

ON AFFECTIONS OF THE JOINTS FOLLOWING OPERATIONS ON THE GENITO-URINARY ORGANS.

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It is well known that certain affections of the genito-urinary organs are occasionally followed by severe disease of the joints. In the following remarks, I have endeavoured to explain the circumstances under which these secondary attacks occur. The injuries and diseases of the genito-urinary organs with which they may be connected are various. They may follow lithotomy and operations on the urethra. They may follow lithotripsy; the introduction of instruments into the bladder; irritation of the urethra from the passage of foreign bodies, and gonorrhœal abscess, with ulceration of the urethra. In fact, any injury or disease which gives rise to primary suppuration in or about the genito-urinary organs of the male, may be followed by secondary articular disease. Besides these, there are joint affections, which appear to be excited by mere irritation of the same parts without suppuration.

The articular affections from the causes above mentioned present several peculiarities worthy of notice. They are sometimes purulent, sometimes non-purulent; and this distinction is well marked, the two varieties being seldom mixed in the same case. The attack of the joint sets in very soon after the appearance of constitutional symptoms. Thus it frequently happens that the joints begin to swell on the first or second day after the rigors and fever. The secondary deposits are often confined to the joints and muscles, and do not extend to the principal viscera. Notwithstanding the apparent limitation of the general disease, death ensues rapidly after the first appearance of the constitutional symptoms—on the fourth, sixth, tenth, and twelfth days.

On the other hand, many of these cases, though extremely severe, terminate by recovery of the patient; yet the joints have been extensively injured, as is shown by the ankylosis which ensues.

The cases may be distinguished into two kinds. In one, there are severe constitutional symptoms, partaking more or less of the characters of purulent infection, and followed by secondary deposits of pus. In other cases, the general symptoms are less severe, often chronic; and the joint affection is not of a purulent kind. M. Velpeau has described a third class of cases, which he ascribes to poisoning of the blood by urine of a bad quality.

The purulent affection of the joints generally sets in under the following circumstances: a slight injury has been inflicted on the genito-urinary organs, or the patient may have irritated the urethra by attempting to pass a catheter himself. Severe rigors, followed by fever of a nervous kind, ensues; and in one or two days the joints are attacked by pain and swelling. The tumefaction may increase to a considerable size in a few hours, the joint becoming red and hot. The knee, shoulder, ankles, and elbow, are the joints most commonly affected. Some of these cases terminate fatally in a fortnight; others again are chronic: even in these the joint disease may commence as early as the second day. There are at first rigors, followed by fever. On the next day, severe pain and swelling attack some of the joints; the periarticular tissue becomes the seat of suppuration; the pus is evacuated artificially; the patient remains in a low, depressed, and doubtful state, for several weeks; but at length recovers, probably with ankylosis of some of the affected joints.

The morbid changes in these cases are various. They are usually inflammatory. The synovial membrane is injected, and sometimes lined with false membrane, and the joint contains pus; but ulceration of the cartilages is not common. In other cases, the lesions are confined to the periarticular tissues, which are infiltrated with pus: or the purulent inflammation may occupy the interior as well as the exterior of the joint, although the capsular ligament has nowhere given way. In a few cases the joint has been the seat of simple inflammation, and does not contain any pus; and matter may be discovered in joints which did not seem during life to be attacked. It is very rare to find pus in a joint which appeared healthy up to the time of death, but this has occurred in one case.

In chronic cases the periarticular swelling often contains pus, and the cartilages are softened or eroded. Indeed, we may infer that the cartilages and even ligaments have been extensively diseased from the ankylosis which ensues.

In the milder form of the disease, the joints become painful

and swollen; but these symptoms are not severe, and the skin is not red. In a few days the affection may subside, and pass to another joint; hence this form is often mistaken for rheumatism. The effused fluid is sometimes purulent; in the majority of cases, we may infer that the effusion is serous, from the manner in which it disappears. I should observe that many of the acute and some of the chronic cases are accompanied by intermuscular abscesses in the limbs.

The nature of the articular affections just described is not well understood. M. Velpeau, as I have said, attributes them to poisoning by urine. M. Civiale confesses that he is unable to explain how they are produced. For my own part, I am inclined to attribute the severe cases accompanied by constitutional symptoms, and followed by purulent deposits, to the influence of pus-poisoning.

The analogy of these cases with many which occur in puerperal cases is evident. The absence of primary suppuration may be considered as a fatal objection; but to this I would answer, that the *fons et origo mali*, the primary secretion of pus, which poisons the blood, has been generally found when carefully sought for. Thus I have found small abscesses along the urethra, produced by the frequent passage of instruments for stricture. I have also found inflammation of the prostatic veins. In other cases, small primary abscesses have been found in the prostate or wall of the bladder, or suppurative inflammation in the cellular tissue of the scrotum. All these are sufficient causes; and if the genito-urinary organs were carefully examined in these fatal cases, it seems to me highly probable that the origin of the disease would be more frequently discovered.

The forcible use of instruments and the passage of foreign bodies may fairly be inferred to have produced some laceration of the urethra, followed by suppuration or abscesses. There are, however, cases in which irritation of the urethra is followed by a non-purulent inflammation of the joints. Here we must either suppose that irritation of the canal has given rise to abscess in some neighbouring part—an event quite possible, though not proved by dissection; or we must confess our inability to explain the nature of such cases, and class them with gonorrhœal rheumatism, to which they bear a striking resemblance.

CASES CONFIRMATORY OF THE EFFICACY OF THE EXTRACT OF BELLADONNA IN ARRESTING SECRETION OF MILK.

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CASE I. In July 1857, I was sent for a considerable distance from my own home to see a neglected case of milk-abscess, of very formidable size. My patient was a healthy young woman; this was her first confinement. A free incision was made from the most dependent part, and a large quantity of pus and milk evacuated. On my second visit, the breast was much improved; the secretion of milk, however, was as active as ever. Extract of belladonna was applied around the nipple night and morning. The secretion of milk stopped at once; and the breast soon healed. The application had no effect on the healthy breast, with which my patient continues to nurse her infant.

CASE II. In September 1857, Mrs. S., the wife of a clergyman, caught cold six weeks after confinement, by remaining a considerable time in a wet grass field. As soon as she returned home, she felt shivery and cold. The left breast became hard, inflamed, and very tender. My advice was not sought until the expiration of ten days. The breast was much enlarged and tender, with a succession of hard tumours, each threatening a separate abscess. No milk could be extracted from the nipple. The belladonna extract was applied as in the former case. Secretion was at once checked, and my patient soon recovered. She still nurses on the right side.

CASE III. Mrs. O., a most intelligent patient of mine, lost her infant from convulsions, on November 9th, 1857. A few days before its death, she bruised her left breast, which was overcharged with milk at the time, owing to the inability of the infant to take it. The day after its death, the breast was much swollen. No milk could be extracted by the breast-pump. A tumour could be distinctly felt at the upper part. The extract of belladonna was applied to both breasts. The secretion of milk was immediately stopped. In two days, my patient was safe. Her own remark was, that she never felt the draught in either breast after the application of the extract.