

was placed at some distance from the bed, and its base was one foot above the level of the patient's limb. The other end of the drain was conducted into an "arm bath" placed below the cradle, and thence the escaping water passed to a reservoir under the bed. A screw clamp was placed on the tube before it entered the knee-joint, and another clamp on the tube after it had left the articulation. By means of these clamps the amount of fluid passing through the joint could be regulated, and also the degree of distension of the joint could be varied. I am much indebted to my house-surgeon, Dr. Perry, now assistant physician to Guy's Hospital, for the ingenuity and care with which he carried out these arrangements.

When the syphon action of the tube was established a stream of water could be made to flow evenly through the joint, and to flush all parts of it. This stream of water ran through the patient's knee-joint, without a moment's cessation night or day, for the period of one month (thirty days). For the first few days some of the fluid escaped through the two sinuses unoccupied by the drainage-tube, but within a week these openings closed, and the skin was soon quite dry. Cold water was employed, to which was added a minute quantity of corrosive sublimate, carbolic acid, or boracic acid. The limb was kept out in the open air of the ward. Twice a day, by closing the lower clamp, the knee-joint was fully distended with water. No trouble was experienced in keeping the apparatus in action. The effect of the irrigation was very pronounced. At once the patient was freed from pain; he slept well, his tongue cleaned, and his appetite returned. His temperature steadily fell and reached the normal line on the third day. During the remainder of his stay in the hospital the temperature never rose to 99°. The swelling of the leg subsided, and the parts assumed their normal appearance.

The irrigation was discontinued on September 22nd. The tube was removed a few days afterwards. The sinuses were healed over by October 5th, and on October 15th the patient left the hospital. At this date both knee-joints were quite

free from fluid; both patellæ were movable and the stiffness existing in the articulations was no more than could be accounted for by the long confinement of the limbs upon splints.

I saw the patient again in June, 1887, seven months after the irrigation. He was in excellent health; his joints were all free from effusion; both knee-joints were of normal appearance, and both exhibited a normal degree of mobility.

It is well known that acute peritonitis is more readily treated when it supervenes upon a chronic form of the trouble, and it is probable that the acute inflammation of the knee-joint in the present case was rendered more amenable to treatment by the circumstance that the articulation had already been the seat of a chronic inflammation. Even with this possibility before one, it may be questioned whether simple drainage and intermittent irrigation of an acutely inflamed joint would lead not only to the recovery of the limb, but also to the perfect restoration of the functions of the articulation.

In the second case, recorded below, the question of the influence of a previous chronic inflammation did not confuse the issue. The case was a simple one of acute suppuration following injury. The patient, a stoker, a vigorous, healthy man, aged 23, was admitted into the London Hospital on November 7th, 1887, with acute synovitis of the right knee-joint.

On November 1st he had fallen and had received a violent blow upon the knee. He was disabled and taken home. The joint did not become visibly swollen until the evening, some hours after the accident. There was no wound. The patient had never had any previous joint trouble, nor, indeed, any notable illness.

When seen on admission the patient appeared ill, and was much worn out by pain and want of sleep. The right knee-joint was a little flexed, was extremely distended with fluid, and was the seat of great pain. The skin covering the articulation was red and oedematous, and the œdema had extended some little way beyond the joint district. The temperature was 100° F. The case was evidently one of suppurative synovitis. The limb was