the integument, also the glands in his left groin were indurated. On further inquiry it was elicited that six months previously he was knocked down backwards by a passing truck, the fall being felt chiefly on his left side, and he admitted that, from time to time since then, he had had vague aching in the left loin, which was never, however, made worse by movement. There was some deficient stroke-sound and breath-sound, with absence of vocal fremitus at the base of the left chest; a systolic murmur was heard at the base of the heart; his liver reached mid-way between the ensiform cartilage and the umbilicus. His temperature in the axilla was 99.8°; his pulse was 108, small, but regular; his respirations were 36. He had some cough, attended with scanty muco-purulent expectoration; his tongue was moderately clean; his appetite was fair; he had had no vomiting except on two occasions, shortly after the accident referred to; his bowels were pretty regular; his urine was acid, deposited lithates, but was free from albumen. He lay on his back, shelling to the left, and had difficulty in sitting up straight in bed, also in fully extending his left thigh.

December 22nd. His sleep had been disturbed by the pain in his left leg; he had had none elsewhere; the oedema of the limb was much the same. His bowels had been freely opened by castor-oil, given to remove any accumulation; but the physical signs and the characters of the tumour remained unaltered.

December 26th. With the aid of hypodermic injections of morphine and atropine at bed-time, he had been sleeping better. He was easier in his left leg; his temperature had slightly risen; his urine was of specific gravity 1018, and showed, as it had done once or twice before since his admission, a small proportion of albumen.

December 29th. The skin could barely be pinched up over the most prominent part of the tumour. The two patches of ecchymosis above the pubes had almost disappeared. The semicircumference at the level of the umbilicus measured, right 15½ inches, left 16½ inches; and from the anterior superior spine of the ilium to the most dependent part of the ribs, the distance was, on the right side 5½ inches, on the left 6½ inches. His temperature was 101.4°; his pulse was 108; his respirations were 36.

December 31st. He had had paroxysms of acute shooting pain in the left thigh, relieved only by hypodermic injections of morphine.

January 2nd. He had been sleeping pretty well, and was more free from pain; but his appetite was not so good, and he was beginning to suffer from dyspnoea. There was still deficient resonance on percussion over the base of the left lung, and bronchial breathing was heard at the angle of the left scapula; at this spot vocal fremitus was present. The breathing over the right lung was free. A good deal of undulatory pulsation was observable at the epigastrium.

January 5th. His cough had increased during the few preceding days. There was dullness on percussion more or less all down the left side of the chest, with the breathing obscure and indistinct; bronchial breathing and bronchophony were heard over the left chest posteriorly; vocal fremitus was present at certain spots. At the right base, the breathing was harsh and rhonchal. What appeared to be the descending colon with solid contents was observed now coursing over the upper part of the tumour in a direction downwards and inwards. His bowels were confined; his urine contained some albumen.

January 6th. At 11.30 p.m. he had a severe paroxysm of pain in his left leg; his respirations were hurried, his breathing was oppressed. The swelling of the limb, which latterly had diminished a little, was now much as before.

January 7th. He had slept very badly. His temperature was 100.8°; his pulse was 108, very small and feeble; his respirations were 36. He had tremulous movements of his fingers at times. He lay shelling down on the left side of his bed as though he would fall out.

January 8th. He had been wandering in the night. The tremulous movements continued. His bowels had acted twice after an enema; he had considerable tympanites. His pulse was 112, very small and feeble.

January 9th. He died at 2 A.M.

Necropsy, twelve hours after death. The abdomen was distended, but in the left iliac region, where the almost solid resistance of the tumour had been observed as usual the preceding day, the parietes were now comparatively yielding. On opening the peritoneal cavity, some serous effusion was found inferiorly; also a long flat band of blood-coagulum was seen extending from the left flank towards the pubes, and thence into the pelvis. On reflecting the great omentum, the tumour was exposed to view. The descending colon crossed it from above, downwards and inwards, and was inseparably adherent to its front. It presented a convex smooth and red surface, formed of peritoneum; was more or less elastic to the feel; was well defined on its right border, but in the left flank was firmly and extensively adherent to

the abdominal wall. It sent a prolongation under Poupart's ligament; while superiorly it was in close contact with the left wing of the diaphragm. In this last named situation, one or two more coagula of large size were met with. The small intestines were very much pushed to the right by the tumour. The left pleura contained much serous effusion, and the lung was compressed into a small bulk; it had two or three tough bands of adhesion laterally and posteriorly. The right lung did not collapse, having old adhesions. The heart was rather small; its aortic sigmoids were healthy. On tracing the aorta downwards in the abdomen, the aneurysmal nature of the tumour soon became apparent. It sprang from the left side of it by a narrow opening, about two inches above the bifurcation, and just below the giving off of the inferior mesenteric artery. There were numerous opaque patches of atheroma in the course of the vessel, but no calcification or breach of surface of the inner coat; nor was there any at the mouth of the sac. A quantity of fluid and loosely coagulated blood escaped from the interior, leaving a free space that would contain a foetal head at full term, while laminated fibrinous deposits were present to such an amount that, including some residual coagula, the mass was found to weigh nearly six pounds. At the posterior part the wall of the sac had gone, and the bodies of the second, third, and fourth lumbar vertebrae were exposed to view. These were all more or less eroded, the intervertebral discs being intact. Below Pouart's ligament, the aneurysm resting on the psoas and iliacus muscles extended to near the trochanter minor, where it formed a *cul-de-sac*. The left common and external iliac arteries had the tumour closely overlying them, but their lumen was quite free; the corresponding veins, however, with the upper part of the femoral, were thrombosed. The liver and kidneys were anæmic; some of the mesenteric glands were calcified.

The huge size of the aneurysm here, and the almost entire absence of subjective symptoms until just about one month before the fatal termination, combine, I think, to give to the foregoing case a somewhat exceptional character; at least, under that impression, I have ventured to bring it before this Section on the present occasion, when the subject of aneurysm is specially selected for discussion. Perhaps another noteworthy feature that the case presents is the rupture into the peritoneal cavity, it being uncertain how far death was directly due to this circumstance. The amount of extravasation was small; and the patient had been gradually sinking from exhaustion for some days. The increasing effusion in the left pleura appearing to have a considerable share in accelerating the fatal event. The seat of rupture was clearly in the upper and posterior portion of the sac, which was under cover of the left wing of the diaphragm; but the opening was so small that (the time for examination being limited) it was not detected; it seemed probable that the blood had found its way by a sinuous passage through the strata of fibrin, penetrating at last the peritoneum. The concurrence of pleuritic effusion on the same side (which was already present to some amount on the patient's admission), the extension of the aneurysm below Poupart's ligament, and the limitation of the pain—the one prominent symptom—to the lower limb, that is, to the distribution of the crural branches of the lumbar plexus, there being none higher up where pressure and tension were so widely at work—are severally, I submit, additional points of interest in the case. As to treatment, it was deemed inadvisable, under the circumstances, to withdraw the fluid in the pleura by thoracentesis, and wholly futile to do anything, whether surgical or medical, for the cure of such an enormous aneurysm; the relief of pain by morphine, etc., was thus all that could be attempted.

CASE OF DYSPHAGIA ACCOMPANIED BY ASCITES.¹

By E. LONG FOX, M.D., F.R.C.P.,

Consulting Physician to the Bristol Royal Infirmary.

IN January, 1885, the Rev. R. C., Fellow of a college at one of the universities, came under the care of my friend, Dr. Colman. As during a period of eighteen months I had the pleasure of meeting him in consultation on the case two or three times in each month, he has allowed me to bring this brief record before this Branch of the Medical Association.

The patient was a shy, reserved bookworm, hard-working, and very intellectual, of irreproachable habits and morals, aged 35. In the early stage of his illness he was said to have had symptoms suggestive of gastric ulcer. These were not severe, but during convalescence he quite suddenly found himself unable to swallow solid food. There was no hæmorrhage, no rejection of mucus. He was able to take plenty of liquid food, especially soup and cream, if he allowed definite

¹ Read before the Bath and Bristol Branch.

intervals between swallowing. His meals, therefore, were very protracted, often over three hours.

In the spring of 1885, he was seen by a distinguished London physician, who diagnosed cancer of the œsophagus.¹ He was then becoming much emaciated. His complexion was naturally pale and sallow, and not unlike the complexion of one suffering from malignant disease. He complained of a feeling of difficulty in swallowing, which he referred to the sternum, about the level of the third rib.

In the summer of 1885, a new symptom appeared. He began to have fluid in the cavity of the abdomen. This was not associated with any tangible change in the liver itself, with any mucous hæmorrhage, with enlargement of any of the superficial veins, or with interference with the free passage of bile. He was then becoming very thin and weak, and was losing the power of taking interest in literary pursuits; there was never any albumen. The ascites rapidly increased, and was associated with some anasarca of the lower extremities; this latter condition was relieved by careful bandaging. The girth of the abdomen amounted to forty-three inches. From the excess of the abdominal fluid, diuretics seemed to be useless.

On December 1st, about half a gallon of clear fluid was evacuated by paracentesis, and from this time the fluid gradually, but surely diminished. All through the illness he had slept well.

Up to December 25th, 1885, he had been nourished almost for twelve months wholly on liquid food, but he had seemed better during the first three weeks of December, since the urine had increased after the tapping. On Christmas Day, 1885, he suddenly fancied, from the improvement in his feeling beneath the sternum, that he could swallow solid food. He had frequently tried to do this before, but always with the effect of rejecting the solid morsel with great distress.

On this Christmas Day, however, he was able to take some solid food at dinner; and, although for weeks he was very slow about it, and had occasional drawbacks if he attempted too large or too hard a morsel, he has continued to take food in the proper form and quantity, and now for six months has been well. All the ascitic fluid disappeared last spring. He gained flesh, was able to walk without dyspnoea, and resumed his full literary pursuits.

In speaking of treatment, it may be said that, as far as it is ever possible to exclude the idea of syphilis from any human being, it was so in this case. The London opinion as to the lesion being malignant was founded upon data that may easily have seemed incontrovertible, except in the one point that the dysphagia was so sudden. We felt that, however probable the diagnosis of malignant disease was, it was possible to give the patient the benefit of the doubt; and, long before the appearance of ascites, we had hoped that the œsophagus was not diseased upon its internal surface, but was pressed upon externally by a gland, either strumous or in a state of chronic inflammation. The appearance of ascites confirmed this belief. It was reasonable to suppose that the same tumour, probably glandular, that was pressing upon the outer part of the œsophagus, was also pressing on the other side on an important channel for conducting the blood from the lower extremities to the heart. It is possible that this may occur in the normal position of the œsophagus and vena cava almost immediately after passing the diaphragm; and, in this relation, it may be stated that the sensation of a patient as to the probable seat of obstruction is not wholly reliable, so much of such sensation being more or less reflex. But the position of the inferior vena cava in the thorax is exceedingly variable. It sometimes bears abnormally towards the left side; and occasionally, instead of ending in the right auricle of the heart, it has been seen to join the right azygos vein. It is, at any rate, highly probable that the cause of the pressure on the œsophagus prevented also some of the return of blood from the inferior vena cava.

The view entertained as to the best chance of promoting recovery was the prolonged administration of iodide of potassium, sometimes with diuretics, sometimes with tonics.

The chief points against the lesion having been malignant are:

1. The sudden access of the difficulty of swallowing solids. There was no gradual notice given of the organ affected; and although, no doubt, much of the constriction was spasmodic, this spasm cannot have been caused by sudden ulceration of the internal membrane.

2. The absence of blood and of mucus from the œsophagus.

3. The absence of pain when the œsophagus was distended by large quantities of fluid.

4. The co-existence of the ascites, showing that the pressure on the œsophagus was external to that organ; in the face of the fact that cancerous glands in the mediastinum are very rare, except as secondary to cancer elsewhere.

¹ This opinion was partly based on the fact that a surgeon, in the endeavour to pass a bougie down the œsophagus, met with an obstruction.

5. It is comparatively easy to diagnose when the illness is over, but we believe the good result of this case was largely due to the iodide of potassium.

A NEW METHOD OF PERFORMING EXCISION OF THE KNEE-JOINT.¹

By HERBERT ALLINGHAM, F.R.C.S.,
Demonstrator of Anatomy at St. George's Hospital.

A new method of excision of the knee is a title which may appear surprising, for of the various operations that have already been performed, it might be thought hardly possible that a new one could be suggested. However, not only is it new, but it has, I maintain, many advantages over the methods of excision for knee-joint disease at present in vogue.

The method which I submit to you for criticism and trial I tried several times on the dead body, and having carefully considered every point in the performance of the operation, in May, 1886, I excised the knee of the patient before you. The operation is performed in the following manner. A vertical incision is made over the joint, beginning about two to three inches above the patella, and prolonged over the patella down to the tubercle of the tibia. Above the knee-cap the knife splits the quadriceps tendon right into the synovial pouch above the joint. The soft tissues over the patella are divided to the bone and the knee-cap sawn through, dividing it into two lateral halves; then the ligamentum patellæ is also split down to the tubercle of the tibia.

Now we have the patella divided vertically, each lateral portion having half the quadriceps tendon and half the ligamentum patellæ attached to its upper and lower borders respectively. These halves are then slipped well to the sides of the joint, so exposing the condyles of the femur and the head of the tibia. Divide the crucial ligaments, if these are not already destroyed; then the leg being flexed, push the condyles of the femur forwards on to the tibia and remove a thin layer of bone. Now deal with the head of the tibia by completely flexing the leg on the thigh, and carefully separate the internal lateral ligament from the internal semi-lunar cartilage, which is most important, for this attachment tends to prevent the tibia coming forwards. The tibia is then pushed forwards on to the condyles of the femur, and in order to avoid dividing the lateral ligaments a thin slice is removed from the tibial articular surface with a strong knife or chisel. It is necessary to follow these particulars so as not to interfere with the lateral ligaments.

With scissors and forceps the synovial membrane must be carefully dissected away from the synovial pouch above the patella, and underneath the ligamentum patellæ; in fact, as far as possible the joint had better be cleared of synovial membrane. At this part of the operation, openings for drainage should be made at the postero-lateral aspects of the joint on the outer side, between the ilio-tibial band and the tendon of the biceps, and on the inner side just above the inner hamstring tendons. The best place is behind and on a level with the upper border of the patella, which is the lowest point, and where the drainage-tubes will not be pressed upon by the fibrous structures around the joint. Attention is now turned to the split patella, which, if not diseased, should be left. If only a little of the cartilage is eroded, cut it away with a knife. Should, however, the patella be extensively diseased, carefully separate the quadriceps, the extension of the quadriceps tendon over the patella, and the ligamentum patellæ from the bone; in other words, shell the patella as a sesamoid bone out of the entire quadriceps tendon, without destroying the connection of the quadriceps muscle with the ligamentum patellæ. If the patella is to remain, the halves are sutured together by a strong catgut suture, introduced as advised by Sir Joseph Lister in wiring fractured patellæ—that is, not going through the articular surface with the catgut. If the bone has been removed, bring together with catgut the extension of the quadriceps, which has been carefully separated from each half of the patella.

Lastly, adjust and sew with fine catgut, from the tubercle to the patella, the split ligamentum patellæ; and in the same way deal with the divided quadriceps tendon above the patella.

The skin is then united with separate sutures, and the limb dressed antiseptically.

In pointing out the advantages of this operation, I must ask you to allow me first to allude to a few important anatomical facts. The fascia lata is strong and thick around the knee, and is strengthened by expansions from the biceps sartorius, gracilis semitendinosus,

¹ Abstract of a paper read before the Medical Society of London