my late master answered. "I used," continued he, "to describe, in my course of lectures, this and that fascia, which presented itself in the course of the operation for hernia, yet I now assert that, in performing an operation in which all the structures have been changed by old disease, we find none of these different layers. I go further than this, and state that surgical anatomy has retarded science. In consequence of the fear created by it, we have not dared to operate, when we otherwise should have done so;" and I think he drew one of his illustrations from French surgeons a few years ago declining to remove the upper jaw, which they now do with impunity, and without the horror which *à priori* reasoning predicted. He moreover declared he had seen old provincial surgeons, who were ignorant of surgical anatomy and surgical relations, operate most successfully. They had been taught by experience, not precept, and were not deterred by the fear of wounding this vessel or cutting that nerve.

(To be continued.)

A Mirror OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

CASES OF PUERPERAL AND TRAUMATIC ARTHRITIS; AMPUTATION OF THE THIGH IN BOTH INSTANCES.

(Under the care of Mr. ERICHSEN.)

ON Wednesday, the 9th of January, Mr. Erichsen called the attention of his pupils to two cases of inflammation of the knee-joint, the one arising from injury, the other being a consequence of uterine inflammation; and in commenting on the history of the cases in question, he took the opportunity of pointing out the differences in the pathology of puerperal arthritis, traumatic arthritis, and arthritis from disease. In the two first forms of this affection—viz., puerperal and traumatic—the synovial membrane was chiefly affected, and the deeper examination was carried into the osseous cartilages, the healthier the structure would be found. In arthritis from disease, however, in such cases as required amputation, inflammation did not, in nineteen cases out of twenty, commence in the synovial membrane, and was found less active in the interior of the joint than in the osseous parts. In tracing the course of puerperal inflammation of the knee-joint, the lecturer said morbid action commenced in the uterus, and was thence communicated to the veins; the inflammatory action proceeding to suppuration poisoned the blood, and so the elements of disease were conveyed to the joint.

The history of the cases that called forth these remarks we give from notes kindly furnished to us by Mr. D. B. Reid, the house-surgeon of University College Hospital.

CASE I.—Samuel W.—, aged ten, a delicate youth, was admitted under Mr. Erichsen, on Dec. 12th, 1855. Nine days before, the point of a rusty nail had been forced into his knee. He suffered little at the time, but during the night considerable pain came on, followed by swelling, after which he was unable to walk. When first seen, as an out-patient, on Dec. 6th, a small ragged wound was seen on the outer and anterior aspect of the joint, around which redness and swelling of the integuments were visible; but there was no evidence of the affection of the joint, the discharge being slight, the tenderness superficial, the swelling local, and flexion and extension causing but little pain. A back splint was applied to keep the joint rigid, and as poultices had been used previously, and the wound was rather sloughy, they were ordered to be continued. Being rather feverish, he was put on salines and antimony, and the bowels opened by a compound rhubarb pill.

Little change took place during the following five or six

days, except that the wound lost its sloughy appearance. On the 12th of December, however, the swelling was found to have extended, and the boy was immediately admitted into the hospital. The splint was removed, and the joint examined. There was no evidence of affection of the articulation. A probe was passed easily into the wound, and ran easily upwards under the skin for one inch, but in no other direction; the integument was then slit up by a curved bistoury, and about a teaspoonful of thin pus escaped; the limb was then laid on its outside, supported on pillows, and thus burrowing of matter was avoided. The treatment consisted of hot fomentations to the knee, middle diet, aperients, and laudanum to allay irritation. Next day, he was better. On the 14th, the wound was again enlarged, but very little matter followed. The same local treatment continued; salines and antimony ordered.

Dec. 15th.—Much erysipelatous blush about the knee, which is much more swollen, the swelling now for the first time passing up in front of the femur, where fluctuation is detected; the knee is gradually drawn up, and the patient has slight startings at night on falling off to sleep; skin hot and dry; nausea; furred tongue; quick pulse.

From this time, the affection of the joint gradually became worse; the shootings increased; the pain and general irritation were augmented; loss of strength, flesh, and appetite. At first he was treated with mercury-with-chalk and Dover's powder, the limb being kept steady, in a slightly flexed position, and poultices and warm fomentations constantly kept up. He became so low, however, that mercury was discontinued, and effervescing salines substituted. Wine, jelly, light pudding, and eggs, were gradually added to his diet.

The effusion into the joint diminished, but afterwards considerably increased, attended with all the symptoms of suppuration in the joint. On the 26th of December Mr. Erichsen made an opening by deepening the external wound, and let out a quantity of purulent fluid mingled with flakes of lymph. This was attended with immediate relief. He slept well during the night, and the startings totally disappeared. Next day he was free from pain; his expression was much less anxious; surface cooler; pulse less frequent; tongue cleaner and moister; bowels open; appetite so much better as to be able to take some meat. It soon became evident that the boy could not stand the suppuration. He lost flesh and strength, and was only kept up by small and repeated doses of wine given night and day. He began to complain of pain, which occasionally attacked him when any fungous granulations blocked up the wounds and confined the matter. This was readily removed by opening the wound with a probe. After this he complained of a settled aching pain in the joint, which nothing but laudanum relieved. As he was losing ground daily, Mr. Erichsen resolved to excise the joint; but in this he was opposed by the boy's parents, who would hear of nothing but amputation. The thigh was accordingly amputated just above the knee on January 2nd.

Dissection.—Parts around the joint considerably swollen and infiltrated with gelatinous-looking plastic matter. The external wound was just over the outer border of the patella, which with the cartilage was eroded for a quarter of an inch, just as if a semicircular piece had been punched out of its edge: the bone here was exposed. The synovial membrane was everywhere brightly injected, swollen, and gelatinous-looking, and almost everywhere exhibited a tendency to spread over the surface of the cartilage extending from its edges. Where this new, soft, bright-red membrane lay over the cartilage, it was pretty firmly adherent, but was dissected off readily with a sharp scalpel, the subjacent cartilage presenting a rough, fibrous, and white appearance, having lost its gloss. The semilunar cartilages were much softened and covered by this prolongation from the synovial membrane, as also were the crucial ligaments. A thin section of the softened cartilage around the ulcerated portion of the patella exhibited nothing under the microscope but granular matter, and clusters of granules belonging to cells whose walls had disappeared, no true cells being visible; the granular matter in many places was arranged in lines, and in some parts the appearance of fibres were closely imitated. After removing the superficial layers of cartilage, those nearer the bone were found to present all the microscopic characters of healthy tissue, well-formed cells in a clearer matrix being observed. The bright-red injected membrane creeping over the cartilage from the synovial membrane was found to consist of granular matter, assuming in many places a fibrous arrangement. Interspersed here and there were long red streaks of uniform calibre, and twisted about in various directions. The question arises—are these long red bodies new bloodvessels?

The boy is now doing well. The femoral ligature separated on the fourteenth day.

CASE 2.—Mary Ann S—, aged twenty-six, a married woman, was sent to Mr. Erichsen on the 7th of January, 1856. Light complexion, blue eyes, much emaciated. She is a native of London; always lived well, and never had a day's illness before the present attack, except when she had scarlet fever, from which she quite recovered. She has been married three years, and was delivered of her first child in May, 1855, up to which time she has always been strong. Two or three days before her confinement her lower extremity began to swell, but no pain was felt till the day after delivery, when she complained of pain in her knee, since which she has never walked. She was walking about up to the day on which the child was born; but soon the swelling and redness of the joint increased to such a degree, that she called in another doctor, who ordered poulticing. The limb also swelled to a considerable size, and she experienced severe pain in the lower part of the abdomen. On the 9th of the month she fell into a low fever, which lasted two weeks, and left her very weak for a month and a half afterwards. The joint continued to swell for four months, causing considerable pain, especially in cold wet weather, and then a large abscess burst on the inner aspect of the internal condyle of the femur, by which matter, to the amount of a pint and a half, was discharged. By this she was relieved, but the opening never closed. Subsequently the matter burrowed about in various directions, so that there were several openings into the joint and into the abscesses connected with it. The general swelling of the limb gradually went down. For the last three months previous to entering the hospital she was troubled with starting of the limb, especially on falling asleep.

On admission, she was found very much depressed; conjunctivæ blanched; surface cool and moist; pulse 123, small and weak; respiration 35; appetite very bad. The least motion of the limb caused considerable pain. Unhealthy and offensive discharge from the knee, which was surrounded with abscesses. No signs of phthisis.

It being evident that the woman was sinking from the discharge and irritation, and that she was far too weak to permit the hope of the abscesses healing up under any known treatment, Mr. Erichsen amputated the thigh by anterior and posterior flaps at the junction of the middle with the lower third. The muscles forming the flaps were for a considerable extent of their surface covered by a layer of tough grey exudation, that formed part of the walls of the sinuses by which the articulation was surrounded. The whole of the tissues were more or less infiltrated with plastic matter, and a sinus ran up some way in the posterior flap.

Dissection.—The original opening, where the abscess first burst on the inner side of the joint, communicated by a large channel with its cavity. From this there was a deep prolongation to the outer aspect of the knee, running between the flat posterior surface of the femur and the hamstring muscles, and there communicating with a large cavity between the fat and the muscles. This cavity, on the outer side, communicated freely with the joint, and with the air by a large opening; it sent one prolongation upwards, in front of the lower end of the femur, running up between the fat and the extensor muscles; and another large prolongation upwards and backwards, between the fat and the hamstring muscles, which continued to the sinus found in the posterior flap. All these sinuses were lined by a dark greyish pyogenic membrane. The knee was in a state of firm ankylosis, almost at right angles. On making a semilunar incision across the front of the joint, and cutting across the ligamentum patellæ, the bones were found somewhat firmly united, partly by fibrous and partly by osseous union. These were torn and cut through. The patella was firmly ankylosed to the articular surface of the femur. An incision was made on its outer margin, and the bone forcibly detached from the femur, and turned inwards. A part of the surface of the internal tuberosity of the tibia was exposed and rough, the bone looking cancellous and quite healthy. The rest of the articular surface of the tibia was covered by a thick, dense, false membrane. The condyles of the femur were in a great degree bare, but the exposed surface appeared healthy, and of a pink tinge. The inferior part of the outer condyle was covered by a thin, soft, and semi-transparent membrane, which was readily detached, and which also covered the hollow between the condyles. The patella was firmly ankylosed by bone to the upper and anterior parts of the condyles of the femur, its cartilage only remaining at one corner.

The patient has rapidly improved since the operation. The

femoral ligature separated on the seventh day, but no hæmorrhage followed. This early separation may be attributed to the increased action caused by the sinuses in the flaps.

MARYLEBONE INFIRMARY.

EXTERNAL DIVISION OF STRICTURE.

(Under the care of Mr. HENRY THOMPSON.)

THE doubts and difficulties which for some time agitated the profession in considering the merits and demerits of Mr. Syme's operation for the treatment of stricture by external division, have at length to a great extent vanished, and their place is occupied by certain clear and definite rules for practice which have received the assent and approbation of the majority of our most distinguished and scientific surgeons. The misunderstanding under which Mr. Syme had the misfortune to labour on his first advocating his plan for the cure of stricture, from a general disregard of the distinction he draws between the terms *impermeable* and *obliterated* stricture (a distinction recognised by Mr. Liston and Mr. Guthrie) has disappeared before explanation; so that few surgeons refuse to concur with him in stating, "As to the question of impermeability, I simply maintain, that if urine passes out, instruments may always, through care and perseverance, be got in beyond the contraction. It should be observed, that the case here is quite different from that of a distended bladder requiring immediate relief. I have never maintained that in such circumstances the introduction of a catheter was always practicable." If Mr. Syme has been successful in placing himself right with those who misapprehended his views on this subject, he has been scarcely less so in gaining the support of the profession with respect to the position and utility he assigns to his operation. "There are two forms of stricture," he says, "in which mere dilatation has been found inadequate to afford relief." One of these forms is where the contracted portion of the urethra is so very irritable, that the passing of instruments into the bladder, instead of mitigating, exacerbates the symptoms. The other form is where the tendency to contract is so determined, that the effect of dilatation is forthwith counteracted by it, and almost immediately rendered useless. As an instance of this latter form of disease, we may cite the case published by Mr. Syme in 1844, in the *Edinburgh Journal of Medical Science* for October, in which he found the contractile tendency so strong, that within the twenty-four hours subsequent to each operation, at which large bougies had been passed with perfect ease, the stricture was still as narrow and as difficult to pass with a small instrument as ever. In such forms, either where the constitutional peculiarities of the patient are such as to preclude treatment by dilatation, or where no amount of perseverance in the application of the dilating process will procure for him any alleviation of his malady, the service that may be rendered by external incision, both in affording relief and effecting a permanent cure, is beyond question. Mr. Henry Thompson, in his "Treatise on the Pathology and Treatment of Stricture of the Urethra," for which the Jacksonian Prize was awarded in 1852, explains the action of the operation in the following terms:—"When a ring of contractile tissue exists, involving the structures around the urethra to a considerable depth, its complete division is followed by a new deposit of organized material between the incised surfaces, the union of which does not, and ought not, to be permitted to take place by simple adhesion, but, granulations having arisen, by adhesion of the granulating surfaces. The new deposit thus formed seems to permit of extension to a far greater degree than the old and dense matter forming the original stricture, and consequently it may, after some amount of consolidation has taken place, be sufficiently extended by dilatation to ensure a more patent condition of the urethra than before, being at least as amenable to that process as the constituents of a stricture which is of recent origin, and which is well known in most cases to be easily and permanently removed by dilatation. On this principle, probably, may the cure be accounted for which often follows such division when all other means have failed."

From the trial that has been given this operation, (and daily the trial is becoming more general,) there are ample grounds for declaring that it is extremely free from liability to fatal result. The rate of mortality seems to be but little more than three per cent., and the cases of death that have occurred after the operation may for the most part be attributed to pyohæmia; while the combined testimony of many reputable operators justifies the conclusion, that the hazard to life arising from hæmorrhage and the risk of urinary infiltration, of which so