

at all times be felt. About four months after the accident the "hard lump," which was then nearly as large as at present, could be felt at times in front of the joint on either side of the knee-cap, below which it occasionally disappeared. During the last four months it has increased in size, and is at times "lost." On ten or twelve occasions he was suddenly stopped short whilst walking, from inability to straighten his right leg. He would then have to sit down, and, by movements of the joint, free the "hard lump" which, he thinks, must have got between the bones. This displacement was attended with slight pain, and was followed by increase in the size of the joint.

Professor Lister determined to perform the direct operation, as the subcutaneous method would be difficult, if not impossible from the large size of the cartilage, while he felt confident that on the antiseptic system the joint might be freely opened without risk. At 11 a. m. on the 2nd July, the following operation, which is reported in detail, was performed:—The loose cartilage being held steady between the patella and inner condyle and femur, the limb extended on a posterior splint, and the skin on inner side of joint smeared with a solution of carbolic acid in oil—(strength) 1 part carbolic acid to 6 of oil—an incision directly over and somewhat longer than the cartilage was made, through the skin only, with a scalpel which had been dipped in the same oily solution. This wound was then gradually deepened in its whole length till the synovial membrane was cut, its surface being kept moist by the same oily solution, which was continually dropped upon it. The incision was gradually deepened to admit of seizing and twisting any bleeding vessel before the joint was opened. A sharp hook, which had been dipped in the same solution, was then fixed in the cartilage; and in order to prevent the chance of re-gurgitation of air not acted on and rendered harmless by the antiseptic, the instrument; with the skin around, was covered with a piece of lint of considerable size, moist with the same solution, and under cover of this the cartilage was tilted out and drawn away, the lint remaining over the wound. This large piece of lint was removed, and another, dipped in an oily solution of carbolic acid of strength 1 to 10, a little larger

than the wound, was at once substituted, the wound being left gaping to permit free exit for any effusion which might take place into the articulation. This layer of lint was then covered by another of larger size and by two pieces of calico, the outer of which overlapped the inner—these had been dipped in the same oily solution. Lastly, an overlapping piece of carbolic acid plaster—strength 1 to 10—was applied, and this covered by a folded towel, to absorb the discharge and by a bandage. Patient was ordered to remain in bed. The loose cartilage was thus described at the time:—"One and a quarter inch long by one inch in greatest breadth and a quarter of an inch in greatest thickness, round at one end and more pointed at the other; one surface smooth, the other irregular with a sort of corrugated appearance. On section, a very remarkable difference is seen in different parts of the structure. Towards the smooth surface, a layer of compact white cartilage, almost perfectly uniform in thickness, viz:  $\frac{1}{8}$  of an inch, and bounded at its deepest part by a sharply defined line, is observed. Between this layer and the corrugated surface are two constituents in two layers, the one next the corrugated surface being a blueish form of cartilage, while between this and the other layer of cartilage is a layer of true bone, of cancellated structure, the cavities being minute, and, as might be expected, with no medullary material in them. This layer is about 1-16 of an inch in thickness, but thins off towards the edges of the loose body."

July 3d, 3 P.M.—Patient has not suffered any pain since the operation: has slept well, and taken his meals as usual: pulse 72. After removal of the towel, the upper edge of the plaster was raised, and the outermost layer of calico exposed, when watery solution of carbolic acid, 1 to 40, was dropped upon the part.

This solution was then freely applied during the removal of the plaster and outer layer of calico. A layer of calico, dipped in the above watery solution of carbolic acid, was then applied over the remaining dressings, and this covered with one to ten plaster, a towel, and bandage. Upon the plaster and towel removed was some of the grunous compound of blood and carbolic acid, corresponding perhaps to two drachms. •