

tal and motor perversions which in so marked a manner distinguish general paralysis from all other diseases of the same class.

The diagnostic symptoms of general paralysis, aside from the exalted notions, are difficulty in articulation, with a trembling of the tongue when it is protruded beyond the teeth, often a turning of it to one side, and a general inability to use it freely, as if it were too large for the mouth, or too heavy for use, very flabby, and easily indented by the teeth; a peculiar dragging of one of the feet or legs; added to these symptoms will be found a heavy, dull expression of countenance, an unusual appearance of the eyes, and almost invariably an unequal contraction of the pupils. It requires close observation to detect these symptoms in the early stages, and careful treatment may relieve them temporarily; but although we may retard the issue of the disease by watchful care and skillful treatment, it inevitably advances insidiously to paralysis of the tongue and limbs, and enfeeblement of the mind. In the last stage, which sometimes lasts for years, emaciation succeeds obesity. Sometimes there is intense restlessness, but generally we find lethargy of body as well as of mind, this lethargy being disturbed by twitchings or epileptiform convulsions. These often terminate life, but the most frequent causes of death are sheer exhaustion and tubercular disease. With regard to the condition of the retina in general paralysis, we find the nerve changes generally proportionate to the contraction and dilatation of the pupils: the contraction of the pupils corresponding to the early or hyperæmic stage, and the dilatation of the pupils to the white atrophic condition of the optic disc. With regard to the temperature, I have noticed as an unvarying symptom that there is always a higher temperature in the evening than in the morning, seldom less than the difference of one degree, and by the thermometer we may discover the progress of the disease when we cannot do it satisfactorily by any other means. In sleepless and destructive patients the temperature is higher than in quiet cases. We may consider the average duration of general paralysis to be about thirteen months, very few patients living more than three years after the development of well-marked symptoms.

THE EFFECTS OF AN OVERDOSE OF GELSEMINUM SEMPERVIRENS.¹

BY F. W. GOSS, M. D.

SEPTEMBER 10, 1878, at eleven A. M., a lady of nervous temperament and subject to neuralgic headache, mistaking the dose, swallowed a teaspoonful of Metcalf's fluid extract of gelsemium. One hour later she became alarmed on account of dimness of vision, drooping of the

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lower jaw, and some tingling in the extremities, which had supervened and were becoming more marked. Her regular attendant being absent from the city, a homœopathic practitioner was called in. He saw her about 12.30 P. M. What treatment was pursued I do not know, but an emetic was not administered, because, as was stated, the medicine having been taken on an empty stomach an hour and a half previously, it was probable that it had already been entirely absorbed.

I saw the patient first at 4.30 P. M., five and a half hours after the ingestion of the overdose. She was entirely conscious, but believed herself to be dying. She said she had not been at all relieved of her distressing symptoms, and that in the last hour she had become much worse. About 3.30 she had attempted to eat part of a cracker, and found great difficulty in swallowing it. The loss of power over the jaw had from that time much increased, and at frequent intervals there was a feeling of faintness. As before stated, the mind was clear, but the speech was very thick; the tongue stiff; the lower jaw dropped, so that the mouth stood wide open; the eyesight was dim, so that she could not distinguish the countenances of those about her, the pupils widely dilated and not responding to light; the pulse 132, feeble; respirations 27, regular. There were no abnormal sensations about the extremities, although earlier there had been slight tingling in them. It was a comfort to her to have her jaw supported by the hand of an attendant.

I gave some carbonate of ammonia, and ordered the dose to be repeated every five minutes, while I went for an electric battery. On my return, at five P. M., the patient said she could swallow with a little less difficulty, and the drooping of the jaw seemed not to be quite so marked. I applied the handles of the battery to the sides of the face, and to the chin along the lower jaw. The sensation of the current was very agreeable to the patient, and in a short time the power to elevate the jaw was being rapidly regained, and the other sensations were becoming less disagreeable. At 5.20 P. M. the pulse was 120, and the pupils were less dilated; at 5.45 the pulse was 104, and the symptoms were much relieved. The use of the battery was then discontinued, it having been employed most of the time during the previous three quarters of an hour. The carbonate of ammonia was ordered to be taken less often. The next morning, September 12th, the report was that the patient had passed a restless night. Her eyesight was better, but it became somewhat dim on using the eyes, and her jaw drooped a little from talking. During the next twenty-four hours she had three attacks of epistaxis, moderate in amount. The bleeding seemed to relieve her head of pain and of a feeling of constriction. No other symptoms worthy of remark occurred. The patient was up and about in a day or two.

Probably if nothing had been done to counteract the effects of the

overdose, it was not sufficiently large to have proved fatal, but it did produce marked symptoms and caused great alarm to the patient. The use of the battery seemed to give speedy and marked relief. I was led to employ it from reading an article by J. T. Main, M. D., published in the JOURNAL for April 15, 1869. Dr. Main states that, having through mistake taken one drachm of the fluid extract of gelsemium sempervirens, he immediately started to see a patient residing some eight miles away. Before arriving he became nearly blind. There was paralysis of the flexor muscles of the hand and arms, and loss of power in the extensors. Sensation in the hands and arms was also blunted. These and other symptoms were relieved at once by the use of the galvanic battery. The poles were applied to the hands. My patient found greater relief when they were applied over the lower jaw.

In the same journal for February 9, 1871, Dr. J. G. Pinkham reports a case of poisoning with gelsemium which nearly proved fatal. In this case there was a general feeling of numbness and oppression, followed by double vision, loss of sight, paralysis of the muscles of voluntary motion, with complete insensibility to all external impressions. The paralysis of those muscles whose function it is to elevate was more persistent than that of any others. It was stated that but forty drops of the fluid extract had been administered, but the reporter says that he placed no reliance upon the statement as to the amount, and that probably much more than forty drops had been taken.

In the same publication for October 1, 1874, Dr. J. T. Boutelle reports a case with a fatal result from an overdose of gelsemium. The patient, a male, aged twenty-four, at one A. M. took a teaspoonful of Tilden's fluid extract of gelsemium, and in about fifteen minutes repeated the dose. Toxic symptoms came on in half an hour, and the patient died at 4.45 A. M. The autopsy showed the blood to be very fluid and dark colored, with no tendency to coagulate or to turn red upon exposure to the air. The heart, lungs, spleen, and kidneys were normal. The liver was dark colored and contained much fluid blood. The stomach contained a quantity of light-colored fluid mixed with glairy mucus, and its internal surface was deeply congested and marked by tortuous, dilated vessels. Intestines normal. Brain rather pale. Sinuses not congested. The internal substance of the cerebral lobes was dotted here and there with small red points, but these were not sufficiently large or numerous to be considered of much pathological importance.