

## Progress of Medical Science.

### DIABETES INSIPIDUS AND DIABETES MELLITUS.

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The following cases can hardly fail to interest your readers, as they present, by comparison and contrast, the more salient points in the differentiation of the two varieties of diabetes, and the treatment that was successful in each. The family history in both cases appears to have been good, and there were no evidences of acquired predisposition to the disease, either specific or otherwise; and both were young men of originally good constitution, and engaged in active outdoor occupations. They may be regarded as typical cases in more respects than that which the names would seem to imply, and I shall therefore endeavor to bring out their individualities and distinctive features in as prominent outline as the brief space I have allotted to myself in this communication will permit.

*Case I.* was a man a little over 20 years of age, and of originally good constitution. His average flow of urine exceeded nine pints daily, of a specific gravity of 1005, without albumen, entirely devoid of sugar, and of slight acid reaction. While in the enjoyment of excellent health he discovered a gradual augmentation in the daily flow of his urine, which went on for some weeks without producing any appreciable evidence of ill health, although he soon found that "his clothes were growing too large" and his appetite was not so strong as formerly. He observed after this that he was losing flesh quite rapidly, and his desire for good, nourishing food grew daily less and less. In five months and a half after his attention was called to the increase in the urinary discharge, he found himself greatly emaciated and so much debilitated as to be scarcely able to walk across the room without assistance. He stated positively that he had never suffered from venereal disease, and had at no time during his recollection received any serious injury to the head or spine, or, in fact, in any part of his body. A careful examination of the heart, lungs, stomach, and bowels revealed no lesion of either of them. He suffered from occasional constipation, but his digestion remained moderately fair, and the thermometer revealed little or no departure from the normal standard. He seemed not to be remarkably thirsty, and, though complaining of some feeling of uneasiness in the small of the back, declared he experienced no actual pain in any part of the body. Opportunity was afforded for observing the difference between the amount of fluids he received into his

stomach and that which was passed from the bladder, and they were in striking contrast. Thus, for example, he took into the stomach of fluids of all kinds six and a half to seven measured pints in twenty-four hours, and passed from nine to ten measured pints in the same length of time. These measurements were made and continued for a period of six days, and the resulting discrepancies were uniformly the same. Various articles of diet were used, in order to test their effects, if any, upon the urinary secretions, but without obvious results. His bowels were regulated with the vegetable cathartic-pill compound and elix. bromide of potassium in four-drachm doses, ordered at bedtime to procure sleep and remove restlessness, of which he sometimes complained; and he began taking drachm doses of fluid extract of ergot *ter die*. The quantity of ergot was increased to a drachm four times, and finally six times, in twenty-four hours, until the beginning of the fourth week, when it was reduced to the original amount per day, in consequence of the urine becoming reduced to three and a half pints in twenty-four hours. The bromide was diminished after the first week, and omitted entirely by the end of the second week, and a cathartic pill given *pro re nata*. The ergot was still further reduced in quantity until the end of the fourth week, when it was suspended entirely. At this time the appetite was good, and the general appearance indicated a return to perfect health. The urine was normal in quantity and quality.

*Case II.* (diabetes mellitus).—Male, between 35 and 40 years of age, laborer, and until a few years ago enjoyed excellent health. About a year ago his appetite was found to have increased very considerably, and with it his thirst was greatly augmented. Notwithstanding, he discovered he was losing flesh. The urine was light and clear and greatly increased in quantity, so much so as to necessitate his passing it five to six times a night; and it was shown by measurement that he voided from twenty-nine to thirty pints during twenty-four hours. He complained of muscular pains and some stiffness in the joints, but the suffering was inconsiderable from these causes. The first examination showed a specific gravity of 1031 and a considerable quantity of sugar. His bowels were opened with mass. hydrarg. and ext. colocynth. comp., each six grains, at night, and castor oil the following morning; and after its action, salicin and bicarb. soda, aa five grains every four hours. Ten days after, the quantity of urine passed in twenty-four hours was thirty-two pints, and contained thirty-one and four-tenths ounces of sugar, and he weighed one hundred and eighteen pounds. The use of salicin and soda was suspended, and arsenic, lactic acid, and opium in large doses were substituted separately and successively, and continued for twenty days, with varying advantage,—i.e., the quantity of urine and amount of sugar increasing or lessening from time