A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

THREE CASES OF ARTHRECTOMY OF THE KNEE; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

THE following are contributions to the literature of arthrectomy of the knee joint, an operation which is finding more favour in strumous disease of joints as its advantages and the indications for its performance are recognised. We refer our readers to Mr. Owen's remarks on the cases. The subjoined account is taken from notes by Miss Gray, clinical clerk.

CASE 1.—G. F.—, a boy aged seven years and a half, was admitted on May 25th, 1888. Eighteen months ago he had hurt his left knee against the kerbstone, for which injury he was eventually taken into Highgate Infirmary for six or seven months, whence he was discharged six months back; since that time he had been limping about on crutches; he had lost his appetite and had grown thin. The joint was much enlarged, the tibia showing the threefold displacement. The case seemed to be hopeless for treatment on the expectant method. On June 6th, therefore, the patella was raised by a free crescentic incision which traversed its ligament, when the joint was found to be full of granulation tissue, which had sprung from the pulpy synovial membrane. All this mass was dissected or scraped away, the semilunar cartilages and crucial ligaments, which were scarcely recognisable in the mass, being also removed, and the lateral ligaments being divided so that the back of the condyles and the front of Winslow's ligament might be scraped clean. Before the leg could be properly adjusted the biceps tendon was divided, and a thin slice had to be removed from the condyles, especially the inner.

The cavity was then washed out with a warm zinc-chloride solution, and a drainage tube was passed through the posterior ligament and out by the wound made for the biceps tenotomy. A dressing of blue (mercuric) wool was applied, and the limb was fixed straight upon an outside bracketed splint, with a foot-piece. The temperature remained normal till the end of a week, when the tube was taken out. On the following day it ran up to 101° for some unexplained reason, but it at once came down again, and after this slight excitement it remained quite normal. Ever since the operation the boy has been improving in health and appearance, and he will leave shortly with a Thomas's knee-splint and a patten. His leg is straight. The crescentic wound healed by first intention, and though a small drain was left in for a week, there was actually no discharge of pus, though for some days there was serous oozing.

CASE 2.—R. R.—, aged ten, had been in the hospital for five months in 1885 for an abscess in the right knee, which had followed scarlet fever. This was freely opened, irrigated and drained, and the boy was sent out wearing a Thomas's knee-splint, the foot of the other side being raised on a patten. He wore the apparatus for a year, after which, the mother says, he was running about without any splint or restraint. For some months before his readmission in May last, his right knee had been again swelling and growing painful, and he had been failing in health; on his being readmitted into hospital the joint was large and painful, and the tibia was much displaced. In spite of five weeks' rest upon a splint the knee got steadily worse, an abscess formed in it, and the child was evidently failing in health. On June 27th, therefore, arthrectomy was performed. The interior of the joint was thoroughly scraped out, the tendon of origin of the popliteus was severed, and the neighbouring surface of the condyle was cleaned, but the leg could not be brought into position till the tendons of the biceps, semimembranosus, semi-tendinosus, and gracilis had been divided.

Their section was effected from the surface, the two openings made for this purpose being used for carrying drainage tubes through the posterior ligament and into the joint. †

This boy began to improve directly after the operation; in fact, the removal of diseased tissue from his knee had a remarkably good effect on him generally. The operation was done on June 27th, and his temperature remained normal till July 9th, when it rose to 100°, and next day to 102.4°; there was then some slight suppuration from the anterior wound, and the boy did not look quite so well, but the temperature quickly came down, and all is promising.

CASE 3.—On the 2nd of last April Ruth E.—, aged nine, fell and hurt her right knee. On her admission seventeen days later, the joint was semi-flexed, swollen, and tender, the supra-patellar pouch being distended. The limb was treated by rest on a splint, and turbid synovia was withdrawn from the joint by aspiration. As there was a steady increase in the size of the knee, and the child's general health was evidently failing, it was deemed advisable to lay open the joint, search for pus, and clean out the pulpy membrane. This was done on May 30th, when, the crucial and lateral ligaments having been cut, and the lower end of the femur thrust out of the wound, an abscess was found running into the popliteal space along the synovial pouch around the popliteal tendon. This was thoroughly evacuated, and cleansed with zinc-chloride solution, and a drain was passed through the popliteal space. The child did badly after the operation, and on the supposition that this fact might be accounted for by further formation of abscess she was at the end of a fortnight again operated on, provision being made for further drainage through the back of the joint. No improvement followed, and on June 23rd, after consultation, amputation was resorted to in the lower third of the thigh. The discharge continued profuse, the temperature kept up, and union of the flaps was long delayed. Eventually, however, a marked change for the better took place, and the child is allowed out on the balcony as often as the weather permits.

Remarks by Mr. OWEN.—These three cases, which, as I write, are all in the same ward, constitute an interesting group. Two are doing perfectly well, whilst the third has gone wrong—about the only case out of a considerable number of a similar nature which has disappointed me. Though it may appear somewhat unfair to lay the blame for this failure upon the poor child, still I am inclined to do so. The operation was carried out in no hurry and with no want of care, but almost from the time of its performance she showed no sign of general improvement; indeed, she quickly began to go down hill; the tissues about the joint remained pale and sodden, with no inclination towards repair. Moreover, and this is a very interesting and suggestive feature in the case, after the eventual amputation of the thigh, instead of at once beginning to improve, the girl made no response, her temperature remained high for several days, and the indolent and pale flaps were unusually slow to unite. Experience shows that after a thorough arthrectomy, all the tubercular or diseased material having been taken away, the child usually begins to improve in health and appearance as vigorously as it would do if it had been freed of the disease by amputation. The two boys showed this improvement in the ordinary way, but in the girl it was wanting both after the arthrectomy and the amputation.

There are some cases of tubercular knee disease which are unfitted for treatment by arthrectomy, but they are proportionately few, and perhaps as experience increases the surgeon will be able promptly to recognise and eliminate them. Neither the general appearances nor the apparent condition of the joint can be regarded as an unfailing guide to treatment. I have met with cases most unpromising in both respects, which have, nevertheless, answered exceedingly well to arthrectomy. And certain am I of this, that I have seen several cases speedily yield to arthrectomy which not many years ago would have been dealt with by most surgeons by nothing short of amputation—joints which from one reason or another would have been uninviting to the most sanguine excisionist. Compared with the old, classical excision, arthrectomy has these manifest advantages—it aims at the removal of every particle of diseased tissue from the joint, whilst it interferes with the bones only to the extent of the removal of carious tissue. Thus the saw will probably not be needed during the operation, the smallest quantity of, or perhaps no osseous tissue being removed, and the risk of shortening reduced to the minimum. Per-

manent stiffness—synostosis—of the joint is, of course, inevitable after an arthrectomy for advanced disease, and it is only with advanced cases that these remarks are meant to deal. I refrain from referring here to those cases of slight articular disease in which, after a limited operation, the movements of the joint may be little, if at all, affected; my remarks concern the three cases which are lying at present in the Louise ward.

Mr. Robert Jones has in the current number of the *Liverpool Medico-Chirurgical Journal* a valuable protest against the routine excision of joints, and I suppose that he would include in it also routine arthrectomy. He has the advantage of being closely associated in work with Mr. Thomas, a surgeon who, I believe, from what I have known of his work and have seen of his practice, could show a little army of cases of knee disease, to which, as triumphs of patient, conservative surgery, the erased and resected joints of the southern metropolis could offer but a lame resistance. I also would object to routine practice of any sort; I think that I would even make a case against routine conservatism in chronic joint disease. I refer to the Liverpool patients, not with any idea of the apotheosis of Mr. Thomas, the principles of whose splendid work, however, are not yet, perhaps, sufficiently recognised, but rather by way of a caution that if arthrectomy is to become for a while the "fashionable" operation, it should not be lavishly or recklessly resorted to.

LEICESTER INFIRMARY.

A CASE OF DOUBLE EMPYEMA, TREATED BY RESECTION OF RIB ON THE RIGHT SIDE, AND DRAINAGE AND INSERTION OF TUBE IN THE LEFT SIDE WITHOUT RESECTION; RECOVERY.

(Under the care of Dr. BLUNT.)

FOR the following notes we are indebted to Mr. J. B. Okell, house surgeon, who also performed the operations.

F. G. W.—, aged five years and nine months, was admitted on March 2nd, 1888, as a case of empyema. The following history was obtained from the friends: Father and mother both living, and very healthy. There are two children; the elder one has always been healthy, the younger being the patient. Had measles in January, 1887; has been more or less ailing since. Never had scarlet fever, but had been strong and healthy up to that date. The present illness began seven weeks before with cough and pain in the left side of the chest. This was soon succeeded by pain in the right side, and the patient became unable to lie on the left side. Fourteen days before admission a doctor inserted a hypodermic needle into the right chest, and drew off a few minims of pus.

State on admission.—There is great dyspnoea, and the patient complains of great pain in the right side, and lies only on this side. Chest: There is much bulging of the right side; both sides move badly, but on the right especially there is very little movement. Right lung: In front and behind there is dulness over the whole lung; breath sounds are absent, and the voice sounds very feebly. Left lung: In front there is slight dulness at the base; over the upper part the breath sounds are harsh and blowing, and the voice sounds somewhat egophonic. Behind there is dulness at the base as high as the angle of the scapula; over this area the breath and voice sounds are very feeble; over the upper part the breath sounds are harsh and accompanied by a few rhonchi. Urine alkaline; no albumen. Temperature 98.6°.

March 3rd.—Pus having been found in the right side by means of a hypodermic needle, chloroform was carefully administered, and, under the carbolic spray, an incision about two inches in length was made obliquely on the right side in the posterior axillary line, and about one inch of the eighth rib resected, care being taken to leave the periosteum. On opening the pleura, thirty ounces of pus were evacuated and a drainage tube half an inch in diameter was inserted, and the wound dressed with pads of wood-wool; the chloroform, which was given in very small quantities, was with difficulty inhaled. At 7.30 P.M., as the dressing was saturated through, a fresh pad was applied. Temperature 98.8°. Patient much easier.

4th.—Wound dressed. Slept all through the night on the right side. Breathing much better. Temperature 97.6°.

On the 5th, 6th, and 7th the dressings were changed. The temperature had varied between 96.2° and 98.2°.

8th.—As air was entering into the right lung freely, it

was determined to explore the left side, so the hypodermic needle was put into this side, and with difficulty a few minims of very thick pus withdrawn; then an aspirator was inserted, but only a few drachms of pus could be got out, as the flakes of lymph blocked it up. So under chloroform, the child inhaling much more freely, and with the carbolic spray, an incision was made about two inches in length, an inch below the angle of the scapula. This time no rib was resected. On opening the pleura, eight or ten ounces of very thick pus were evacuated. A tube, one-third of an inch in diameter, was then inserted, and both sides dressed with the wood-wool pads.

9th.—Breathing very much easier. Child slept on his left side chiefly during the night. The left side only was dressed. Temperature 98°. Is taking his food well.

10th.—Both sides dressed; left side discharging freely. Temperature 98°.

18th.—Temperature 101.4°. Both sides dressed. Nothing detected in the chest to account for the rise of temperature. After the administration of a purge the temperature fell.

20th.—Temperature 100.4°. Both sides dressed, and the cavities washed out with warm boracic lotion.

26th.—The temperature has been subnormal since the previous date. The child was weighed, and scaled 2st. 5½lb. Lungs examined and found to be expanding, air entering freely.

28th.—Sat up to-day for tea in bed.

April 3rd.—Tube in the left side shortened; very little discharge from this side. Weight of child 2st. 6½lb.

8th.—Tube taken out of the left side, as there had been no discharge for several days.

10th.—Has been sleeping chiefly on the right side. Weighs 2st. 8lb.

11th.—Got up to-day for the first time.

14th.—Last night the temperature ran up to 102.4°, and gradually reached 104° on the evening of the 16th, when, on examining the lungs, the breathing at the right apex was harsh and somewhat tubular, suggestive of pneumonia.

17th.—Has been very sick after everything, but says he feels much better. Temperature 100.8°.

18th.—Temperature 98.6°. Seems very much better and brighter. Sickness stopped. The left side has healed up soundly.

19th.—Shorter tube put into the right side; very little discharge. Temperature subnormal, which continued so throughout from this date.

23rd.—Weighs 2st. 7lb. Has begun again to take his food well.

25th.—Got up and laid on the sofa.

27th.—Tube in the right side taken out, there having been no discharge for several days.

30th.—Wound on the right side nearly healed. Weighs 2st. 9lb. From this time he continued to improve with rapid strides, especially so when the weather permitted his getting out into the grounds. As his friends were emigrating to America, he was kept in the hospital until a few days before embarking.

May 12th.—Both lungs were finally examined, and nothing abnormal detected; there was the very slightest falling in of the right side. The patient runs about all day without any sense of fatigue. Weighs 3st.

On May 14th the patient was discharged, and a letter received from his father on July 3rd stated that the little fellow stood the sea voyage uncommonly well, and that he is in better health now than he has ever been before.

STATION HOSPITAL, PORTSMOUTH.

A CASE OF APEX PNEUMONIA; RECOVERY; REMARKS.

(Under the care of Mr. G. T. TREWMAN, Surg. M.S.)

PRIVATE R. B.—, South Lancashire Regiment, aged nineteen (service three months), was admitted on May 22nd, 1888. He stated that he had been ill for five days, suffering from cough and shortness of breath.

On admission the following was his condition: Face very much flushed, but not markedly cyanosed; respiration 30 to the minute; dyspnoea not a marked symptom; temperature in the axilla 103° F. Expectoration blood-stained and very offensive. On examining the chest, it was found to be fairly well formed, vocal fremitus much increased at the right apex and down as far as the nipple on that side in front, slightly increased in the corresponding part of the lung behind. Very marked dulness of the upper part of