

quent pressure which the head of the child must exert on the organs in the true pelvis; but, during gestation, the ovary is situated too high up not to escape from this compression, and moreover the frequency of ovaritis in the left side is as marked in young unmarried girls as it is in those who have had children.

(To be continued.)

CASE OF POISONING BY BELLADONNA.

By E. P. HURD, M.D., Newburyport.

THE following case of belladonna poisoning may be of interest to your readers, as illustrating the necessity of caution in using the alkaloid atropia, even within the prescribed limits.

On Saturday, May 28th, at 8½, A.M., I was called to see Mr. F., suffering from chronic sciatica. Patient very feeble; has been bed-ridden for some months. More than usual pain the previous night, and no sleep. I had been in the habit of using hypodermic injections of morphia, one fourth of a grain, as an anodyne. The usual disagreeable after-effects of opium ingestion invariably followed. I resolved on this occasion to substitute atropia, taking a hint from a recent therapeutical work. Two nights before, I had injected about the fiftieth of a grain into the arm, and with, as I fancied, a decidedly calmative effect, although the patient was obliged to resort to a Dover's powder (10 grs.) during the night.

I prepared a solution of the following strength:—Atropia, gr. one seventh, ad aquæ ʒij.; *this making just seven syringefuls.* One syringeful (one forty-ninth gr.) was injected. On withdrawing the point of the syringe several drops of blood oozed forth, showing that I had penetrated a vein.

At 10 o'clock I was summoned in great haste. Mr. F. was in much distress. Face flushed, head hot, pupils dilated, delirium, restlessness, dry tongue and fauces, dysphagia, quick pulse, fever. He kept exclaiming, "O my back, my hips!" Family alarmed. My first procedure was to reassure the family. Morphia was administered. Ordered the mouth to be kept moist with lemonade; cold to the head, and sinapisms to the feet, which were cold.

Repeated visit at 2, P.M. Febrile reaction had subsided, and the condition was one of prostration. Pulse slow and feeble. Delirium rather of the low muttering character. Answers questions in monosyllables, and immediately relapses into the delirium. Picks at bedclothes, grasps at

imaginary objects. Pupils large as pistol bullets; vision dim. Mouth parched. Says that he is in no pain. Restless. Feet and legs cold; the coldness extends to his hips. Head still hot.

Treatment.—Essence of beef every half hour. Carb. ammonia, with spts. lavender. Hot bottles to feet, and the entire lower extremities to be enveloped in warm flannels, over which a hot flat-iron to be assiduously applied.

4, P.M.—Patient has rallied. Temperature and pulse becoming natural. Less delirium. Has passed urine. Prescribed beef-tea and milk, the carb. ammonia to be occasionally administered.

Sunday, A.M.—Found my patient every way improved. Quite rational. Effects of the atropia nearly passed off. Pupils natural. Dim recollection of the events of the previous day; all seemed like a confused dream to him.

From the above experience of the effect of the internal administration of atropia, I judge that it is not always a safe or a reliable remedy. I could not have anticipated such unpleasant effects from so small a dose. Late authorities have given, hypodermically, as much as one twenty-fifth of a grain. I am not certain that one twenty-fifth of a grain would not have killed my patient!

It was stated, in the above report, that several drops of blood exuded on withdrawing the point of the syringe. Could I have thrown the solution into a vein, and could this account for the unpleasant toxic effects; the drug being carried directly, in the venous blood, to the heart and thence to the brain? This is the explanation of one of my *confrères* to whom I stated the case. It is certainly singular that the same dose on a former occasion should have affected my patient so slightly.

I am not disposed ever to repeat the same dose again. In fact, I intend to be careful in my use of atropia, in whatever way administered.

June 1st, 1870.

POISONING BY ACONITE. RECOVERY. PROBABLE ANTAGONISM BETWEEN OPIUM AND ACONITE.

By H. W. BROWN, M.D., Hubbardston, Mich.

Mrs. M——, aged 31, was attacked with urethritis which, she stated, had recurred for the third time in about five years. In the treatment, I at one time prescribed tincture

of hyoscyamus (fol.), twenty-five drops every three hours, for the relief of pain.

Saw the patient at 8 o'clock, A.M., Feb. 11, 1870. She was reclining upon her bed, dressed, and reported having had a more comfortable night than she had done for several preceding. Upon a table, among others, was a vial containing about two drachms of fluid extract of aconite (rad.) (Parke & Duffield) which had been used as an external application for the relief of facial neuralgia. I gave my directions to the attendant for the day, and for the exhibition of the hyoscyamus and left the house, but fortunately remained upon the premises in conversation with the husband of the patient. In about half an hour, or a little more, I was summoned into the house by the announcement from the terrified nurse that the lady was dying. Found her "down stairs," in a rocking chair, with a *pallid* countenance, dilated pupil, cold extremities, extremely feeble and slow pulse, alternate relaxation and spasm of the muscular system, respiration very much retarded, subsultus tendinum, or rather wild movements of the arms and hands, and complaining at intervals (a word or two at a time) of intense thirst, severe burning pain in the stomach, vertigo, headache, dryness of the throat, &c.; said she could not swallow, or speak; that the room was quite dark; "I am so numb;" "I can't breathe," &c. I supposed the patient poisoned by belladonna, but was struck with the paleness of the face, and the presence of sensibility. I was about preparing an emetic, when the attendant stated that Mrs. M. had remarked, after taking the first dose of the "drops," that it felt dreadfully in her stomach, and she would not have it there, and had called for a table spoonful of mustard and some warm water, which she had mixed and drank. It did not, however, produce emesis. I administered an emetic, and a slight amount of fluid was evacuated by the mouth. I immediately commenced the exhibition of stimulants and sulphate of morphia, after the following plan. A mixture of two parts of whisky, and one part of water, to which a few drops of the spirits of camphor were added, was given, a tea-spoonful every five minutes, or about that, and half a grain of sulphate of morphia every half hour. In addition, stimulant remedies (sinapisms) were applied externally. Free vomiting took place about eleven o'clock. At twelve, there was considerable improvement in the general condition of the patient. I then reduced the dose of the morphia, and gave it at longer

intervals. I think there was a manifest improvement after the third dose. Now to state the main point. It appeared, upon examination, that the attendant had given the patient twenty-five drops of fluid extract of aconite, instead of hyoscyamus as directed, by mistake or carelessness, as both vials were plainly marked, and the proper one indicated.

Would twenty-five drops be considered a poisonous dose? The dose is from two to five drops ordinarily. There is doubt in my mind that in this case the termination would have been fatal without treatment. I remained with the patient till six, P.M.; it was two or three days before recovery was complete. The free evacuations of the stomach contributed, doubtless, in a great measure to the recovery, even though it occurred so late.

I am also convinced of the efficacy of the morphia in the case. There is some discussion at the present time as to whether there is an antagonism between opium and belladonna. If so, why not between opium and aconite?

Selected Papers.

ON REDUPLICATION OF HEART SOUNDS.

By ARCHIBALD BLELOCH, M.A. Glasg., Sc. D., Edin.

THE nervous supply of the heart is three-fold. There are the cardiac branches of the pneumogastric, the sympathetic plexuses appropriated to the supply of the heart, and a system of ganglia in the substance of the organ itself. The function of the cardiac branches of the pneumogastric has been demonstrated to be inhibitory. The function of the sympathetic cardiac nerves is at once motor and sensory. The function of the ganglia in the substance of the organ is supposed to be connected with rhythm and co-ordination.

This extensive nervous supply corresponds with the mechanism of the organ otherwise. The heart is made up of muscular tissue, exactly similar to that of voluntary muscle, and hence it possesses, when healthy, very high contractile power. In addition to this, it is lined by a delicate serous membrane, in contact with which is the warm vital fluid, the blood. The serous lining is supplied with sensory nerves, which must be supposed to communicate with the ganglia in the heart itself, with the sympathetic and spinal nerve centres, and also as furnishing all requisite information