him by shouting to him, when he would put out his tongue and make some unintelligible answer. The pupils were unequally dilated, the right being the larger; both acted to light. The conjunctivæ were sensitive. The surface of the body was pale and cold, and there was slight sweating. The pulse was rapid, somewhat feeble and irregular. There was no stertor. The limbs were flaccid. Soon after admission the patient began to move his head from side to side, moaning occasionally. He vomited at frequent intervals, but the vomit contained no blood, nor was there any from either nose or ear. There was a lacerated wound in the occipital region, to the left of and slightly above the external occipital protuberance, about an inch and a half from before backwards, and nearly parallel to the long axis of the head; and on the introduction of the finger into this an irregular depressed fracture of the bone could be felt. This measured three-quarters of an inch from before backwards, and half an inch from side to side. The edges were sharp and irregular, and the depressed bone could be felt at the bottom of it.

About two hours after the injury Mr. Sydney Jones trephined, the patient being under the influence of chloroform. Two trephine openings were required, and from these the splintered bone was elevated and removed. The internal table was found to have been splintered to the left and behind, and a sharp spicule of bone was found driven in between the dura mater and the bone, pressing on the dura mater, but not causing any wound. The wound was carefully closed with catgut sutures, a drainage-tube inserted, and the wound dressed with dry iodoform gauze, the head being carefully bandaged. Before the operation the head was shaved and washed with a 1 in 20 solution of carbolic acid, whilst during the operation the spray was employed. His temperature at midnight was 98°.

June 19th.—He was very restless during the night, never dozing for more than ten minutes together. Has to be constantly watched to keep him in bed. Vomited at 6·30 this morning after taking a teaspoonful of milk. He has not passed urine, nor have the bowels acted, although five grains of calomel were given last night. When spoken to he complains of headache, and has asked for the urinal, which he has not used. He always lies on the right side, with his eyes closed and the limbs flexed. Face flushed; eyes bright; pupils normal. Pulse rather full, 100; temperature normal. Some blood came through the first dressing, which was renewed at 2.30 A.M. Bowels acted freely in the afternoon.

21st.—He passed a restless night, but seems quieter this morning. He has vomited at times since the operation. Has retention of urine, which is relieved by the catheter.

22nd.—Complains of hunger, but is still only allowed to have milk. Pulse 80, fairly strong and regular. No sickness. Will now lie on either side.

23rd.—Was restless during the early part of the night. Pulse weak and dicrotous. Tongue moist and slightly furred. Wound dressed: very slight healthy discharge.

25th.—He has much improved; sleeps well at night, but requires the use of a catheter at regular intervals. Wound dressed and drainage-tube removed.

July 1st.—Since the last note the wound has been dressed daily, but is now almost healed, there being but slight discharge from a small aperture about a quarter of an inch in diameter. He is still restless both night and day, and cannot be left alone on account of his attempts to get out of bed. The left pupil is slightly the larger; he has no headache, and he eats ravenously.

On the 19th the temperature in the evening rose to 101·2°. It did not afterwards reach this, there being a rise of one or one and a half degrees above the morning temperature until the 25th, when it became normal both morning and evening.

A month later the patient left the hospital. The wound was quite healed, though the depression due to the removal of the bone was very evident. He was fitted with a leaden plate to protect this.

WOLVERHAMPTON GENERAL HOSPITAL.

TWO CASES OF ACUTE GLOSSITIS.

(Under the care of Dr. TOTHERICK.)

FOR the following cases we are indebted to Mr. W. H. Evans, M.B. Lond., house-physician.

CASE 1.—E. R——, aged twenty-one, was admitted on July 12th, 1886. Tongue covered with thick brown fur, hard, and immensely swollen, the tip projecting half an inch beyond the teeth; it lies immovably fixed in the mouth; causes great pain, and is very tender on pressure. Salivation profuse. Breath extremely offensive. There is very little swelling in the floor of the mouth, but considerable pain on pressure both here and at the angle of the jaw. Movements of head and neck are attended with slight pain. Articulation impossible. Deglutition very difficult. Patient complains of headache, and feels generally ill. Pulse slightly increased in frequency. Temperature 100·4°. Ordered milk and beef-tea, one ounce of saline aperient mixture three times a day, and a weak solution of permanganate of potash to wash out the mouth. The man can give no cause for his condition, but thinks he "caught cold."

July 13th.—Temperature normal; pain much less, but no apparent diminution in the size of the tongue.

14th.—Tongue much smaller; temperature normal; salivation less troublesome.

15th.—The tongue has almost gained its normal size. Patient feels much better.

He made complete recovery, and was discharged on July 17th, 1886.

CASE 2.—J. P.——, aged twenty-seven, was admitted on July 23rd, 1886. The patient was seized with sudden swelling of the tongue on the 21st, caused by "catching cold." Towards the same evening he complained of pain and swelling in the floor of the mouth, gums, and at the angle of the jaw. The pain has increased in intensity and the swelling in extent during the last forty-eight hours. He has been out of work several weeks, and denies any excessive indulgence in drink.

On admission the tongue was hard, and painful on pressure, covered with a thick fur, and protruded about three-quarters of an inch beyond the teeth. Salivation most profuse and distressing. Odour of breath not very offensive. Has great dysphagia, and can only swallow fluids, which have to be poured to the back of the throat. Articulation impossible. Respiration not impeded, although the dorsum of the tongue almost meets the roof of the mouth. Temperature 99·8°. Pulse 116. Urine: sp. gr. 1030; contains a trace of albumen. Ordered milk and beef-tea; also one ounce of saline aperient mixture three times a day, and a lotion of Condy's fluid for the mouth.

July 25th.—Temperature 102·2°. There is some superficial sloughing of the gums and under part of the tongue. Has had scarcely any sleep since admission. An incision about an inch and a half in length and a quarter of an inch in depth was made on each side of the median line of the tongue. Towards evening he felt much relieved, the temperature having fallen to 99·4°.

26th.—Swelling of tongue subsiding; has much less pain, and has slept fairly well since the incisions were made. Salivation still troublesome.

27th.—Tongue slightly swollen and indented by the teeth. Made a good recovery, and was discharged Aug. 1st, 1886.

Remarks by Mr. EVANS.—All observers admit this to be a rare disease. In his clinical lectures, Dr. Graves, referring to a case he had attended in his private practice, remarks as follows:—"True idiopathic glossitis is an extremely rare disease. J. P. Frank only saw one case during his whole life. Four cases of it have been observed of late years in different parts of Europe, one of which is given in a German journal on the authority of my friend, Dr. Gattel, of Elbing, a gentleman upon whose accuracy implicit confidence may be placed." After making a careful survey of the literature of the subject, I can only find sixteen cases, exclusive of the two above described, which are reported at any length. In the course of my reading I had come across descriptions of a few others, but of so fragmentary a character that it may fairly be questioned whether the cases to which they referred were undoubted examples of this disease. From a study of the cases lately admitted into this hospital, the onset of the disease is very sudden, enormous swelling of the tongue coming on in a few hours. There may be a little premonitory pain and stiffness about the angle of the jaw, with slight difficulty in mastication and occasionally pain in the occiput and neck, and then the swelling of the tongue follows with great rapidity. The organ may almost fill the cavity of the mouth, and in some cases project beyond the front teeth as much as "two inches." The tongue now lies motionless, is hard and painful on pressure, and coated more or less thickly with a brownish-white fur. Sometimes it is deeply indented by the teeth, especially on the inferior surfaces of the tip. Articulation is imperfect, and in some cases absolutely

impossible. Salivation is generally a prominent symptom, and causes great distress; the saliva, constantly dribbling over the surface and along the sides of the tongue, becomes viscid and ropy unless immediately wiped away. In severe cases the salivation may be profuse, and it constitutes to my mind one of the most distressing symptoms. Swallowing becomes extremely difficult, and in many cases fluids have to be passed to the back of the throat; even then the attempt at deglutition may set up violent fits of coughing. The inflammatory process may be strictly limited to the tongue, but does occasionally spread downwards to the rima glottidis and larynx, causing such serious obstruction to respiration that tracheotomy offers the only chance of escape from asphyxia. The temperature is usually slightly raised, but seldom runs higher than 102°. If no active treatment has been adopted, the tongue, having remained in this enlarged and painful condition for a variable period, from a few hours to a few days, commences to subside; and this sometimes occurs with great rapidity, being reduced to half its bulk in twenty-four hours or less; but usually a more gradual resolution takes place, and seven or eight days may elapse before the tongue has attained its natural size. Although the natural tendency of the disease is towards resolution, this happy termination does not invariably occur. It may go on to chronic induration or end in chronic glossitis. Several cases of hemiglossitis resulting in imperfect resolution have been recorded, one half of the tongue, remaining perceptibly larger than the other; one such case is mentioned by Dr. Graves, who states that in spite of his deformity the patient was able to speak perfectly. I am not aware of any case in which the glossitis was bilateral that is said to have terminated in a permanently enlarged tongue, but surely it is not unlikely that such an event might occur. We should not easily perceive it, as the advantage derived from a comparison of the two sides of the tongue available in cases of hemiglossitis would of course be lost. Another termination of acute glossitis is in suppuration, which may be diffused or circumscribed; the former variety rarely occurs. However, one case, in which death occurred from laryngitis, was recorded by Mr. J. Z. Lawrence, where the hyoid muscles and root of the tongue were infiltrated with purulent material. But the circumscribed form seems to be more common. Three out of the above-mentioned sixteen cases were followed by a circumscribed accumulation of pus; in two cases it was situate towards the root of the tongue. Recovery quickly followed evacuation of the pent-up matter. Gangrene may take place, but this is an extremely rare occurrence. One case of sphacelus of the tongue is reported by Mr. A. Pritchard, but the evidence that this was preceded by acute inflammation does not seem to be sufficiently clear. The diagnosis presents no difficulty; the enlarged tongue, profuse salivation, and other symptoms of the disease are characteristic. Nevertheless, in a paper published in the *Practitioner* some months ago, Dr. S. Mackenzie described some conditions liable to be mistaken for it, amongst which were salivary calculus, acute ranula, and abscess in the floor of the mouth. Most writers consider acute glossitis to be a strictly catarrhal affection; Mr. Butlin, Dr. Mussy, and Sir Dyce Duckworth are quite agreed upon this point. In two of the above eighteen cases it succeeded a "pharyngo-laryngitis," in one it followed "erysipelas and sore-throat," and in another the patient was being treated at the time for acute rheumatism. In the majority of cases the patients attribute their illness to "catching cold." It occurs more often in men than women, and chiefly in young adults, although in one of the above-mentioned cases the patient was eighty years of age. It generally affects both sides of the tongue; out of the eighteen cases it occurred eleven times bilaterally and six times unilaterally (in four instances on the left and in two on the right side), and in one case it attacked each side of the tongue in succession, being first on the left and afterwards on the right side. In a case of hemiglossitis reported by Mr. Bellamy, in which both sides of the tip were affected, attention is drawn to the fact that the median septum is thick and strong posteriorly and mesially, but thin and delicate towards the tip, and it is suggested that in cases of hemiglossitis which become general the inflammatory process may probably extend from one side of the tongue to the other through the thin part of the septum at the tip. With regard to treatment little need be said; it is very simple. The less severe cases usually subside in a few days, no active interference being necessary. The diet should consist entirely of slops; a saline aperient is generally indicated; and the mouth may be washed out with a disinfectant lotion, a weak solution of permanganate of potash answering the purpose very well. In the more severe cases, it is the general opinion that incision of the substance of the tongue is the correct mode of treatment; it relieves tension, diminishes the risk of sloughing, and certainly alleviates the pain.

GREENOCK INFIRMARY.

A FEW NOTES ON THE SYMPTOMS AND TREATMENT OF THE VICTIMS OF THE DISASTER AT CRARAE.

(Under the care of Dr. FOX.)

FOR the following notes we are indebted to Mr. Alex. D. Pithie, assistant house-surgeon.

On Saturday, Sept. 25th, a large number of excursionists went by steamer to witness the explosion of seven tons of gunpowder at Crarae quarries, Lochfyne-side. These quarries are situated on the side of a hill, and form a large bowl with only a narrow entrance. After the explosion the excursionists landed and walked to the quarry, about a quarter of a mile off. No sooner had they entered the bowl of the quarry than they began to stagger and drop down in all directions. With difficulty they were brought out, when it was found that six were dead and a great number unconscious. Eventually all of them recovered under the treatment used by medical men on the spot, except seven, who were sent to this institution.

On admission, all but one were found to be comatose. This patient had been violent, but could now be induced to keep to bed by gentle coaxing. The general symptoms were as follows:—The breathing was slow, deep, and stertorous (in the fatal case it was short and shallow, with stertor). The faces were flushed, and the veins on the neck and forehead distended. The eyelids were closed, and the pupils in every case were dilated on admission (in the fatal case these contracted just before death), but responded to the stimulus of light. The extremities were cold. There had been involuntary evacuation of the bowels in every case. As to the bladder, it was impossible to come to any conclusion, but on passing the catheter only a few ounces of urine could be drawn off. There was a very strong odour from the breath of each patient, which might be described as sweet-feculent. The pulse in each case was slow, but full and regular. All the temperatures were at first subnormal. The patients were all unable to swallow.

When admitted, the sufferers were at once stripped and put to bed; sinapisms were applied to the extremities, nape of neck, and spine; hot bottles were placed between the legs and along the thighs and side, also to the feet; the catheter was passed, and the urine drawn off. The bowels were first cleared out by a purgative enema of castor oil and turpentine, and afterwards stimulant enemata of beef-tea and brandy administered at intervals of about three-quarters of an hour. Friction was applied to the extremities and body. In the fatal case, ether was given hypodermically when the pulse began to fail (which it frequently did), with the effect of temporarily restoring the heart's action. The tongue was drawn forwards, and strong friction used to the chest and sides. Ammonia vapour was tried, also galvanism along the spine. These means were, however, of no avail, as the patient died of syncope about 9 A.M. on the 26th. Just before death very strong reaction set in. There was very profuse perspiration, the pupil contracted, and the temperature rose to a little over 101°. The peculiar odour of the breath was noticeable in every case, also the involuntary evacuation and dilated pupils. As to the bladder, it was impossible to say anything about the involuntary micturition, inasmuch as, although their clothes were wet, this might be attributed to the very heavy rain which fell at the time. All the temperature being subnormal might or might not be also attributed to the inclement state of the weather, and perhaps also to the long journey in the steamer before they reached the hospital. This might also apply to the cold extremities.

After being put into bed, and the means described above used, the patients became bathed in a warm perspiration. In two cases the transition from coma to consciousness was accompanied by delirium. This in one case was so violent as to necessitate the use of a strait-jacket. After the full return of consciousness the patients felt very weak and much prostrated, and in one case (the longest unconscious) there was slight frontal headache and giddiness on any