with wonderful patience and care, but with a freshness and fertility of contrivance and resource which command the interest and admiration of the numerous visitors, English and Foreign, who attend his clinique. I have seen more brilliant and bold operations, but none in which what appear at the time to be hazardous and severe measures, are so fully justified by successful results. His patella operations are a good illustration of this. In old cases of fractured patella, he opens the knee-joint without scruple, dissects off the fibrous bands that unite the fragments, passes wire loops round these to enable him to judge of the feasibility of bringing them into contact without tension. If this is not possible, he detaches the quadriceps extensor freely from the surface of the bone, prolongs his incision upwards for a distance of 5 or 6 inches, dissects the surface of the muscle, and divides it throughout its thickness by a V-shaped incision. The fragments then come together with ease, their adjacent surfaces are freshened by means of the saw or a chisel and hammer: they are drilled and firmly attached with a stout silver wire, whose twisted ends are cut short and hammered down to the surface of the bone from which the periosteum has previously been stripped. Two holes are made in the skin on each side to admit drainage tubes for the purpose of employing this immense cavity of the exudations which pour into it, and the wound is then carefully stitched. In a fortnight or three weeks, this large wound will have healed without suppuration and without pain or any constitutional disturbance of consequence, and in another fortnight or three weeks, the patient begins to use his limb.

I have seen two cases of this description, and a more crucial test of the advantage and safety of antiseptics could not be imagined. In recent cases, the operation of wiring broken patella is not so formidable or difficult, and the result in both cases has, in Lister's hands, been uniformly and brilliantly successful.

I have, I think, written enough to show that antiseptic surgery or, as it is now more appropriately denominated, aseptic surgery is no mere ephemeral fashion, but a positive, palpable, and permanent improvement in surgical art, through the agency of which a very decided addition has been made to the power at the command of the surgeon in ministering to the conservation of function and life, and the cure of injury, deformity, and disease.

London:
5th January, 1885. K. M. L.

Few people are aware, or seriously consider, when they take a cup of tea, that it is essentially an aqueous solution of trimethylxanthine ($C_8 H_{10} N_4 O_2$) which they are drinking.

A Mirror of Hospital Practice.

MEDICAL COLLEGE HOSPITAL, CALCUTTA.

TWO CASES OF EXCISION OF THE ELBOW-JOINT.

By J. O'Brien, M.A., M.D.,
Officiating Second Surgeon to the Hospital.

Case 1.—The patient, a Mahomedan, aged 25, in poor health, was admitted into the Medical College Hospital on the 12th September, 1884, suffering from an extensive swelling of the right elbow-joint, reaching up into the arm, and down into the forearm, for a few inches either way. There were two sinuses, leading in towards the joint, and communicating with each other beneath the superficial layer of flexor and pronator muscles. One opened behind and below the external condyle, the other below the internal condyle. The parts generally were in a foul and inflamed state. The joint was immovable and ankylosed in the straight position. He stated that the inflammation originated in a wound of the hand, which he received some six weeks before admission. He was put on a good diet, and the sinuses treated antiseptically with injection of perchloride of mercury (1 gr. to 3 oz. of water) and covered with pads of sawdust impregnated with a 5 per cent. solution of the perchloride. Under this treatment inflammation subsided, and the discharge became less. Towards the end of the month, the sinuses were laid freely open, and dressed antiseptically. In about a month the large sores thus formed healed, and with the exception of the ankylosis, which persisted, the arm appeared to be in a healthy state.

As it appeared probable that the ankylosis was of a fibrous character, and due to adhesions without the joint, an attempt was made, on 7th December, to forcibly bend the joint under chloroform, and to obtain motion in it. The attempt succeeded to a certain extent, but the ends of the bones were felt to grate roughly against each other, showing that their articular surfaces were diseased, and great inflammation followed next day, which had to be treated with rest and the constant application of ice. While the inflammation persisted, no attempt to continue passive motion was possible, and when it subsided, the arm was found ankylosed as firmly as before. It then became apparent that bony ankylosis existed, and that the only hope of remedy lay in excision of the joint.

Accordingly, on 30th December, the joint was excised under chloroform, by Langenbeck's method of a vertical incision at the back of the elbow, about 5 inches in length, and having the olecranon as its mid point. Esmarch's bandages were employed to exsanguinate the limb. On opening the joint, the whole of the articular extremity of the humerus and the surface of the bone for about two inches above the condyles, were found rough and devoid of

either cartilage or periosteum. The sigmoid cavity of the ulna and the head of the radius were also bare of cartilage, and firmly adherent to the humerus. The joint was forcibly bent, and the extremities of the bones protruded through the wound. The humerus was sawn through about two inches above the condyles, and the sigmoid cavity of the ulna and the head of the radius were also removed, leaving the attachment of the biceps and brachialis anticus muscles untouched. There was very little bleeding when the bandages were removed.

The further progress of the case was one of rapid recovery. The limb was placed in semiflexed and semiprone position, resting on a well padded, bent, zinc splint. Under antiseptic dressing of the perchloride of mercury, the edges of the incision, united throughout by first intension, and the cavity formed by the removal of the bones, became obliterated and filled up, partly by contraction, partly, in all probability, by organization of the clot which filled it after the operation, and, perhaps, to some extent, by the growth of granulations, but, from first to last, hardly a single drop of pus formed. It is now the thirtieth day after the operation. The wound has been entirely healed for about ten days. Passive motion has been steadily employed, and cold lotion applied to diminish any tendency towards heat or inflammation which the movements might create. The arm rests in an easy guttapercha back splint, and all the movements of the joint are free. The patient is now able to flax the arm with ease and to pronate it, but supination is still difficult. Considering the large amount of bone removed, the perfectness of the joint is astonishing. When the muscles, which were partially atrophied from long disuse, recover their tone, the arm will be, I expect, almost as useful as ever.

Case 2.—The patient, a healthy Hindu, aged 30, was admitted into the hospital on 14th January, suffering from complete ankylosis of the right elbow-joint, the result of an injury.

He states that he fell on his elbow about six months ago, and sustained a severe injury of the joint. Enormous swelling rapidly set in, for which native medicines were employed, but a large abscess formed, and burst, discharging a large quantity of pus. After about a month, the abscess healed, and all inflammation subsided, but the joint was immovably fixed in the straight position.

On admission into the hospital, the joint was entirely free from pain or swelling, but all motion in it was entirely abolished. It was firmly and immovably united by complete bony ankylosis in the straight position. As the limb was practically useless in the state in which we found it, excision of the joint was the only remedy available.

Accordingly, on the 17th January, an operation, exactly similar to that described above, was performed. When the soft structures at the back of the joint were incised, and removed to either side by dissection, the bones were found firmly united by direct osseous union. On attempting to forcibly bend the ankylosed joint for the purpose of getting the extremities of the bone to protrude through the wound, the humerus snapped across through the olecranon fossa, just above the articular surface. The bony union in the joint was so complete, that it was found hard to decide where the humerus ended and the other bones began. From the appearance of the bones it would appear that the original injury which led to the ankyloses was a transverse fracture of the humerus immediately above the articular surface, and within the capsule of the joint. The coronoid process of the ulna is also much thickened from deposit of callus, leading to the inference that this point of bone was also broken.

There was a good deal of oozing of blood from minute vessels after the removal of the elastic bandage in this case. It caused much trouble and delay; notwithstanding copious douching with iodine lotion, still no large vessel had been opened, and no point could be found at which it seemed advisable to apply a ligature. This troublesome and persistent hæmorrhage, or oozing from small vessels after the employment of elastic compression, has been noticed by other surgeons. With regard to its employment in this particular operation, Agnew writes unfavorably. He says:—"Should the parts, during the operation, be obscured by hæmorrhage, a tourniquet may be applied over the brachial artery. The Esmarch bandage is followed by so much bleeding after its removal, that I no longer employ it in these operations." The end of the humerus was removed sub-periostially, as recommended by Langenbeck, and was sawn off, as in the previous instance, about two inches above the condyles. This high division of the bone was necessary owing to accidental detachment of the periosteum, when the end of the humerus was turned out of the wound to be excised.

The progress of this case has been satisfactory, but the healing has not been as rapid as in the former case, in which the bones were actually diseased and eroded. This was a case of ankylosis due simply and solely to an injury of the joint, and the bones and tissues surrounding them being healthy, section of them and of the adjacent soft tissues was attended with more disturbance, both local and constitutional, than in the other case, in which both were diseased. A moderate amount of inflammation followed the operation, and a small quantity of pus collected at the upper extremity of the incision, necessitating the opening of two of the sutures, and the insertion of a second drainage tube on the fourth day after the operation. When the pus escaped, the temperature, which had been up to 102°, at once fell to 99°, and the inflammation subsided. The wound is now (14th day) nearly healed, and gentle passive motion is employed. The case promises well in every way, and I expect that an useful joint with free motion will be obtained.

With regard to the amount of bone which should be removed in the operation for excision of the elbow-joint, Bryant gives precise directions. He says: "In all cases the whole of the articular facets should be resected, and

when the bone at the point of section is not quite healthy, a second piece had better be removed. I have at times regretted not having excised enough of bone, aud particularly of the humerus: indeed, I strongly advise the surgeon in all cases to be free in his section of this bone, more particularly in excisions for ankylosis."

Again, Holmes, in his System of Surgery, when treating on the excision of this joint, writes: "The whole end of the humerus just above the condyles ought to be removed. If only the extreme ends of the bones be sawn off, ankylosis will most likely take place; while if the amount above prescribed, *viz.*, the whole condyloid extremity of the humerus and all the sigmoid cavity of the ulna, with the head of the radius, or even a little more on both sides, be taken away, free motion may, under favorable circumstances, be expected."

My own small experience of the operation leads me to be free in my section of the bones and to err on the side of taking away too much rather than too little. In a case in which I operated about six months ago, removing merely the articular surface of the humerus and the usual quantity of the lower bones, the movements of the joint, though free, were not as complete as I expected. I should say, in every case, it would be desirable to make the section of the humerus a short distance above the upper margin of the olecranon fossa,—*i. e.*, from half an inch to one inch above the condyles.

EDEN HOSPITAL.

FOREIGN BODY IN LOWER PART OF PHARYNX, WITH FORMATION OF ABSCESS AND PERFORATION OF LARYNX; TRACHEOTOMY; DEATH.

[Communicated by Dr. J. Clarke, Resident Surgeon to the Hospital.]

B——, a well-nourished female child, aged one year, was brought to Eden Hospital on 22nd December. The mother stated that, seven days ago, after a warm bath, the child was attacked with bad breathing, and there was no history of the child having swallowed a foreign body. On admission, temperature was 102°, pulse very frequent. No abnormal chest sounds, but there was a deficiency in the quantity of air entering the lungs. The tongue was covered with a white fur, but there was no evidence of croupous or diphtheritic deposit. The breathing was very hurried, 72 per minute, irregular, and now and then ceased for a few seconds. The front of the throat was tender.

Child took the breast, and in this way was able to get a little nourishment, but on attempting to swallow milk, it came through the nostrils, and *made* the breathing worse. Hot fomentations ordered to front of neck, with chloral and bromide mixt., every hour.

At 9-30 P. M., the temperature had gone up to 104·4°; the breathing became much worse, and the child was in a dying state, scarcely any air entering the chest. Chloroform was given and tracheotomy performed by Dr. Clarke. A vulcanite tube was put in and the child began to breathe freely, but when milk was given to the child, it swallowed it eagerly, but the milk came out through and by the side of the tracheotomy tube, and caused a good deal of spasm and cough.

As the child was not able to swallow without interfering with the breathing, enemata of milk and beef-tea were ordered, as well as gr. iii of Sod. Salicylate and m. v of Sp. Amm. Ar. every hour.

It was rather difficult to understand why the milk, when swallowed, came out through and by the side of the tracheotomy tube, and the following probabilities were suggested:—Either there was a communication between the pharynx, or upper part of the œsophagus, and the larynx; or the milk trickled down through the upper opening of the larynx. The idea presented itself, *viz.*, to pass down a tube and feed the child in this way; but as the enemata were retained, it was considered advisable to give the parts rest. The child slept well, and the next morning the temperature was down to 99·4°, with very fair pulse and breathing quietly through the tube. In the evening of 23rd, temperature went up again, reaching 103·4°, and the child died, at 2 A.M. on the 24th, from exhaustion.

After death, the tongue, larynx, œsophagus and pharynx were removed. There was no evidence of inflammation about the openings of pharynx or larynx. The right side of larynx, corresponding to lower part of thyroid and cricoid cartilages, and upper part of right side of trachea, just below the cricoid cartilages, was ulcerated and discoloured, and a probe passed from the larynx backwards into the pharynx, coming in contact with a foreign body.

Corresponding to lower part of pharynx and upper part of œsophagus, was a swelling about the size of a small egg; while the specimen was being removed, this swelling burst and discharged a quantity of pus. On making an incision into it, it was found to be the walls of pharynx and œsophagus much thickened and infiltrated, which formed the walls of the swelling, inside which was a piece of tin with string attached about 1″ square and bent on itself at the centre, and firmly attached to the anterior wall of pharynx and back of larynx. The back of the bend was directed backwards towards the posterior wall of pharynx, and the two sides with four sharp corners, directed forwards towards the larynx.

The right side of the bent piece of tin had ulcerated its way through into the right side of larynx, and was found projecting a little to the right of the middle line. The left side had made an opening in the wall of the pharynx, but seemed to fill it up, and prevented matters from coming out among the deep tissues of the neck.

The result of the *post-mortem* examination explained easily the fact of the fluids when swallowed coming through the tracheotomy tube and the wound, although the foreign body did not mechanically completely close the opening into the œsophagus. The sharp edges of the tin, by irritation, set up inflammation, and ulcerated through the walls of larynx and pharynx, thus establishing a communication between them; and milk, when swallowed, was directed along the concave surface of the foreign body, which acted as a funnel into the larynx, where it set up irrita-