much swollen and erysipelatous; temp. 101°, and edges of wound sloughing. This case was also always dressed under the spray, with boracic acid and iodoform. Quinine and opium pills. In a few days the pain was very much less, he slept well, the swelling and erysipelas disappeared, the temperature (according to the chart) became normal, and by the 15th March the wounds had healed. The middle finger was stiff, and he could not bend it well, but with passive motion, in time, I am sure he will have his hand all right again. He also left on the 23rd of April, with his companion in misfortune, to rejoin his steamer in China.

CALCUTTA MEDICAL COLLEGE HOSPITAL.

REMOVAL OF TONGUE FOR CANCER.

By SURGEON-MAJOR J. O'BRIEN, A.M., M.D.

A Hindoo woman, aged 45, states that she bit her tongue some 4 months ago. A small sore resulted, which, instead of healing, has gone on steadily increasing in size. There is a good deal of shooting pain, difficulty in speaking and swallowing, and much distress generally.

On admission into the Medical College Hospital a few days ago a large epithelioma with cracked fungating base and indurated everted edges was seen occupying the right side of tongue for its anterior half. The left side was also invaded to some extent. Five of the cervical lymphatic glands were found diseased, viz., one in the median line between the symphysis of the inferior maxilla and the hyoid bone, and two in each of the submaxillary triangles close beneath the ramus of the jaw.

The operation was begun by removing the gland in the middle and passing a probe, armed with a stout thread, for dragging up the wire of the ecraseur, through the incision thus made, up between the genio-hyoid muscles into the mouth close to the frænum. The probe was withdrawn and the thread left hanging out of the mouth. A Mason's gag was then applied and the mucous membrane of the floor of the mouth freely and completely divided from the line of the frænum in front back to the posterior molar on each side. The finger was then introduced and the tissues at the root of the tongue carefully isolated. The organ was next dragged well out of the mouth by means of a stout vulsellum and transfixed through its posterior third, about an inch in front of the epiglottis by two long straight acupuncture needles crossing each other diagonally. The wire of the ecraseur was then drawn up into the mouth and slipped behind the needles, slowly tightened, working from below the chin, and the tongue removed well clear of the disease. There was practically no bleeding, not more than a few drachms of blood lost in the whole operation.

The lymphatic glands were next removed on both sides and a drainage tube inserted through the central incision so as to allow of free drainage from the mouth.

This method of operation appears to me to possess many advantages over most others proposed. In the first place there is no risk of hæmorrhage, indeed if carefully performed, and the ecraseur very slowly tightened, it is almost bloodless, in the second it affords a free drainage for septic discharges from the mouth, and lastly, though apparently complex, it is extremely simple and easy of execution. Of late much has been written in support of WHITEHEAD'S method of operation, *viz.*, removal of the tongue by scissors; but it is not, in my opinion, one that commends itself to general approval. In the first place it is attended with the risk of dangerous hæmorrhage, in the second, it is not easy amidst profuse bleeding to see exactly where one is cutting, and thirdly, as pointed out by Prof. STOKES, it is apt to be followed by septic poisoning. There was a case of the kind in the Medical College Hospital lately. DR. RAYE removed half the tongue for cancer, with but very little bleeding, according to WHITEHEAD'S plan. Symptoms of septic poisoning, however, supervened and caused death in a few days.

With regard to the hæmorrhage there is a conflict of opinion, but in most cases it appears to be, as one would naturally expect from such an operation, troublesome, and in many alarming and dangerous. In the *Lancet* of 1882 (February and April) two cases are reported, one by Mr. TREVES of the London Hospital, and one by Dr. GEORGE ELDER, in both of which the hæmorrhage was so great that most surgeons would hesitate before venturing to incur a similar risk for their patients.

In Mr. TREVES' case the hæmorrhage was considerable from the section of the mucous membrane, and he thus describes the removal of the tongue itself. "I therefore at once removed the entire organ with the greatest possible expedition. When removed blood was seen to be pouring from the cut surface of the floor of the mouth. As the tongue was taken out a large sponge was at once thrust into the mouth and pressed firmly down. The next point was to secure the linguals. The sponge was kept pressed down to the floor of the mouth until it was considered that the oozing from the surface might have been checked. On its removal, however, blood welled from the general surface as freely as ever. The lingual arteries were readily seen as blood spouted from them directly out of the mouth. One of these vessels was immediately picked up with the torsion forceps, but with one twist of the forceps the end of the artery came off and the bleeding of course recurred. Although this occupied but a moment, the hæmorrhage from the general surface of the wound was most profuse, and the blood by running down the throat threatened to produce asphyxia. The sponge was re-inserted and kept firmly applied for a longer time. On its removal blood still poured out from the wound surface, a clamp forceps was put on one lingual and an attempt made to ligature the other, but, although the ligature was applied with the greatest care, the end of the vessel came off with the ligature when the forceps was removed. The bleeding so far had been terrific, and it is particularly to be noticed that it consisted of a general oozing from the cut surface, and not from the pumping of individual arteries."

With regard to the other case DR. ELDER writes: "During the operation there was very considerable loss of blood, seemingly not so much from division of the blood vessels as from the general surface of the wound. The position in which the tongue was of necessity held, combined with the flow of blood, so impeded respiration towards the termination of the operation as to threaten asphyxia; but fortunately at this juncture the patient became partially conscious and assisted in clearing the throat."

In the *Indian Medical Gazette* for May DR. JAMES CLEGHORN reports 3 cases of removal of the whole or part of the tongue by scissors. In the case in which the whole tongue was removed he first tied the lingual arteries in the neck, an operation that is by no means easy. Notwithstanding this there was "free hæmorrhage from the whole of the cut surface, which was arrested by pressure and one vessel near the left tonsil was tied." In the other two cases of partial removal there was considerable bleeding. Of the first he remarks, "The hæmorrhage was profuse, and great difficulty was experienced in arresting it." In the second case "the bleeding was profuse, but was easily arrested by pressure."

These cases suffice to show that in WHITEHEAD'S operation there is very considerable risk of hæmorrhage, and even of asphyxia from blood getting into the air passages. On the other hand when the tongue is removed by the wire ecraseur, either after the method of PAGET or of NUNNELEY, there is absolutely no hæmorrhage, and the operation is safe and easy. I have performed it twice lately with excellent results in both cases. Surgeons in the mofussil may occasionally be obliged to remove the organ with scissors for want of an ecraseur, but if they happen to possess this instrument, I must confess I cannot see what possible advantage is to be gained by having recourse to WHITEHEAD'S operation.

PRESIDENCY GENERAL HOSPITAL.

CASE OF REMITTENT FEVER WITH INTESTINAL ULCERATION.

By DR. G. F. A. HARRIS, I.M.S.

Andrew Peterson, 32, Swede; seaman, Ship *Earl of Jersey*. One day in India, was admitted into the Second Surgeon's ward, General Hospital, on the 27th February 1884, complaining of diarrhœa and excessive palpitation, pain in cardiac region, with difficulty in breathing; says, "the pain shoots across the stomach, and is worse after food." On auscultation, the first sound of the heart, at a point midway between apex and base, is unduly prolonged, and what WALSHE terms "*murmurish*." Heart's action excited. Bowels said to be loose. Is very