paraplegia was made by Lewisson in 1869. In a series of experiments on rabbits he succeeded in paralyzing the lower limbs by squeezing the kidney, the uterus, or a loop of intestine. The loss of power continued while the pressure lasted, or a little longer, and disappeared abruptly. In *Guy's Hospital Reports*, 1868, Mr. Salter gives two cases in which caries of wisdom teeth not only caused severe pain in the arm, but partial paralysis of the muscles. In one case all the symptoms passed off as soon as the tooth was drawn, and in the other a like result followed within a few hours after drawing the tooth. Fagge refers to these cases, and admits that they, and some cases of paraplegia occurring coincidentally with intestinal worms, are "in perfect accord with Lewisson's experimental results, since they subsided as soon as the source of irritation was removed." Just how many cases of an almost exact similar nature, with abrupt termination on removal of a coincident irritation, have been reported can only be learned by a thorough examination of medical literature. The cases reported in this paper have been found in a very short time and with a very limited literature at hand. But I think that a sufficient number have been referred to to permit the idea that the nervous affections and the irritants are not always mere coincidences, and that even when the affections occur in women it will not do to say always that "it is scarcely possible to exclude hysteria as a cause of the loss of power."

Bramwell,¹ in discussing the functional paralyses occasionally resulting from peripheral irritation acting reflexly, says that the cases in which there is an organic lesion of the cord cannot correctly be termed *reflex*, if we understand by that term a *functional paralysis due to peripheral irritation acting reflexly*. "True reflex paralysis is undoubtedly rare, but that it does occasionally occur in man seems beyond dispute; and that it can be induced in the lower animals seems proved by the remarkable chloroform experiments which Brown-Séquard has lately published. The diagnosis of reflex paralysis is always hazardous, and should only be made when:

1stly. There is no evidence of organic disease.

2dly. There is a manifest source of peripheral irritation.

3dly and chiefly. The removal of that irritation is followed by disappearance of the paralysis.

Temporary paralysis due to vaso-motor changes in the cord are sometimes met with and are clearly functional in character."

ARSENITE OF BROMINE IN DIABETES MELLITUS.

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In July, 1884, an article appeared in *THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*, written by Austin Flint, Jr., on "Diabetes Mellitus". In this article he recommended for medicinal treatment the liq. brom. arsenitis, first suggested by Clemens.

During the last year I have had opportunity to try this drug in a considerable number of cases. They have so uniformly progressed favorably that I have thought it worth while recording them. It is difficult, however, to estimate justly the action of any drug in this disease, for we know that a proper modification of the diet will alone produce the most marked curative effects, and probably no one ventures to treat a case without simultaneously regulating the patient's diet.

The first case in which I used the arsenite of bromine was that of a lady past middle life, living in a neighboring city. She had for several months been losing strength and flesh. She complained of a perverted appetite for liquids, and noticed that the urine was passed with frequency and in unusual quantities. The symptoms that are most noticed by the patient were an unnatural weariness on slight exertion, and a very considerable loss of flesh, amounting to twenty pounds or so in six or eight weeks. In this case, there was frequently present a peculiar stinging pain in the tongue, and a twitching of that organ.

When the urine was examined, it was found to be heavily laden with sugar. A strict diabetic diet was prescribed, together with the arsenite of bromine in three-drop doses three times daily; also granules of digitaline, each of one-sixtieth of a grain. The latter was used to steady and strengthen the heart's action, which was unusually weak and somewhat irregular.

At the end of the first week, a trace only of sugar was found in the urine and all the symptoms were mitigated. The dose of the arsenite of bromine was increased to five drops. At the end of the second week, or a little sooner, all trace of sugar disappeared from the urine, and there was a steady and marked general improvement. This improvement was steadily maintained, and in two months from the time the patient came under treatment, she was feeling quite herself again. Although frequently tested, the urine never showed signs of sugar after its first appearance. The patient was as faithful for four or five weeks to the prescribed diet as one can be, and returned to an ordinary diet very gradually. She has been under observation for nearly a year now and has shown no signs of a relapse.

The second case was also in a woman, a little past middle life, but in the middle class of society. When first seen she complained of excessive weakness, which had gradually but somewhat rapidly stolen upon her, and an excessive and seemingly unquenchable thirst. She had lost flesh only moderately. The appetite for food was scarcely up to the average. The urine was more abundant than normal, and was clear and limpid. She was so weak, or as she expressed it, "so tottering upon her feet," that she could scarcely walk across the room. The weather was sultry, but her skin was dry.

She, also, was placed upon the arsenite of bromine in five-drop doses three times daily, and her diet prescribed. In the use of a restricted diet she was not at all persevering. I think, therefore, that in this case little of the improvement which followed treatment can be ascribed to the food eaten, or rather uneaten.

¹ Brain, Vol. IV, p. 41.

In a week from the first visit she had so far improved that she could easily get about the house, and the sugar had disappeared almost entirely from the urine. The thirst had disappeared, and in every way she was improved. I did not get a sample of the urine to test until ten days had passed, and in this no sugar was found. Improvement continued steadily. After this date I ceased to hear from her directly. From other members of her family, who consulted me in regard to themselves, I learned from time to time during several months that she was feeling quite well.

The third case that came under my observation in this period is not worth recording, as after making a diagnosis and prescribing as in the former cases, it passed into other hands. It was a gentleman already under treatment who came to me for additional counsel.

The fourth case was that of a lady in the best station of life, about fifty years of age. She had been under my father's care for four or five years, and my own, at times, for two years. In her case the diabetes usually came readily under control, but in from six to nine months there was apt to occur a relapse. These relapses were marked by loss of flesh, but much more marked loss of strength and energy. She had during all those years adhered to a modified diabetic diet, being allowed a very little sugar in her coffee in the morning, and a very moderate amount of wheat bread. The relapses, or return of diabetic trouble, could nearly always be traced to over-exertion and a little laxity in the diet. If she attended two or three lunches or receptions in quick succession, and was tempted to take preserved fruit or cake, a new outbreak of the disease was very apt to follow.

At the time of which I now write she was suffering from an attack thus provoked. In addition to the usual loss of strength and energy and the presence of sugar in the urine which ordinarily marked her attacks, she suffered severely from pruritus vulvæ. She had begun to exercise rigid care about her diet of her own accord, two or three days before consulting me. There was, however, abundance of sugar in the urine. As previously she had appeared to recover quickly under the use of small doses of calomel maintained for a few days, and a pill of extract of ergot of three grains, three times daily. She was first placed upon the ergot, and, with the hope of getting the effect of the mercury, and still more marked effect upon the pruritus through arsenic, she was also given six drop doses of Donovan's solution three times daily. As an external application, carbolyzed cosmolin was used. She returned in two or three days, complaining of heaviness of the eye-lids and puffing of them. There was slight but evident œdema of the lids. The Donovan's solution was discontinued, and she was given a mixture of glycerine and citric acid, in the proportion of about eight to one, which she had previously used with benefit. A week later she was not feeling much better, although the urine contained less sugar. The pruritus still persisted.

At this time the use of arsenite of bromine was

begun. In a few days all the symptoms were mitigated, and in two weeks she was feeling as well as usual. The sugar entirely disappeared from the urine soon after the arsenite of bromine was employed.

The next case was that of a man living in the central part of the State, who was unusually large and ponderous. He came to the office complaining of lack of energy, weariness on slight exertion, and pain, particularly in one ankle, which some months before had been sprained. His appetite was unusually good, but there was no great thirst. He passed urine frequently, and very large quantities, filling an ordinary *pôt de chambre* full between ten at night and seven in the morning. The urine was of a light amber color, clear, and contained a large quantity of sugar. He had lost flesh, and was steadily losing, although still unusually heavy. The loss of energy and strength was, however, most marked.

His diet was carefully prescribed, and the arsenite of bromine in five-drop doses, three times daily, was ordered. A week later, no sugar could be found in the urine, and he said he thought he felt a little better generally. The quantity of urine secreted was much less. At the end of the second week he was feeling very greatly improved; his strength and natural energy had very considerably returned, and as he expressed it, he was getting back some of his old spring and elasticity of gait. The pain in the ankle about which he first complained was nearly gone. I had thought that that was only in part due to the sprain which his ankle had suffered, but was in part rheumatic, and accordingly at the end of the first week I gave him a pill of salicylic acid of two and a half grains, four times daily, in addition to his other medicine. Steady improvement has taken place in this case, and no sugar has been detected in his urine after the first week of treatment.

The next case was also that of a man residing some fifty miles from Chicago. He was in the middle period of life. For some months he had been losing flesh, having lost as much as twenty pounds in all. He complains much of the quickness with which he becomes wearied when walking, especially in the legs below the knees. His countenance presents a worn appearance; the color of the face is sallow; he urinates more frequently than natural, and copiously. The first sample of urine shown me was slightly redder than natural. At the bottom of the bottle there was a slight cloud of mucus, and over the sides and bottom numerous fine, beautiful reddish crystals of uric acid. No albumen was found in the urine, but after filtering off the sediment the characteristic reaction of sugar was obtained.

The treatment prescribed consisted in directions as regards diet, and the use of arsenite of bromine as in the last case. Ten days later the urine appeared clear and contained no sugar. He is still under observation, and although there is a little improvement in his feelings generally, only three weeks have passed since he was placed under treatment, and we cannot yet judge of the result.

In these cases, I have continued to use the arsenite of bromine for some weeks after sugar had disappeared from the urine, and until the ability of the

patient to bear a more varied diet had been tested. In these cases, improvement, and decided improvement came promptly upon the use of the remedy.

In regard to the diet, sugar and food containing it, and vegetables rich in starch were forbidden. Bread was allowed only in the most moderate quantities. Patients are always desirous of explicit directions in regard to diet, and I have found it convenient and useful to give them a written or pantagraphic copy of the following:

ARTICLES OF FOOD FORBIDDEN.

Bread, cake, pastry of all kinds, and food prepared with flour, cracked wheat, oatmeal, rice.

Potatoes, turnips, beets, beans, corn, carrots.

Prunes, grapes, figs, bananas, pears, apples, preserved fruits.

Liquors of all kinds, whether distilled or fermented.

ARTICLES OF FOOD PERMITTED.

Soups, except those rich in vegetables, meat of all kinds, fish, eggs, oysters.

Radishes, cucumbers, cresses, celery, lettuce, spinach, cauliflower, cabbage, tomatoes, oyster-plant, onions, string beans, parsley, mushrooms, salads, pickles, olives, oil.

Lemons, gooseberries, currants, sparingly of raspberries, strawberries, oranges.

Milk, tea and coffee without sugar, but with glycerine in its place if desired.

More or less variation can be allowed from this in mild cases, and in severe cases more rigor may be required, although it is difficult to hold a patient to a diet more rigid than the above.

It is well known that in many cases of diabetes severe mental strain, sorrow or shock, seems to be the exciting cause of the disease. I have observed this so often that I carefully inquire in all cases for it. I am sure that in a large proportion of the cases that have come under my observation some such mental strain was present during the forming period of the disease. In the first of the cases here mentioned business difficulties, added to still more perplexing and worrying family cares, were present during the time when flesh and strength were most declining. In the second and third cases no such causes could be found. In the last two business trouble was coupled with family sorrow. In the fifth case the disease broke out just after the man's entire property had been lost in stock speculation. If any mental influence played a part in producing the disease in the fourth case it was sorrow.

In a very recent number of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION Dr. Austin Flint, Jr., has published a list of cases of diabetes in which the disease had occurred in near blood-relations. The fourth case that I have described might be added to this list, as her mother also suffered from diabetes, and finally died from the effects of carbuncles which complicated it.

MEDICAL PROGRESS.

ATROPINE IN POISONING BY MORPHINE.—In the *Vratch*, No. 44, 1885, p. 733, Dr. J. I. JAVORSKY,

of Tashkent, records the case of a strongly built and generally healthy midwife, aged 33, who attempted to destroy herself by taking at 1 A.M. about 30 grains of acetate of morphine and half an ounce of tincture of opium, *Pharm. Rossica* (1:10). No nausea or vomiting occurred. She fell asleep and awoke about 8 A.M., looking very ill. When first seen by the author (at 9 A.M.) she lay speechless in a comatose state, with irregular, slow, superficial breathing, extreme myosis, her jaws being firmly pressed together. A hypodermic injection of a fourth of a grain of apomorphine produced vomiting in fifteen minutes, after which the author succeeded in introducing into the patient's stomach about six ounces of strong coffee, with a large quantity of tannin. The patient's state however, steadily grew worse. At 11 P.M. the author began to inject one-sixth of a grain of sulphate of atropine every fifteen or thirty minutes. Exactly one grain of the alkaloid was used up to 3 P.M. causing only a moderate mydriasis, but no improvement in the state of the patient, who lay now pulseless, breathing only five times a minute. In spite of the apparent hopelessness of the case, the author went on injecting atropine, alternating it now with injections of tincture of musk. And his energetic efforts were fully rewarded; about 9 P.M. the pulse became full, 90 a minute, and the breathing regular, 12 a minute. At 11 P.M. the patient became conscious and asked for drink. Having passed a quiet night, she rose on the next morning free from any danger. The whole amount of atropine injected from 11 A.M. till 9 P.M. was 2.03 grains; that of tincture of musk, about 2 drachms. Dr. Javorsky thinks that his case strongly supports the theory of an antagonism between atropine and morphine (as upheld by Binz, Benzold, Henbach, etc., against Onsum, Camus, Bois, Knapstein, Dokhman, etc.). [Dr. R. Neale's *Medical Digest*, sect. 376:5, contains a series of cases of morphine-poisoning cured by atropine. In the *Voenno-Medits. Jurnal*, August, 1877, Dr. Dobrokhotoff describes recovery after poisoning by 10 grains of morphine dissolved in 5 ounces of bitter almond-water; the patient, a weak woman, aged 24, was treated by atropine, administered both hypodermically and internally (altogether 2-5 grains), tincture of belladonna 30-drop doses, powder of musk in 1-gramme doses, etc. In the *Vratch. Vedomosti*, No. 27, 1883, p. 4162, Dr. Rodzewicz publishes a recovery after 8 grains of hydrochlorate of morphine, the treatment consisting in enemata of coffee-infusion, friction, electricity, wine, etc.—*Rep*].—*London Medical Record*, March 15, 1886.

SEPTIC AORTITIS.—At the meeting of the Pathological Society of London, on April 6, 1886, Dr. F. CHARLEWOOD TURNER showed three specimens of septic aortitis, and a microscopic section from a fourth case. The first specimen showed the aorta extensively ulcerated, with undermining of the endarterium. This was obtained from a female, aged 62, who had aortic incompetence, with hypertrophy and dilatation of the left ventricle, and granular kidney. Microscopic section from one of the ulcers showed masses of micrococci in the deepest layer of the endarterium,