. This had been a previous symptom of the disease. The quantity of the urine was sensibly, and at times greatly diminished, being at times no greater than the liquid ingesta. But it was not only or principally in the quantity that change was manifested while using opium. The sensible and chemical characters of the urine were greatly changed. The ordinary odor, and the acrid taste of urea were evident, and the sweet taste much diminished. Chemical analysis confirmed the evidence of the senses, and showed that the ordinary constituents of healthful, natural urine were present. All these facts are important, and seem to authorize farther trial of opium. It should have been added that the nitrous acid was tried, but for a day or two; its operation on the stomach was so distressing, producing nausea and vomiting, even in very small doses, that its use was soon discontinued. Occasionally opium was omitted for a day or two, but always with an obvious increase of urine. Quinine was added to the opium at an advanced period of the disease, but with no apparent benefit; nor did loss of blood by cupping over the region of the kidneys lessen the excretion. For the pain in the side, and for occasional cough, vesication and alterative doses of calomel soon procured relief. One symptom in this case was a very

troublesome one, and which is truly characteristic of the disease. This was strong desire for prohibited articles of food, and these were furtively obtained whenever this could be done. Thus, I discovered that he had eaten in a day, almost at once, all the sugar again and again from the bowl, which was large enough to supply a table of a dozen or more men. In the main, however, the diet was rigidly adhered to.

Oct. 16th. Being quite as well as for some weeks back, he was permitted to go abroad, having lived remote from his friends since I began my attendance on him, but in a situation allowing free exercise in the open air, and remarkable for its healthfulness. His regimen had been, from the time I first saw him, Aug. 28th, very strictly adhered to. He was absent six hours, and returned very ill, vomiting copiously, meat, fruit, beer, and ardent spirits. He was evidently intoxicated, and too ill to give any account of himself. Involuntary dejections soon came on, with constant delirium, great restlessness,—lying with his eyes half closed,—balls rolled up,—respiration deep, heavy, spasmodic, and approaching to stertor,—skin everywhere cold,—pulse 120, very small and feeble,—face hippocratic,—abdomen retracted,—urine very copious, not measured. Medicines were given, but without relief; and he died 4, P. M.

Examination eighteen hours post-mortem.

Thorax. *Lungs*: slight adhesion of right lung; lung indurated under this, and for two or three inches around, near second rib. An incision being made, small tu-

bercles were discovered, some of which had begun to suppurate.

Heart rather small, not morbid.

Abdomen. *Spleen* very small and shrivelled.

Stomach contained about eight ounces of thick greenish yellow fluid. Lesser curvature, between cardiac and pyloric orifices, mucous membrane presented small patches, generally one inch in diameter, of a dark red color, arranged in a line corresponding to lesser curvature. Between these patches, several yellowish lines, one third of an inch broad. At cardiac orifice, mucous membrane was of a dark brown color, extending up the œsophagus two or three inches. Every part of mucous membrane was opaque and apparently thickened.

Liver healthy; perhaps less firm than usual.

Thoracic duct readily admitted air to pass up into the subclavian, and several large branches of the lacteals were seen running towards the kidneys when inflated.

Spleen and *Pancreas* not diseased.

Vessels of mesentery and small intestines, throughout turgid with blood, presenting externally a mottled appearance.

Kidneys exhibited no remarkable appearance; the cryptæ appeared rather more large and conspicuous perhaps than natural. The mamillary processes were of a more florid red color than usual; tubuli uriniferi very distinct, and morbidly dark colored; kidneys small in size, but of natural firmness of texture.

Ureters and *Pelvis* of kidneys enlarged and flaccid.

Bladder moderately distended, six inches in diameter; coats

thickened ; openings of the ureters relaxed and flaccid.

Remarks.

In looking back upon this case, and especially the post-mortem examination, it may be asked, what light does it shed upon that most obscure question of pathology, the *nature* of diabetes mellitus ; and what do we learn from it concerning the *treatment* ? If it be inferred from the partial benefits derived from opium, that in this case opium is recommended as a specific for diabetes, the purpose of the communication will not be accomplished. But opium has been tried on the continent of Europe, and with alleged success. The doses there were, however, much larger than my patient ever took. Some confirmation is afforded the foreign practice by this case, and though accidentally fatal, and perhaps never so greatly relieved as to furnish any well founded hope of ultimate recovery, still enough was gained to warrant, in the failure of other means, a fair trial of other remedies, and among these, of opium.

What, in the next place, is this disease ? In what disturbance, and of what functions, is its nearest cause to be found ? It is frequently fatal, nay, some have said most commonly so, by the occurrence of phthisis pulmonalis during its progress ; and such would probably have been the case in the present instance. The lungs were in an incipient stage of tubercular disease. From the frequency of pulmonic affections in diabetes, may we not look for its cause in such a state of the lungs as prevents perfect sanguification,—such changes not having been produced in the chyle after entering

the circulation, as to animalize it perfectly,—and hence the excretion of one of its constituents, sugar, and a want of the elements of urea. In what the disease of the lungs in diabetes differs from the ordinary morbid affections of this organ has not been investigated. Some have ascribed the disease to a morbid state of the kidneys. The kidneys in this case were but slightly diseased. The appearances in the stomach and its appendages were doubtless produced by the errors in food and drink committed by the patient while abroad.

II.

Report of the Select Committee appointed by the House of Commons to inquire into the Manner of obtaining Subjects for Dissection in the Schools of Anatomy, and into the State of the Law affecting the Persons employed in obtaining or dissecting Bodies.

Concluded from page 792.

It is the duty of the student to obtain, before entering into practice, the most perfect knowledge he is able of his profession, and for that purpose to study thoroughly the structure and functions of the human body, in which study he can only succeed by frequent and repeated dissection. But his wants cannot be adequately supplied in this country, except at an expense amounting nearly to a prohibition, which can be afforded only by the most wealthy, and precludes many students from dissecting altogether. From the precariousness or insufficiency of the supply, the dissections and lectures are often suspended for many weeks, during which the pupils are exposed to the danger