

This so-called ligament presenting the patella as a "sesamoid bone," developed in the tendon for the defence of the front of the knee-joint. The true ligaments within this joint being, on the other hand, the crucial transverse and coronary inside, those on the posterior being the well known ligament of Winslow, the tendon of the popliteus, &c. This arrangement of the patella, extensor tendons, and parts inferiorly inserted, with a large bursa and mass of loose fat projecting into the cavity of the joint below the patella, as well as the large pouch of synovial membrane immediately beneath the extensor tendon, and in front of the lower extremity of the femur, are all worthy of being kept in mind in considering the gravity of such an accident, which may, from external causes and mechanical injury, implicate all these parts, or the ligamentum patella alone, as in the present case.

ST. BARTHOLOMEW'S HOSPITAL.

RUPTURE OF THE POSTERIOR TIBIAL ARTERY; DELIGATION UNSUCCESSFUL.

(Under the care of Mr. M'WHINNIE.)

IN connexion with a severe case of secondary hæmorrhage given by Mr. Skey *in extenso* in THE LANCET of June 9th, the accompanying instance of rupture of the posterior tibial artery may be found instructive. In the following operation the artery was deligated without the surgeon being positively aware of the exact vessel torn, except from the presumptive evidence afforded by absence of pulsation, the excessive pain, and the nature of the accident, as well as by the large quantity of blood thrown out from the artery; indeed, for some hours the question was in the balance as to whether the limb should be amputated, or the nature of the injury of the vessels in the ham ascertained first. The latter proceeding was, however, adopted, as not necessarily excluding the former, in case there should be necessity for it. The patient, too, was a brewer's drayman—a class who bear operations very badly.

R. S—, aged twenty-eight, was admitted into St. Bartholomew's Hospital, one day last month, in a state of great exhaustion. The history given of the accident was the following:—As he was driving his dray in the street, the horses started off, and his left leg got crushed between the front plank of the dray and a gate-post. The limb almost immediately began to swell; and, two hours after the accident, it was thought better to carry the man to the hospital. The limb was then swollen, tense, and cold, more especially below the knee, where the contrast as to cold was most marked, when comparison was made, to the warmth of other parts of his body. The general appearance of the man was not unlike that of a soldier who had received a severe injury by a cannon-shot in battle. He was as if suffering from slight concussion. He referred all his pain to the calf of the leg; the limb, he said, felt "numb" as to external sensation, but the bursting pain internally was very severe. After the most careful examination of the parts, no pulsation could be detected in either of the main arteries, the anterior or posterior tibial. The pain and swelling of the calf, as well as the tension of the popliteal region, were increasing every hour, tightening the limb as though it would burst. The foot was also perceptibly more cold, and tending, it was feared, towards gangrene. The man's pulse had quickened; his body, however, was warmer. As no time was to be lost, Mr. M'Whinnie, in consultation with some of his colleagues, decided to make a further exploration of the injury, under the effects of chloroform; it being highly probable the posterior tibial artery was injured, if not entirely torn across, with hæmorrhage into the surrounding parts. It was decided to act on this supposition; and, taking into the calculation the unhealthy condition of brewers' draymen in general, it was deemed better not to amputate the limb except that proceeding should be imperatively called for.

The operation commenced as soon as the man was under the influence of chloroform. An incision, about four inches long, was first carefully made in the popliteal space, exposing the popliteal artery, which appeared pulsating naturally; the popliteal vein also was apparently sound. A large quantity of blood, however, was extravasated into the parts, as well as round the internal head of the gastrocnemius muscle, which was ruptured. A large vein was seen, which at one moment it was thought might be the source of the hæmorrhage; but tracing the artery down, it was found that all pulsation ceased at a given part. It now appeared plainly that the posterior tibial artery had suffered the injury. On further extending the examination this artery was found pulsating for about half an inch only below the bifurcation of the popliteal, where it became contracted and pulseless. As no wound was percepti-

ble, Mr. M'Whinnie next directed his attention to the point where the peroneal artery is given off, and hoping that the wound might be *below* this point, a ligature was placed round this vessel, and another ligature higher up, about four lines from the bifurcation of the popliteal, around the posterior tibial. Whilst under the influence of the chloroform, all these parts were brought into view, as well as the anterior tibial artery, which had almost by a miracle escaped. The wound having been finally brought together by one strip of plaster, and covered with wet lint, the patient was removed to bed, where the parts were wrapped in cotton wool, and the limb raised. About an hour afterwards, as the effect of the chloroform wore off, he became very restless, and was ordered thirty drops of tincture of opium. He had small quantities of brandy and water through the night.

Next day, we found that he had had but little sleep; and, twelve hours after the operation, he was found starting up in bed and rambling. His face was flushed and hot, eyes suffused, expression disturbed, skin hot, pulse 130 to 140, full, jerking, and easily compressible. He was ordered another opiate. Four ounces of brandy to be given with water from time to time, in the intervals of feeding him with beef-tea; the latter the poor fellow took readily. He soon, however, began to sink, and died thirty-two hours after the operation.

The *post-mortem*, twenty-four hours afterwards, showed the limb extensively ecchymosed. The state of the arteries of the part first attracted attention. The anterior tibial, though surrounded with some effused blood, was entire and normal through its whole course; the interosseous ligament and tibialis anticus were more or less torn, as were also the hamstring tendons and muscles. Blood was effused all along the sheaths of the popliteal and sciatic nerves. The chief source of the evil in the case, however, presented itself very soon, in a small ragged opening in the posterior tibial artery, just below the ligature on its anterior aspect; below this again, the artery seemed sound. All the other organs of the body were, comparatively speaking, healthy. The bones of the leg and knee were all sound. The absence of pulsation in the anterior tibial was due to the pressure of the extravasated blood, the artery having been burst or ruptured by the original crush of the limb in a bent position against the plank of the dray.

LONDON HOSPITAL.

CASE OF CLOSED PUPIL COMPLICATED WITH CATARACT; THREE OPERATIONS; RECOVERY.

(Under the care of Mr. CRITCHETT.)

WE have witnessed a case which has been operated on at this hospital twice within the last few weeks, which presents some new features in ophthalmic practice. The favourable result, as Mr. Critchett explained, arose from his not doing too much at one time, but "breaking up," as it were, the danger by a series of operations at distant and distinct intervals, each operation perfectly different from the other, yet each suggesting points of practical value in the management of similar conditions. The following abstract of the case will make the subject clear:—

Mary Anne A—, aged twenty-eight, was attacked a year ago with acute inflammation of the right eye, followed by sloughing of the cornea and ultimate shrinking of the globe. About six weeks subsequently to this attack, the left eye was similarly inflamed, and the result was a penetrating ulcer of the cornea at its centre, with complete adhesion of the pupillary margin of the iris to the corneal cicatrix, which was large and dense. The anterior chamber of the eye was nearly obliterated, but the cornea was bright round the scar; the iris also could be seen in a healthy condition, with its fibres tightly drawn and attached to it all round. In a word, she was entirely blind of one eye, and so blind of the second that she could not perceive any object, and was led about by her friends. She came under Mr. Critchett's care, at the London Hospital, early in June of the present year, having been blind about eight months. At the last operation, a few days ago, it was very interesting to witness her joy when a piece of torn capsule was removed, and she could see everything as plainly, she declared, as ever she did, and walked back to her ward without help.

The first step towards restoration of sight was the formation of an artificial pupil. This was done in the following manner:—The patient being under chloroform, and the globe exposed by means of the wire speculum, (vide THE LANCET, vol. i. 1855, p. 507,) a small opening was made in the cornea close to its junction with the sclerotic, the small "canular" forceps were introduced, and a strip of iris was drawn away from its attach-