ON
AN ACUTE FORM OF ULCERATION
OF THE
CARTILAGES OF JOINTS.

By HERBERT MAYO, Esq.

Read April 11, 1820.

THE luminous illustration which the pathology of joints has received from Mr. Brodie, would infer some presumption in the attempt to prosecute this subject further. There are, perhaps, no organs, of the diseases of which an equally original and inclusive view has been taken; yet it is not impossible that even among these cases, certain varieties may have escaped unnoticed, which it may be useful to trace. The following observations, which I was led to make, when verifying Mr. Brodie's statement, may perhaps have this merit.

A female, 27 years of age, six months after parturition, was seized with pain and swelling of the wrist. The next day, the right knee had participated in this affection. The succeeding day, both these affections had subsided; but similar changes

had commenced in the left knee, which continued acutely painful and permanently swollen, the whole limb indeed being enlarged; the knee was frequently leeches and continually fomented, without any relief being obtained. Six weeks after the attack, I had an opportunity of observing this case; at that time, by the patient's account, no material change had taken place in the limb; the thigh and leg were swollen with serum effused in the cellular membrane; the joint itself contained no fluid; the pain in the knee was very acute and constant, and increased by the least movement; the patient lay on her back, with the knee straightened. The application of leeches to the part gave her now no more relief than formerly; cold applications and fomentations were equally inefficient; repeated blistering appeared, at one time, to be of service; afterwards, this measure seemed to have lost its power; small doses of calomel and opium were administered frequently, during a few successive days, with no result. At length the pain seemed to abate spontaneously, the swollen state of the limb gradually subsided, the patient recovered the appearance of health, but the joint was wholly immoveable.

A female, 17 years of age, was seized with pain and swelling of the thumb, which she conceived that she had sprained. The following day, the pain had shifted to her elbow, where it rested, being exceedingly severe, and constantly throbbing. The

arm was swollen above and below the elbow, and the skin slightly reddened and healed ; leeches were applied to the arm without any benefit, and, subsequently, a blister, in the vicinity of the joint, which was kept open with the same cerate. Under this treatment, the pain in the elbow was somewhat relieved, when it suddenly reappeared with increased violence, the arm becoming more swollen, and the skin covered with a bright blush of inflammation. Leeches were repeatedly applied without any relief. An erysipelatous inflammation now extended itself up the arm, occupying successively her neck and chest ; her stomach became remarkably irritable, so that for several days she vomited whatever she swallowed ; she was thus reduced to the lowest degree of exhaustion. A fluctuation could now be felt on the outside of the sore arm, near the elbow-joint. On puncturing this part, a small quantity of pus escaped ; the wound was not long in closing. The patient regained her strength ; her arm gradually returned to its former size, but the elbow-joint was completely ankylosed, admitting of no movement.

In both these cases, the period between the commencement of the attack and the completion of the ankylosis, somewhat exceeded two months. The febrile symptoms attending the commencement of the latter were slight. I had no opportunity of ascertaining this circumstance in relation to the former.

These cases I felt inclined to consider as inflammatory affections of the joints, looking to the acute form of the attack ; but they were not accompanied with that effusion into the synovial cavity, which Mr. Brodie describes as characteristic of inflammation of the synovial membrane ; still less did the symptoms seem to indicate the process of ulceration of cartilage. " The ulceration of the cartilages of the knee," says Mr. Brodie, " differs with respect to its symptoms from inflammation of the synovial membrane in this, that the pain in the former is slight in the beginning, which is the very reverse of what happens in the latter*." A statement completely borne out by the cases of these affections, which Mr. Brodie relates, many similar to which I have myself witnessed, when verifying his observations at the bed-side of patients.

Soon after the cases, which I have described, occurred, I had an opportunity of making the following dissection.

A boy, 14 years of age, died of an affection of the brain, connected with fracture of the skull. He survived this injury about three weeks. Four days after the accident, a joint of one finger and one ankle-joint appeared swollen and painful. The swelling extending some distance above and below the affected joints. There was no discoloration

* Brodie on the Diseases of Joints, p. 155.

of the surface, which might lead to the supposition that these parts had been bruised. The swellings suppurated, and were opened previously to the boy's death.

I ascertained, by careful dissection, that the abscesses, which had been extensive, did not communicate with the joints in their vicinity, the capsules of which contained no excess of fluid. On opening the articulation of the affected finger, the extremities of the bones were found wholly bared of cartilage; in other respects quite healthy. On exposing the cavity of the ankle-joint, the surfaces of the astragalus and tibia and fibula were found almost wholly stripped of their cartilage; what remained of this texture was thinned, and that unequally; but seemed in other respects unchanged, and adhered firmly to the bone. The same alteration was found in the remaining joints, which the astragalus concurs in forming; the exposed bone on each surface was perfectly healthy. The annexed drawing represents the superior surface of the astragalus, obtained from this dissection.

Is there sufficient correspondence between this latter case and the two former, to warrant the inference, that a similar rapid absorption of cartilage took place in the three; and that, if the subject of the third observation had lived, the affections of his joints would have terminated in ankylosis, as happened in the two former cases?

At any rate, it is useful to call the attention of the Society to an affection, important in its consequences, rapid in the progress of its symptoms, and liable to divert from the active treatment, which it probably requires at an early period, inasmuch as it simulates a more harmless affection, acute rheumatism.

With respect to the treatment of this affection, I can offer nothing but conjecture.

The peculiar appearance of ulcerating cartilage, which I have described, differing from that which more frequently occurs, has not escaped the researches of Mr. Brodie. Two cases* are mentioned in his work, corresponding with the third, which I have detailed, in as far as regards the absorption of cartilage. It is to be observed that I employ this case, in the present instance, merely as illustrative of what may take place in the hitherto undescribed disease, of which I have brought two instances.

* Brodie, cited work, p. 136.