say the word "paralysis", but would point with a vexed and puzzled air, as if recognising his difficulty, to the right half of his body. When prompted with the word, he could, however, repeat it for a moment. His usual reply to questions addressed to him was, "Oh, dreadful;" but he never swore. Reading was very imperfectly performed, partly owing to defective eyesight, and partly to the aphasic condition; for he read out words different from those on the printed page, and thus made most incoherent nonsense. Writing was out of the question, from the contracted state of the right hand. The sight of the right eye was quite gone, and the left was much impaired; and Mr. Liebreich, who kindly examined him with the ophthalmoscope, diagnosed "decided atrophy on the right side, partial atrophy on the left." The sense of smell remained; but whether it was better on one side than on the other, was not made out. He was very deaf, but could be made to hear by loud talking. About a month before his death, which occurred from gradual exhaustion, the fits quite ceased, and bed-sores formed.

NECROPSY.—Beyond a few old pleuritic adhesions on the left side, the chest-viscera were healthy. The transverse colon was displaced to the hypogastric region; and the kidneys were lobulated, but healthy. The brain-arteries were normal; and there was no sign of dilatation nor of atheromatous change in any of them. The membranes, except over what remained of the left frontal lobes, were not thickened, and could be easily detached, without tearing the subjoined grey matter, after slight maceration in water. The left frontal lobe had suffered marked degeneration. On its external surface, the first frontal convolution was well marked and sound for the outer two-thirds of its length; thence it was degenerated or entirely destroyed, and its place supplied by thickened membrane. The second frontal convolution had much degenerated, being only entire in the part immediately in front of the sulcus præcentralis; most of its anterior prolongation, with the exception of a very small piece joining what was left of the third frontal convolution, being destroyed. The third frontal (or superior marginal) convolution was entirely destroyed, with the exception of that part at its origin which curved round the ascending ramus of the Sylvian fissure. The convolutions of the island of Reil, intimately connected with the corpus striatum and the third frontal convolution, were almost entirely destroyed by degeneration. On the inferior surface of the left frontal lobe, the sulcus olfactorius was deepened from atrophy of the grey matter bordering it, but the bulb seemed entire; the gyrus rectus was gone, and its place badly supplied by thickened membrane. Only a small remnant of the middle frontal convolution remained, and there was no trace whatever of the third. On the internal surface, the gyrus fornicatus was defective in the anterior part, at its beginning under the genu of the corpus callosum, with the exception of a very slight band of grey matter connecting it with the septum pellucidum and the olfactory bulb. The corpus striatum on the left side was certainly smaller than the right one, but contained neither clot nor cicatrix.

REMARKS.—It would seem that the degeneration began first in Broca's convolution, at the time that the word-memory began to fail, and before the paralytic seizure occurred in 1867, for this third frontal convolution was the most impaired of all; the lesion having attacked to a much less degree the second, and least of all the first. Though crossed right hemiplegia is, as a rule, noticed at some stage of the progress of aphasic disease, it is yet by no means necessary; and I should be inclined to place the lesion in the corpus striatum posterior in date to that of the third frontal convolution, but coincident with the first hemiplegic seizure. The two lesions (aphasic and hemiplegic) should always, if possible, be distinguished, for the connection is accidental; and, though the grey matter may be so diseased that the power of the will over word-groups is altered or destroyed, it by no means follows that therefore the power is lost over the extremities of the other side of the body, although such is usually the case as a result of disease extending to the corpus striatum. According to Ferrier, the "centres for the mouth and tongue in cats and dogs are localised in regions corresponding with the lower frontal convolutions and island of Reil in man", and stimulation of these centres will produce movements in the groups indicated; whilst the crossed action of the hemispheres "only extends to muscles and combined muscular movements which act independently of each other"—*e. g.*, to the arm and leg; and thus a disease of the convolutions may lead to hemiplegia, and to a palsy of those muscles which minister to the formation of words—*i. e.*, to those combinations which correctly reproduce sounds heard, and the organic centres of which are situated in the same convolutions as the centres which preside over the muscles concerned in articulation. If, then, language mean the correct reproduction of a sound once heard by that definite muscular action best adapted for it—*viz.*, a certain position of lips and tongue, and tension of laryngeal muscles—it is in accordance with all physiological analogy, that a memory of that group shall be implanted upon some part of the brain-tissue, ready to show itself either at the call

of the will, or else, independently of the will, as a reflex act, consequent on some irritation. If the power of the will over a certain speech-group be lost, then either no answer will be given to a question, or some other word will, in the anxiety to reply, be given. If, however, the speech-group be affected wholly or in part, the word is either blotted out entirely, or so changed as to be scarcely recognisable. It is, in my experience, rare to find articulation correct in these cases of loss of word-memory; indeed, a consideration of the mode of production of aphasia almost necessarily leads to the conclusion that it must be affected until the other or "non-driving" hemisphere has had time to take upon itself the function generally assumed to so much greater extent by the left half. Certainly, however, there is no necessary hemiplegia (using the word in its general sense, as applied to the extremities), notwithstanding the hesitation of speech brought about by vain attempts to reproduce a desired word. When hemiplegia from disease of the corpus striatum does occur, the intellect, in my experience, always suffers to some extent; for the downward current from the convolutions is interfered with, and secondary changes are brought about. Sight-memory is not necessarily impaired when word-memory is, for I have found persons who knew that they were using wrong words when reading, though evidently understanding what they read; but we are so accustomed to correct optic and auditory impressions by each other, that a lesion of one can scarcely but affect the other.

The cause of the cerebral disease in this case is not clear. The extreme dementia is explained by the large amount of destruction; and, though the implication of other convolutions than the third frontal renders it impossible to say positively that the aphasic state resulted from its destruction, yet the fact that only the frontal convolutions were affected, and that the disease was earliest to begin and most advanced in the third, renders the hypothesis very probable.

CASES ILLUSTRATING THE USE OF PERCHLORIDE OF IRON TO ARREST POST PARTUM HÆMORRHAGE.

By CONSTANTINE HOLMAN, M.D., Reigate.

CASE I.—Mrs. — always had very large children. Her first was delivered by forceps, and delivery was followed by uterine inertia. It had always been found necessary to remove the placenta by hand, in spite of the use of ergot before and after the birth of the child. In her fifth labour, the loss was large, in spite of the introduction of the hand into the uterus, of pressure, and cold applied inside and outside. No ice could be obtained. Solution of perchloride of iron was injected. There was no further loss. The recovery was as good as usual. She was up on the fourteenth day.

CASE II.—The same patient as Case I. In her sixth labour, the child was very large. The os uteri was felt to be cracked, and there was a good quantity of bright blood with the usual flooding. I injected the uterus with a solution of perchloride of iron, and placed a sponge soaked with the solution in the os. There was no further loss, and she made a good recovery.

CASE III.—The patient, in labour with her first child, but of stout habit, led a luxurious life, and had generally flabby muscular fibre. The labour was slow, marked by inertia; the slight contractions painless. The child was large. A very profuse gush of blood came with the placenta; and, in spite of *skilled pressure*, the blood poured away. The hand was introduced, but the loss was still great. She became nearly pulseless, and in thirty minutes was blind. I injected perchloride. No loss followed. There were no lochia at all for forty-eight hours; then the discharge was offensive. Phlegmasia dolens in the left leg appeared. Her convalescence was slow, but her recovery was complete. A clot had evidently sealed up the os uteri, and this ought to have been broken up by the fingers.

CASE IV.—Mrs. —, in labour with her third child, had always flooded. She had a very feeble heart. The uterus was greatly distended. After the removal of the placenta, a continuous profuse loss went on for half an hour, in spite of the hand in the uterus, pressure, cold, etc. I injected perchloride of iron. There was no further loss. She sank exhausted four hours after delivery. No special pain was complained of on the injection.

CASE V.—Mrs. —, in labour with her first child, had passed a fibroid tumour by the anus. The pains were short and inefficient. The loss was great. Through the abdominal parietes, the uterus was felt large and boggy. The placenta was removed by hand, and the hand was kept in the uterus. The posterior wall did not seem to contract. The loss went on. The impression produced on the system was rapid.

I injected perchloride. No pain ensued. The uterus remained large. There was no further loss. She sank in three hours. At the *post mortem* examination, the uterus was large. The sinuses were filled with coagula. The uterine tissue was tinged of a dark colour. The posterior wall of the uterus was crammed with fibroids; in fact, there was almost entire fibroid degeneration of the posterior wall. There were two subperitoneal pedunculated fibroids behind.

CASE VI.—Mrs. — had always flooded, and had been treated by ergot during labour; by pressure and ergot subsequently. Her ninth child was born after pains lasting three-quarters of an hour, and before my arrival. The uterus was distended, and loss was going on. The placenta was lying in the uterus. The uterus was now well cleared out, but the loss continued. The hand was therefore introduced again, and retained; and cold was applied externally. Still the loss went on, and there was rapid failure of power. I injected perchloride. The loss stopped. Stimulants were continued freely. She rallied in four hours. Vomiting came on, and moderate hæmorrhage returned. The pulse failing, I introduced the hand, cleared out the few hard clots from the uterus, and injected solution of perchloride of iron. This was quite successful. She made a good recovery.

I have also had a case of a primipara with smart arterial loss from the cervix, in which I inserted a sponge steeped in perchloride of iron successfully.

In all these cases, I conducted the labour on the principles long since taught me at Guy's Hospital; that is, supporting the uterus, in the last stage especially; making the uterus throw off the placenta, by manual external pressure if possible; giving ergot in the third stage, if flooding be anticipated; watching the uterus by the hand until contraction is firm and continuous. Brandy was given freely in all the cases.

THERAPEUTIC MEMORANDA.

THE EMPLOYMENT OF GELSEMINUM.

I DESIRE to draw attention to the value of gelseminum sempervirens in the treatment of some forms of odontalgia. Since reading Dr. Wickham Legg's paper, published in May last, advocating the employment of the drug in cases of odontalgia, I have frequently used the remedy for the relief of toothache and some allied affections among my outpatients. Gelseminum, commonly called the yellow jessamine, is not very generally known to English practitioners, although it has been largely used in medicine for some years in the United States. The drug seems to act mainly upon the nervous system, impairing the sensibility of the sensory nerves. American pharmacists prepare a liquid extract; the dose of the powdered root is from one to two grains; I have used a tincture, made from two ounces of coarsely powdered gelseminum root macerated in a pint of rectified spirit. In hospital outpatient practice, we meet with a large number of cases of neuralgic pains in the face and jaws, associated with carious teeth, but unconnected with any evident local inflammatory changes. The patients are frequently badly nourished women. In such cases, I have given the tincture of gelseminum, in doses of fifteen minims every six hours, in an ounce of dill-water. Out of about twenty cases, I do not think the use of the remedy has failed to be followed by decided and lasting relief in more than three or four instances. The pain did not usually disappear till after the third or fourth dose. I have seen enough of the employment of gelseminum, to feel sure that more extended experience and careful investigation of its action will establish the drug as a valuable addition to our materia medica.

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GELSEMINUM SEMPERVIRENS (YELLOW JESSAMINE) IN FACIAL NEURALGIA.

CASE I.—S. W., aged 30, confined eight months ago, not suckling, anæmic, for twelve months had been suffering with grinding, shooting pain in the teeth, jaws, and temples. The pain was generally worse from 9 to 10 A.M., sometimes at night. Eating brought it on. She had several stumps, but the dentist said that nothing was to be done. She had tried many medicines. She was ordered tincture of gelseminum, ten drops in water thrice daily. She was relieved by the first dose, and the improvement continued whilst she was under observation and taking the medicine—two to three weeks.

CASE II.—T. B., aged 39, complained of violent stabbing pain from the mastoid process, over the side and front of the head, coming on from 3 to 6 A.M. This had continued for three weeks. There was no known cause, except a fall on the part seven months ago. His general

health was good. He was ordered five grains of quinine before the paroxysm, fifteen grains of ammonium chloride thrice daily, and liniment of chloroform. He got no definite relief, except from the last mentioned, and, at his next visit, was ordered three drops of tincture of aconite. From this he had much relief for a few days, when he relapsed. Pain was now felt more in the jaws and left side of the face. He was ordered ten drops of tincture of gelseminum, and got distinct and decided relief, which continued whilst under observation.

My note-book contains now many similar cases, which warrant me in adding my testimony to that of Dr. Legg, and to that of my friend and colleague Dr. Sawyer. I have ample evidence of the power of gelseminum to relieve pain, especially—I do not say only—in branches of the fifth nerve; and medicines that relieve pain are the most valuable we can have. In toothache from caries or irritated nerve, I do not know that we often think of any but local treatment, unless sometimes aconite or large doses of quinine; yet in very many cases, gelseminum will relieve markedly. Its use, as may be said of most neurotics, is not free from some danger; but I have only seen unpleasant symptoms once, and then from an American liquid extract in doses of five to ten drops (the dose marked on the label). These symptoms were dimness of vision and extreme prostration. They soon passed, but may serve to remind that the evidences of the physiological action of the drug are, loss of sight, double vision, headache, paralysis. Several cases of accidental poisoning have exhibited these; the few recorded fatal ones were all of children to whom extravagant doses had been given. The preparation I now use is a tincture made according to the usual pharmacopœial mode (*e.g.*, as tincture of aconite), but with two ounces of root to the pint of spirit. It was first prepared here by the hospital dispenser, Mr. Dewson, and is now kept by Messrs. Southall. The dose ordered was from five to twenty drops, and with this, among a large number of out-patients, I have had no cause for anxiety. As the "Therapeutic" corner of our JOURNAL is now, and usefully, occupied concerning tetanus, I will point out that gelseminum, from its paralyzing power, ought, *à priori*, to be of use in that malady.

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THE THERAPEUTIC USES OF CODEIA.

IN a paper in the JOURNAL of April 11th, Dr. Myrtle asks whether codeia depends solely for its action on the presence of morphia, that having been the general opinion held by those who took part in the discussion of his paper. I can, I think, throw a little light on this subject.

How far back in the annals of history opium has been used as a drug, it is impossible to say; but it was not until recently that active principles were separated from it in such a manner that they could be used as independent remedies; and it is not the less surprising that, although there are at least eight separate bases coexistent in opium, yet few have been utilised at present.

Before we use an active principle, or one so called, it will be necessary to know that it is so, or most certainly notes affecting its behaviour will be useless. Now nothing can be more certain than that codeia is a separate and distinct chemical compound; for (a) it has a definite crystalline form—viz., bold rhombic octohedra, and this at once announces the individuality of the substance; (b) the result of ultimate analysis gives, as the formula of codeia, $C^{18}H^{21}NO^3$, the formula of morphia being $C^{17}H^{19}NO^3$. It is evident, then, that if codeia were sometimes mixed with morphia, we should have a varying crystalline form and an indefinite atomic weight. Besides these points of stability, we have those researches commenced by the late Dr. Matthiessen, and ably continued by Dr. Wright, in which they show that polymerides may be obtained from these two bases; and that from codeia, by the action of hydriodic acid, methyl-iodide and morphia may be obtained. A full account of these researches can be seen in the *Proceedings of the Royal Society*, 1871-72.

Experiments which have been made on the physiological action of codeia tend to show various results. These in some measure are due to the experiments having been conducted on animals of different species, genera, and classes. Some, and those most reliable, have been on man; and, as it is for human benefit that we prosecute these researches, it would be better if further secondary experiments were always so conducted.

Thus Anderson says the salts of codeia have a powerful narcotic influence when taken internally. In Dr. Myrtle's case, we have not even drowsiness, so that it is probable that Anderson did not use the pure salt.

Dr. Stocker injected some cats subcutaneously with hydrochlorate of codeia. In each instance, the pupils were dilated; cerebral congestion