

CASES OF DATURA POISONING, WITH REMARKS ON THE ANTIDOTE.

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A PRISONER, while engaged in extra-mural labour, became affected with symptoms resembling those of intoxication, and was sent to the hospital at 11 o'clock a.m. by the warden in charge of the gang. The case was at once reported to me, and I saw the prisoner within half an hour after his admission. He was then insensible, and had lost all power of voluntary motion. On being roughly shaken, he would open his eyes, stare vacantly in front of him, and almost immediately relapse into his previous state. The pupils were dilated to their fullest extent, and were completely insensible to light. From eight to twelve fresh datura seeds were found concealed in his dhotie, and a relative, who was at work in the same gang, stated that the patient had eaten a number of datura seeds. The native doctor had given fifteen grains of ipecacuanha powder with about a pint of warm water, but vomiting had not been produced: twenty grains of sulphate of zinc were then given, but the difficulty of swallowing was so great, that half the draught containing the zinc was lost. The nervous system was so deeply affected by the poison, that I concluded it would not be safe to depend on the action of these drugs, so I passed the tube of the stomach pump, and thoroughly washed out the stomach, and had the satisfaction of finding several entire datura seeds and a quantity of half masticated ones in the fluid pumped out. The stupor and insensibility increasing, I injected hypodermically one grain of muriate of morphia, which produced contraction of the pupils to a very appreciable extent, but as the effect was only transient, I again injected, at intervals between 1 o'clock p.m. and 3-30 p.m., three more grains morphia, when the pupils became greatly diminished in size, and did not again dilate—they however continued insensible to light—the respirations became slower and more laboured, and there was such deep insensibility that nothing could arouse the patient. At 4 p.m. the case seemed so hopeless, that I had recourse to artificial respiration, and at 4:30 p.m. I left the hospital in despair, leaving orders with the native doctor, that on the death of the patient, the body was to be sent to the dead house for *post-mortem* examination. At 5:30 p.m. any change that had taken place in the symptoms was for the worse:—the breathing was still slow, the shoulders were raised during each inspiration, and there were spasmodic twitchings of the muscles of the arms and face. The muscles of the abdomen were hard and rigid; on dropping a small quantity of spirits into his mouth, there were no attempts made to swallow, and the patient was nearly asphyxiated by some of the spirits passing into the trachea.

I drew off his urine, and gave an enema of turpentine, castor oil and warm water. At 9 p.m. the breathing was quicker, and although the deep insensibility remained, I had now some hopes of his recovery. Early next morning the Native Doctor reported to me that the patient was all right, and on visiting the hospital I found him perfectly sensible and able to walk steadily. The pupils were half dilated and very sluggish to light, and he only complained of headache and a pricking sensation in his legs; consciousness had returned at 11 o'clock p.m., and at 4 a.m. the enema was passed with a quantity of feculent matter. He confessed having eaten all the seeds of a small sized datura apple, except the few found in his possession, to relieve, as he said, pains in his legs, from which he had long suffered, and for whose relief he had taken datura in his own house.

A second case was treated last year in the dispensary. The patient, a man about 40 years of age, was brought to the hospital at 7:30 a.m. by the police, who had found him lying insensible in the house of a prostitute. The symptoms on admission were,—deep stupor, great dilatation and insensibility of the pupils, and twitching of all the muscles, especially those

of the arms. Cold water was poured over his head, after which he muttered a few inarticulate words, and attempted to pick up imaginary objects from the ground. Twenty grains of sulphate of zinc in solution were poured into his mouth, and a similar dose given after a quarter of an hour, without producing any effect. At 9-30 a.m. the spasmodic contractions in the muscles had increased; those in the left thigh and leg were small and almost continuous, the fore-arms were flexed, and the hands alternately pronated and supinated. During the next twenty-four hours, eleven grains of muriate of morphia were hypodermically injected at intervals, but without affecting the symptoms, or producing any change in the pupils. The patient never became conscious, and died twenty-seven hours after admission. The prostitute, in whose house the man was found, was suffering from the slighter symptoms of datura poisoning, such as dilatation of the pupils, unsteady gait and causeless laughter.

The above case is interesting from the large quantity of morphia that was given, without the production of any of its specific results. The method in which the alkaloid was administered rendered it much more powerful, than if given by the mouth, as shown by a committee recently appointed by the Medical and Chirurgical Society, who reported that "medicines given hypodermically are three or four times more powerful, than when given by the mouth."

The antagonistic action of poisons, possessed of opposite physiological actions, was first observed in the case of opium and belladonna, in the seventeenth century. A few scattered notices and cases illustrating this antagonism, appeared previous to the investigations, in 1854, of the late Dr. T. Anderson, the well-known Botanist, and Superintendent of the Royal Botanic Gardens, Calcutta, but to him belongs the credit of having brought the subject prominently before the profession at home. Dr. Anderson, without any knowledge of what had been done by others, argued that as belladonna dilates the pupil, it might also cure those diseases in which contraction of the pupil is a prominent symptom; and when resident physician in the Royal Infirmary, Edinburgh, he had an opportunity of bringing his theory to the test, by administering belladonna largely in several cases of opium poisoning, with highly successful results; when stationed in Lucknow, he treated a sepoy, who had been poisoned by datura, with morphia, giving one grain, by the mouth, every hour, until fifteen grains had been taken; the patient recovered. These cases were published, and it is now taught as a well-established fact that belladonna is the antidote for opium, and the latter for all the mydriatics.

There can be no danger in the administration of the antidote, as we have a certain guide in the state of the pupils. Stillé in his *Therapeutics and Materia Medica* says,—“the condition of the pupil is an infallible index for the exhibition of opium and of the mydriatics, in poisoning by the one or the other of them. Until the contracted pupil begins to dilate, or the dilated pupil to contract, no danger from the antidote need be apprehended. Their antagonism is complete.”

The second case recorded above might have recovered, had I given the morphia more liberally, but I was then unacquainted with the value of the test as recorded by Stillé.

Datura poisoning is of frequent occurrence in this country, and I trust the facts now recorded will tend to the greater employment of morphia as an antidote.

Introduction of Animal Vaccination in Upper Scinde.—From the *Gazette of India*, we learn that Honorary Assistant Surgeon J. Leahey has succeeded in introducing the practice of vaccination from the calf into Sukkur in Sind. It is hoped that the lymph from the calf retains its virtues during the hot months. If this is true, it is, indeed, a step forward in vaccination in India.