branch). His general health was still good. It was decided to offer the patient the prospect of relief by surgical interference, to which he readily consented. On Oct. 24th the patient was anaesthetised by Dr. Dudley Buxton and the operation was performed as described above, except that the internal maxillary artery, not having been previously interfered with, was seen as it entered the pterygo-maxillary fissure and was divided between two ligatures. The tubercle on the great wing of the sphenoid having been chiselled away, the inferior maxillary nerve was readily hooked up and Meckel's ganglion was clearly demonstrated. Three-quarters of an inch of the trunk of the nerve was excised, including the ganglion, and there was but little hæmorrhage during the proceeding. The foramen ovale was not dealt with in this case. An uninterrupted recovery followed, the temperature never rising above the normal and primary union occurring.

About the middle of February, I heard from Case 1 and saw Case 2, and they were then both free from pain and were very grateful for the relief they have obtained. The scar of the operation is scarcely visible, and there is no impairment in the mobility of the jaws. The cheek still remains numb and anaesthetic. I would lay great stress on the method of reflecting the skin-flap, which is a manifest advantage, not only in facilitating the deep dissection, but also in obviating any subsequent deformity of the face through the presence of an unsightly and often depressed cicatrix. Lastly, it must be remembered that, providing all proper precautions are taken at the time of operation, there is no risk of subsequent sepsis, inasmuch as the antrum is left untouched and the wound is well away from such sources of infection as the nose and mouth.

Harley-street, W.

HEMIPLEGIA DURING PERFLATION OF AN EMPYEMA CAVITY:

WITH A SUGGESTION AS TO THE CAUSE OF THE ACCIDENT.

BY THEODORE FISHER, M.D. LOND.,
REGISTRAR TO THE BRISTOL GENERAL HOSPITAL.

It seems to be necessary to apologise for publishing a case in which the accident of hemiplegia occurred during the treatment of empyema, since that complication has been almost entirely relegated to the past by the abandonment of the practice of "washing out"; cases, however, arise from time to time in which the offensive character of the discharge necessitates the adoption of irrigation with an antiseptic fluid, and the following case is brought forward because it seems to suggest that the accident may easily be prevented. Here hemiplegia occurred, not during washing out, but while air laden with eucalyptus vapour was being puffed in. Fluid used for irrigation of the cavity is always warm, while the air in this case was at the temperature of the surrounding atmosphere, or possibly colder, since in taking up eucalyptus vapour it may have become chilled. This suggests that the application of cold to the pleural surface may be a factor in the production of the accident, and that in those cases that have occurred during washing out the fluid may have been allowed to fall below that of the temperature of the body. The following case occurred at the Infirmary, East Dulwich-grove, S.E., and I have to thank Dr. Gross, late medical superintendent, for permission to publish it.

A man fifty-five years of age was admitted into the infirmary on Jan. 13th, 1891, with signs of fluid in the left side of the chest. On the 15th he was aspirated, and the cavity was found to contain pus. On Feb. 3rd the empyema was opened in the ninth space in the post-axillary line. On the 23rd the cavity was washed out by Dr. Gross (it had been washed out on several previous occasions), and afterwards some air laden with eucalyptus vapour was puffed in. The following are notes by Dr. C. A. Kent, who was assisting Dr. Gross: "After washing out the chest with a weak solution of iodine water a few cubic centimetres of eucalyptus vapour were blown in and allowed to escape. The patient suddenly complained of giddiness, turned very pale, and fell back apparently dead. Pulse weak and very irregular. After artificial respiration had been kept up for a few minutes respiration recommenced and the pulse became good. He was semi-unconscious for two hours after.—24th: This morning the right arm and to

a less extent the right leg are paralysed. He is from time to time fairly sensible. He says, 'Oh, dear!' The right arm becomes rigid when the patient tries to raise himself with the left. He is very restless and irritable. No facial paralysis can be made out. The pupils are equal, medium, and sluggish. The knee-jerks are brisk, the right being more so than the left. The plantar reflexes are not well marked. There is no clonus. The patient sleeps with the right eye open.—25th: The patient speaks fairly well, using numerous words. He still seems dazed. His sister-in-law came here to see him yesterday, but he did not recognise her, though he could say a few words. He has regained considerable power in arm and leg.—26th: The patient now seems almost as well as before the attack, although he is slightly dazed. He says that he remembers nothing. He moves the right hand and arm well, but still weak." The patient perfectly recovered, and left the infirmary with the wound healed in the course of a few weeks.

I have suggested that chilling of the pleural surface may possibly be a factor in the causation of hemiplegia. Before giving reasons for that supposition the various views of the pathology of the accident may be referred to. When the accident first attracted attention the detachment of a venous thrombus during the washing out of the empyema cavity was supposed to occasion embolism of a cerebral artery and give rise to the alarming symptoms and hemiplegia. In fatal cases, however, no such embolus was found. It was then suggested that the hemiplegia was reflex, due to some obscure inhibition of the action of one half of the cerebrum. Against that view it was urged that the pleural surface could not be sensitive since it had become transformed into the wall of an abscess cavity. M. Desplats,¹ after reporting a case, suggested that, while in some the symptoms might be reflex, in others they were probably due to the toxic effect of the absorbed antiseptic, while in still others they were merely the manifestation of epilepsy or of uræmia. If epilepsy explains any cases they must be few in number, since, although epileptiform convulsions may be the main feature of this accident, the termination generally either in death or in hemiplegia distinguishes them from the convulsions of that disease. Uræmia is more closely simulated; both hemiplegia and epileptiform convulsions may be present, the latter being sometimes followed by rapid death. But in the accident under notice failure of the pulse and respiration at the onset are marked features and give evidence that although there is some resemblance to uræmia, there are small, yet obvious, differences. The invariable suddenness of onset during the washing out is also against the acceptance of uræmia as the explanation.

It can hardly be supposed that the antiseptic is responsible for the hemiplegia, since that used had varied and poisoning by the commonest antiseptics, does not give rise to such symptoms. Nor is it likely that these poisons would act mainly upon one cerebral hemisphere. It has been already mentioned that embolus is negatived as a cause for hemiplegia, since in fatal cases no emboli have been found. If, therefore, one rejects emboli, epilepsy, uræmia, and poisoning by antiseptics, the only theory left is that the hemiplegia is due to shock. It certainly seems strange that a thickened pleural surface covered with abundant, partially organised exudation, should be able to transmit any nervous impulses to the central nervous system, but although the surface may not be sensitive to ordinary irritation, it cannot be said that a chilling of the wide vascular surface may not be capable of producing some mysterious effect upon the cerebral circulation. In the above case a few cubic centimetres of air laden with eucalyptus vapour had been puffed in when the accident occurred. Mechanical irritation by previous washing out had been harmless. It seems, therefore, reasonable to suppose that the effect of the air was not harmful from direct irritation, but indirectly through the production of cold. Possibly in every case in which the accident has occurred the antiseptic fluid has been allowed to fall below the temperature of the body. This would explain why the accident does not usually occur until the treatment has been carried on for some time. When the treatment is first commenced more attention would probably be paid to the temperature of the fluid than that at some later period in which the patient was becoming convalescent. A case referred to in THE LANCET² tends to support this view of the effect of cold. In that case 0.8 c.c. of a 3 per cent. solution of peroxide of hydrogen had been injected, when the respiration became oppressed, clonic

¹ La Semaine Médicale, Sept. 23rd, 1885, p. 320.

² THE LANCET, July 31st, 1886.

convulsions occurred in the right arm, the head turned to the left, and the patient died in ten minutes. A solution of peroxide of hydrogen must have been injected cold, and the quantity was too small to have had a mechanical effect. The value of the evidence it affords is, however, somewhat diminished by the fact that the injection was not the first but the seventh. It must also be admitted that there is one fact that seriously militates against this view of the pathology of the accident. Were the view correct, one would expect the hemiplegia to bear a constant relation to the position of the empyema. Although the hemiplegia is nearly always upon the same side of the body as the empyema, in one case recorded by M. Berbez it was on the opposite side.³ In the case recorded in this paper the hemiplegia was also, curiously enough, on the opposite side of the body. One is obliged to admit, therefore, that the above view as to the cause of the accident rests upon somewhat insufficient evidence, yet when necessity arises for washing out an empyema cavity it would be well to pay careful attention to the temperature of the fluid.

Clifton, Bristol.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A LARGE QUANTITY OF MORPHIA (TWELVE GRAINS?) TAKEN HYPODERMICALLY WITH SUICIDAL INTENT; RECOVERY.

By PERCY POPE, M.R.C.S. ENG., L.R.C.P. EDIN.

I THINK the following case of attempted suicide by hypodermic injection of morphia is worthy of record, not from any novelty in the way of treatment, but on account of the enormous dose (estimated at twelve grains) that was taken, and from which recovery ultimately resulted. I was sent for one evening about 11 P.M. to see a servant girl who had "poisoned herself with opium." On seeing her a very few minutes after she had taken the poison I found her to be already stuporous, drowsy, and with her pupils much contracted. I discovered that she had taken some morphia hypodermically, the bottle and syringe being by the bedside. Subsequent inquiries elicited the facts that she had been accustomed to go to the druggist with her master's prescription, who was taking morphia hypodermically under medical advice, and that her knowledge of his taking it in this manner suggested a ready means of self-destruction. The druggist, believing that she had come for the drug on her master's order, had no hesitation in supplying her. She obtained the hypodermic syringe by the same means. On my examining the girl's arm seven recent acupunctures were readily discernible, and she subsequently stated that she had taken six syringefuls of the solution. The syringe was a twenty-minim one, and at least three drachms of the solution were missing from the bottle. There was no sign on the nightdress or bedclothes of any of the solution having been spilt, and only one of the acupunctures was bleeding; I therefore cannot help concluding that 2 drachms (or 12 gr.) of morphia were taken. Unfortunately this can, of course, be only a matter of surmise; but I can assert that I never witnessed such excessive and grave symptoms from morphia poisoning, and I have seen several cases, one other case being that of 4 gr. taken hypodermically by a man who was not a habitual morphia-taker. The usual means were employed to keep the patient alive—viz., atropine (4 gr. in $\frac{1}{2}$ gr. doses were given during twelve hours at short intervals without any result on the pupils), galvanism, wet towels, cold coffee, exercise, artificial respiration, &c. The respiratory centre was affected in far greater degree than the cardiac. Twice during the twelve hours following the administration of the morphia artificial respiration was called for, once for twenty minutes and again for five. Lividity and blueness of the face were constant and pronounced. The iris was contracted to such an extent that the pupil appeared to be quite absent, not even the space of a pin's point being discernible in the muscle, and the eye appeared as

if covered entirely by the iris. The conjunctival reflex was absent for some hours, and the eyes appeared glassy and dull. After twelve hours' treatment symptoms of improvement showed themselves, but for no less than thirty-six hours after taking the poison had the treatment to be persevered in at intervals. If the patient was allowed to sleep even after twenty-four hours, the respiration ceased after two or three minutes, and lividity and blueness of the face rapidly supervened. She required constant rousing, and even exercise from time to time, and, as I stated, it was not until thirty-six hours had elapsed that her dangerous symptoms ceased. The girl's age was nineteen, and she had never to her knowledge taken morphia previously in any form. The solution was of B.P. strength.

Fulham.

NOTE OF A SIMPLE APPLIANCE IN CONNEXION WITH BLADDER SURGERY.

By THOS. ANNANDALE, F.R.C.S. EDIN.,

REGIUS PROFESSOR OF CLINICAL SURGERY, UNIVERSITY OF EDINBURGH.

WHEN after the operation of perineal lithotomy or cystotomy it is thought advisable to drain the bladder for some time the connexion of a length of indiarubber tubing to the stiffer tube secured in the perineal wound is useful, as it helps to keep the bed dry by carrying the urine into a receptacle at the side of or under the bed. I (and I have no doubt other surgeons) have found that this indiarubber tube is very apt to be compressed by the bedclothes or limbs of the patient, and the free flow of the urine is consequently interfered with. Having recently employed the following simple contrivance with a view to prevent any interference with the free action of the tube, I give a brief note of it. This or some similar apparatus may already have been suggested, but I am not aware of it. A piece of lead pipe with a bore 1 in. in diameter and long enough to extend from the perineum to one edge of the bed is surrounded with some soft material, such as a roller of flannel. The indiarubber tube is then passed through the lead pipe, and the latter is placed upon the bed under one or other thigh and arranged so that one end will be opposite the perineum and the other at the edge of the bed. In this way the rubber tube is thoroughly protected from any pressure. The weight of the lead tube will keep it steady, but, if necessary, it can be fixed by means of two or three large safety-pins passed through the under-bedclothes and the flannel roller surrounding the tube. This apparatus may be used in another way—namely, by having it long enough to reach the lower end of the bed. The lead pipe in this method lies between the patient's thighs, and if the head of the bed be slightly raised the "fall" will still further facilitate the free flow of the urine along the indiarubber tube.

Charlotte-square, Edinburgh.

TESTICULAR INJURY.

By HARRY BURTON, M.R.C.S. ENG., L.S.A., &c.

ON Oct. 2nd, 1892, I was sent for hurriedly to see a man twenty-seven years of age who had met with an accident. On my arrival I found the man lying on a couch surrounded by sympathising friends. The following was the history he gave. Whilst carting manure from a stable to a field one of his horses bolted, going through the gateway. The man tried to get between the gate-post and the cart, and was crushed between the former and the bush of the wheel. He walked to a relative's house (a distance of 200 yards) and awaited my arrival. There were no signs of shock and the only complaint was some degree of pain in the abdomen. I examined him at the seat of the pain, but found no signs of injury. I simply ordered him to go to bed, and was leaving the house when the patient coolly suggested that he thought there was something wrong lower down. Having ordered the women out of the room and then exposed him thoroughly, I was surprised to find the following condition of things. His right testicle had been forced out of the scrotum and hung by the spermatic cord and vessels (which seemed to be uninjured). The scrotum on the left side had a small rent in it (an inch and a half in length), but the testicle was not extruded. Having obtained some carbolic acid (1 in 40),

³ *Berue de Médecine*, June, 1886, p. 548. *Practitioner*, vol. ii., p. 306.