

Bigelow, and delineated by Fig. 13, page 63, of his most interesting work on "Dislocations and Fractures of the Hip-joint," a copy of which figure is here inserted. The

FIG. 2.



patient having been brought under the influence of chloroform, I easily traced with my finger the outline of the trochanter major, and found that its upper border was directed downwards and backwards. I could not discover the ball of the femur, and therefore came to the conclusion that it remained in the acetabulum. On rotation of the thigh, the trochanter major did not describe the segment of a circle, as in a dislocation, but was observed to revolve on its own axis, as in fracture of the neck of the thigh-bone, and during rotation slight crepitation was elicited. From the above symptoms, I was convinced that this was a case of fracture of the neck of the femur with flexion, adduction, and inversion of the limb, a variety of fracture not hitherto described, as far as my reading has enabled me to judge. Having formed this opinion, I reduced the fracture by taking hold of the knee with one hand and the foot with the other, by placing the leg at a right angle to the thigh, by abducting, rotating outwards, and bringing down the limb by the side of the other—in short, reduction was accomplished by practising the last three movements adopted by Bigelow for reduction of dislocation of the head of the femur on the dorsum of the ilium. When the limb was thus brought into proper position, it exhibited no tendency to eversion or inversion, and there was scarcely any appreciable shortening.

For the first twenty-four hours following reduction the affected extremity was kept at rest by placing a long sand-bag by the side of the patient's trunk and limb, and afterwards by applying to the outer side of her pelvis, thigh, leg, and foot a long splint, composed of long broad bandages charged with plaster-of-Paris, and moulded into the shape of a Desault's splint. The test-line of the ilio-femoral triangle, shown by Bryant to be so valuable for enabling the surgeon to arrive without excessive manipulation at a reliable diagnosis in fractures of the neck of the thigh-bone and Nélaton's test-line for dislocation of the head of the femur backwards, were not available in this case, owing to the extraordinary position of the femur; but the already described symptoms produced a decided conviction in my mind that the case was one of fracture of the neck of the thigh-bone with the limb in a position which I had never before seen in any example of that injury, and the post-mortem examination made six weeks after the reduction of the fracture proved that my diagnosis was correct.

From the moment that the limb was made straight the patient remained perfectly free from pain in the hip, but frequently complained of pain at the knee, which was perfectly sound. This pain was chiefly seated within and at the inner side of the joint—a symptom so common in morbus coxæ,—sometimes misleading an unwary surgeon,

but rarely, if ever, met with in injuries of the hip-joint, judging from my own experience. If the conditions in which this symptomatic pain is experienced be disease at the filamentous terminations of one branch of a nerve, and the pain reflected to the terminations of another branch of the same nerve, conditions furnished by the anterior branch of the obturator nerve supplying the hip, and the posterior branch the knee-joint, it is difficult to understand why the symptomatic pain is experienced so severely and frequently at the knee in disease, and so rarely, if ever, in painful accidents, of the hip-joint.

Six weeks after the application of the plaster-of-Paris bandage-splint, and three days before the death of the patient, the splint was removed, and the limb remained straight, without any tendency to eversion or inversion, and there was no appreciable shortening.

Notwithstanding the occasional and unavoidable contact of urine with the denuded surface on the patient's back, which was covered with a large gangrenous slough on her admission, by the application of turpentine, carbolic, and other dressings, and the removal of all pressure by means of a water-pillow ring filled with air, the slough eventually was removed, and granulations made some advancement; but these attempts at healing were fruitless, owing to the great weakness and age of the patient. The weakening effects of this large sore, together with amyloid degeneration of the kidney, caused death fifty days after the occurrence of the injury.

The post-mortem examination was conducted by Dr. Rodger, pathologist to the Aberdeen Royal Infirmary, who found that the capsular and ilio-femoral ligaments were perfectly entire, the latter being thicker and stronger than usual; that the neck of the femur was fractured close to the ball of the bone, the plane of the fracture being at a right angle to the long axis of the neck; that the outer fragment was considerably shortened, débris occupying the plane of the fracture; that there were no bands uniting the fractured surfaces to one another, and that there was no effusion into the joint, and no signs of the inflammatory process. The round ligament was perfectly entire, showing that the ball of the bone had never left the cavity of the acetabulum.

I believe that the integrity and tension of the ilio-femoral ligament was the cause of the adduction, flexion, and inversion of the limb, and that by its causing the centre of motion to be situated at its attachments to the anterior inter-trochanteric line of the femur was the explanation of the facility with which the outer fragment was returned into its proper position by the manipulation of the limb.

Of the one hundred and thirty cases of intra-capsular fracture of the neck of the thigh-bone which have come under my notice, and where the accuracy of diagnosis was verified by dissection, this is the only case I know of with flexion, adduction, and rotation inwards of the limb. Of the remaining number, in one case only have I met with rotation inwards, the limb in other respects occupying the usual straight position. I watched that case of intra-capsular fracture with inversion during life, and had an opportunity of verifying the diagnosis after death, and have been for many years in the habit of exhibiting the preparation to the students of surgery in the University of Aberdeen.

ON THE DANGER ATTENDING THE USE OF THE STOMACH-PUMP.

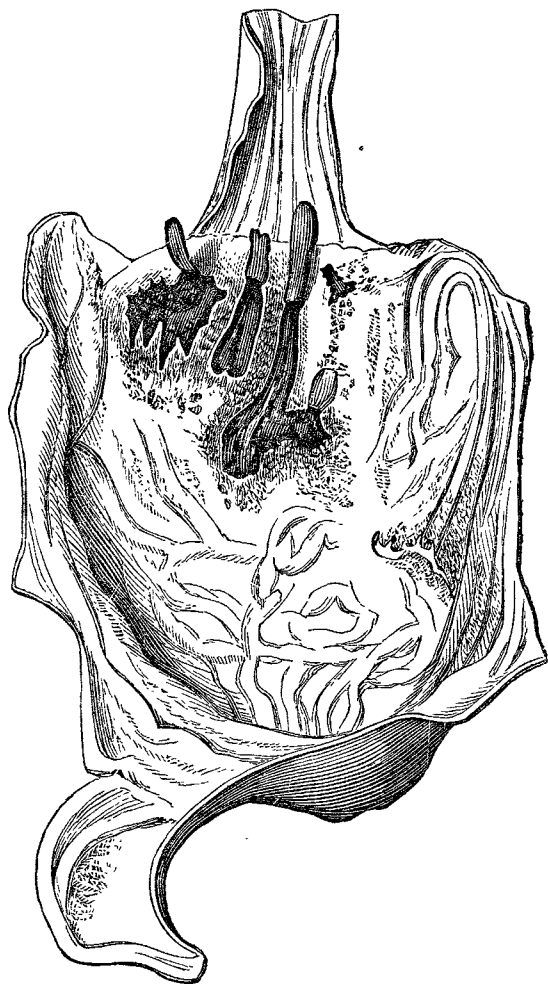
BY SIR JAMES ALDERSON, M.D., F.R.S.,
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In tenui labor.—VIRG.
Though low the subject, it deserves our pains.—DRYDEN.

So great is the outcry by the public in cases of poisoning for the use of the stomach-pump that I shall be excused in pointing out the dangers of its employment, more especially in unskilful hands. The annexed drawing is from an illustrated work on "Poisons," by the late Dr. Roupell and Mr. McWhinnie, showing the damage to the internal coat of the stomach by the exhausting power of the pump in a case of poisoning by arsenic. The case occurred soon after the introduction of the instrument into use.

In all cases of soluble poison the full effect of the stomach-

pump may be obtained by the use of a tube, used so as to act as a syphon, without any chance of danger to the patient. In a work of great merit, complicated with mathematical detail, by the late Dr. Arnott, published in 1829, the use of



a tube, without any pump attached, is suggested to act as a syphon in cases of poisoning, and as it can be used at all times without danger to the patient, I venture to call attention to it.

An india-rubber tube, with an opening near that extremity of the tube which is to be introduced into the stomach (being carefully passed down the œsophagus), is to be filled with water or some other bland fluid, the other end of the tube (which may be funnel-shaped) being held for the time *above the mouth*. As soon as the tube is full, pressure is to be quickly applied to the tube at its upper or outward opening; it is to be pinched quickly between the finger and thumb, and then turned downwards, when, acting as a syphon, it will empty the stomach. This process can be repeated as long as any indications are given that all the poison has not been withdrawn from the stomach. Of course, this only applies to soluble poisons, and in these cases only can such means be judiciously employed.

The power of the syphon is not great, but it is sufficient for the occasion, and is without danger. The power is measured by the difference only in the weight of the fluid in the two legs of the tube measured from the surface of the fluid in the stomach; the only requirement for its proper action being, that the outer orifice of the tube, during its use, should be held well below the surface of the fluid in the stomach. The syphon (or, more properly, siphon) is of old origin, supposed even before the Christian era. Its name—*σίφων*, a canal, or tube—in no way indicates its use. Various of our intermittent springs, in this country, are dependent on its action. In these cases the tube is naturally formed: it communicates with a naturally-formed chamber in the rock, which receives water from a constant spring, and as soon as the water in the chamber rises above the level of the bend in the syphon the chamber is emptied, to be again filled, and from time to time emptied. There is one of these intermittent springs on Giggleswick Scar in Yorkshire; and I have no doubt the "fluttering of the water" in the pool of Bethesda, described in the Gospel of St. John as the work of an angel, was of this character. In passing through the chamber, or before, the water might have gained, in solu-

tion, some salt favourable to the alleviation of certain cases of rheumatism, which would only be available on its exit from the tubes, before admixture with, or diffusion in, the body of the water in the pool.

Again, the stomach-pump is used for feeding insane patients. Now there is really no occasion for such an apparatus. A tube will answer all the purpose, provided care be taken to keep the outer opening of the tube well above the mouth of the patient. Gravity will exercise all the power required for the passage of liquid food into the stomach; and those dreadful fears, always expressed by the patient when the pump is used, will be altogether avoided.

Berkeley-square.

ON HYDRARTHROSIS AND ARTHRITIS OF THE KNEE, CONSECUTIVE TO LYMPHANGITIS OF THE LOWER LIMB.

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IT is my desire to draw attention to a variety of affections of the joints which I do not believe has yet been described, but which cannot be very rare, as in my single practice I have met with it five times. I mean the propagation, to the synovial membrane of the knee-joint, of a superficial inflammation, originating in the subcutaneous lymphatic *réseau*, and assuming the form of lymphangitis of the large vessels, or that of erysipelas. Owing to the precision and the distinct character of its etiology, and the gravity of its prognosis, I consider that this variety merits special mention.

Firstly, I will give a brief summary of my five cases.

Some twenty years ago I was called by one of my colleagues to see a patient living in the neighbourhood of Paris. He was a merchant, fifty years of age, much broken down by excesses of all sorts, and had been obliged to remain in bed for a fortnight on account of lymphangitis of the leg. The mischief had begun by a small excoriation of one of the toes which had become irritated by walking. The inflammatory accidents had developed suddenly, the limb was covered with red streaks, and a certain number of small superficial abscesses had formed around the inflamed lymphatic vessels. When I saw the patient several of these abscesses had already been opened, but there remained many more ready for incising, and others in course of formation. Two of these collections were of the size of a large olive, and were situated on the internal aspect of the knee. I incised them obliquely, and let out a considerable quantity of phlegmonous pus. I adopted the same treatment with the other collections, which were situated on the leg and thigh. On subsequent days other incisions became necessary; nevertheless, matters seemed to be progressing as favourably as the debilitated condition of the patient would permit, when suddenly the knee became the seat of violent pain and considerable tumefaction. These new symptoms had begun on the inside of the knee, round the spot where I had opened the two abscesses a week previously. Purulent arthritis set in with great rapidity, in spite of every means we could adopt. Different operations, including amputation, were proposed to the patient, but all were declined. The general condition became worse and worse, and the unfortunate patient died three weeks after the articulation had suppurated.

The second case came to my knowledge a few years later, and was that of a girl fourteen years of age. The patient was a slim, delicate, and nervous child. The nail of her big toe had fallen off after a contusion it had sustained, and a small collection formed underneath, which opened spontaneously. Shortly afterwards diffuse lymphangitis covered the whole limb. The swelling soon subsided, but several circumscribed collections were formed successively. The doctor attending the case incised these little abscesses, amongst which was one situated on the inside of the knee. On the next day the patient complained of pain in her knee, which was swollen. I was called in, and believed at the