

## APPENDICITIS; COLLES'S FRACTURE; FRACTURE OF THE PATELLA.

CLINICAL LECTURE DELIVERED AT THE ST. LOUIS MEDICAL COLLEGE.

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### APPENDICITIS.

GENTLEMEN,—The two cases which I now present to you have both been before you for observation. They are cases of appendicitis, or rather were cases of appendicitis. The histories of the two cases are quite different. The one, a young man aged thirty, suffered a severe attack of colic in April, 1889. Soreness and local tenderness were present for some days after the onset. In January, 1890, he suffered a second attack, which kept him in bed for two weeks. The pain at this time was well localized in the right iliac region. General distention of the abdomen, with fever and persistent pain and constipation, attested the severity of the attack. A third attack occurred in April, 1890. At this time a hardened mass developed in the right groin, which persisted for a number of months after convalescence. He was in bed with this attack also about two weeks. Persistent tenderness has been present ever since the third attack, the patient never having made a complete recovery. At the time we first saw him, in May, 1890, there was a distinct indurated mass in the iliac fossa. This line of induration was about as thick as the two fingers, well marked, and tender. He was unable to work much during the summer of 1890, but returned to his occupation as storekeeper in the fall. When he could remain comparatively quiet he did not suffer much pain, but any unusual exertion provoked a return of the tenderness and pain. In January, 1891, he suffered a fourth severe attack, and was confined to bed over two weeks. There was a general peritoneal inflammation at this time, at least so the physicians in attendance believed. He again came under our observation in May of the present year. At this

time I could detect no induration in the iliac fossa. There was, however, more or less pain on exertion, and there was a distinctly tender spot on the line between the umbilicus and the spine of the ilium. The sensitiveness at this point varied from day to day. In view of the frequent recurrence of the inflammatory action and the disabled condition persistently present, the patient submitted to operation three weeks ago, May 9, in an interval between attacks. I found upon opening the abdomen with the usual incision that the head of the colon was somewhat reddened, and after searching for a time I found the appendix turned outward along the lower extremity of the colon, held in place by a fold of the peritoneum and by some bands of adhesion. The appendix itself was about the size of a lead-pencil, fully two and one-half inches in length, hard and unyielding in character, somewhat redder at its base than in its body. It was removed without much difficulty and its very broad mesentery ligated in two sections. A simple catgut ligature was placed about the base of the appendix, the mucous portion of the stump clipped out with the scissors, and the abdominal wound approximated with a suture. The patient made a complete recovery without any evidence of inflammatory action about the abdomen. He suffered, however, a severe attack of catarrhal pneumonia, which I believe was in part due to the influence of the ether used at the time of operation.

The second case, a man, aged about forty, persisted in saying that he had not suffered any pain or discomfort in the abdomen until May 7, when he was taken, while at his business, with pain in the abdomen and with nausea. There was no fever during the first day. On the second day there was a slight rise in temperature. I saw him first on the third day, at which time the temperature was 101°, pulse about 80, some distention of the abdomen, with marked tenderness in the right iliac fossa, and with induration and thickening inside of the anterior superior spine. The operation was done May 11, on the fourth day of his sickness. The usual incision exposed the colon, and upon disturbing the adhesion of the colon to the iliac fossa there escaped at once offensive gas and thin purulent fluid. Carefully separating the adhesions of the colon and lifting it from the iliac fossa, the appendix was observed on its posterior surface. It was gangrenous, with a broad well-marked mesentery, the appendix itself being about two inches in length, with a broad base fully opening into the bowel. The appendix was gangrenous and had ulcerated so as to expose a large concretion, which was removed with it. Two separate silk ligatures were placed, one about the base of the appendix and the other enveloping the

mesentery. These ligatures were left long, protruding through the external wound, which was carefully cleansed by sponging. Iodoform gauze was put into the cavity and a drainage-tube placed in position, only a small portion of the external wound being approximated by sutures. This patient made an uninterrupted recovery.

In the first case the operation was performed between the attacks, and the appendix was found in a comparatively good condition, although I think it unquestionably the source of the recurring dangerous sickness with which the patient had been afflicted during the past two years. The wound was at once closed, and the patient was practically well in two weeks. The other had already suppurated, and he was in the midst of an acute attack of appendicitis.

The great majority of the cases which have come under our observation at the clinic have been during the presence of an acute attack, and have been operated upon, where operation was needed, during the acute process. The great majority of these cases have had a circumscribed pus-cavity in the peritoneum. The experience of the past few years has taught me how to open these abscesses to a better purpose than formerly. I confess to have opened many abscesses in the right iliac fossa, in my earlier experience, without recognizing what I believe now to have been the true source of the abscess,—viz., a suppurating appendix. Many of these abscesses I opened by a small incision just below and to the inside of the anterior superior spine of the ilium, passing well up along the iliac fascia and muscle, inserting a tube and allowing the part to drain until a cure was effected. We can open such abscesses, where they are dependent upon the appendicitis, with equal safety and to better purpose by the ordinary incision for the removal of the appendix. Great care should be exercised not to break up the circumscribed adhesions which limit the pus-cavity. If the general peritoneal cavity is opened, it should be carefully guarded, by sponges and by cleanliness, from infection. If a careful dissection is made and the separation of the adhesions about the appendix is cautiously done, the drainage and the escape of pus can usually be easily controlled, the appendix removed, the abscess-cavity cleaned, and the part put into shape for free drainage and rapid healing. In all cases where the pus has been in any considerable quantity, I pack the cavity with iodoform gauze and establish free drainage through the external wound. The removal of the appendix becomes an incident in the operation for the relief of the abscess and the proper cleansing of the cavity. Unfortunately, the great majority of these cases still come to the surgeon after an abscess-cavity has formed. It is then too late

to make a clean and perfect laparotomy and close the wound for primary union. It is true many cases of appendicitis recover without operative measures, the necessary treatment being rest in bed, attention to the bowels, and moderate diet,—the abscess, if there be one, opening into the bowel and discharging through the intestine. Induration and thickening about the head of the colon do not necessarily imply suppuration, for not infrequently the inflammation subsides without the formation of an abscess. It must be admitted, even by the most conservative, that operative interference in these cases is very generally judicious, conservative, and efficient.

The early operations have given us a clearer conception of the pathological changes which accompany the inflammatory attacks. It is astonishing how rapidly the destruction of the appendix is sometimes accomplished by the inflammatory process and how quickly suppuration occurs. I have found the appendix ulcerated and the bowel perforated within three days from the time of the apparent onset of the disease. It is sometimes difficult to get the full history from our patients. For instance, in the last-described case the patient persistently denied any pain in that region until the first day of his confinement to bed, and yet, after the operation had been made, he admitted that he had suffered for many months with pain in the right loin and back, a pain that he had ascribed to the kidney, but which no doubt was due to the presence of this enlarged and inflamed appendix.

## COLLES'S FRACTURE.

This young man has a fracture of the lower end of the radius. The injury was received in the usual way by falling upon the palm of the hand, and the displacement of the lower fragment is backward. This gives us the peculiar deformity which is so characteristic of the fracture, a deformity which results largely from the displacement produced by the violence which effects the fracture, muscular action having but little to do with the displacement. As you see, the fulness on the dorsum is just above the wrist-joint, the joint itself being carried backward and forming a part of the dorsal projection. The prominence on the palmar side is a little above the line of that upon the dorsum. The lower fragment is inclined outward towards the radial side. It is sometimes difficult to determine the presence of a fracture in such a case, for if displacement is slight a sprain of the wrist presents symptoms which simulate, in part at least, this deformity. A careful comparison of the relative positions of the styloid process of the radius and that of the ulna will very generally lead to a correct

diagnosis. In this fracture the end of the radius is tilted backward and towards the radial side, the styloid process being carried with it, and it is thus found on a level with or above the styloid process of the ulna, whereas in the natural position of the bones the styloid process of the radius should present below a transverse line drawn from the process of the ulna.

The one important point in the treatment of this fracture is to obtain a perfect adjustment at the first dressing. The fracture is, as you know, through cancellated bone, or the expanded extremity of the radius. Ordinarily, if the fracture is once well adjusted and the position made perfect there is but little disposition towards a secondary displacement. The fracture is by no means uniform in its line. It is a rare thing to find crepitus well marked, the diagnosis depending upon the history of the case and the deformity presented rather than upon the presence of the absolute sign,—crepitus. The fracture is occasionally an impacted one.

The method of reducing the fracture is important. The elbow of the patient being held by an assistant, a second assistant should grasp the hand as if to shake hands. The surgeon now, with his thumbs upon the dorsum, has the fingers of his hand in front of the radius above the line of fracture. Extension by the assistants, aided by firm pressure of the surgeon's thumbs on the fragment, will very generally carry it forward and inward into perfect position. If there is difficulty in moving it into position, the assistant grasping the hand should carry the hand back to extreme extension, then with extension applied in this position the impaction may generally be broken, and the bone carried forward into position. I do not believe the complicated splints that have been devised for the treatment of this fracture are necessary. A small, thin board, a portion of a cigar-box, which should reach from the tip of the fingers to the epicondyle, padded with cotton, affords, I think, the best splint for the fracture. The padding in the palm of the hand should not be very abundant. The hand should rest nearly flat upon the splint. A moderate pad of cotton on the palmar surface should be applied above the line of fracture. The hand resting upon the splint, with fingers extended, is now bound to the splint by a roller bandage. A dorsal pad of cotton is placed directly over the lower end of the radius so as to hold the fragment in position. The splint and bandage should extend to the elbow. No dorsal splint is needed.

The results obtained in the treatment of this fracture should be better than one might expect from reading the ordinary text-books on

fractures. I think the deformity which should result after such fractures should be slight. I have found it more difficult to obtain the full length of the radius than to avoid the deformity which results from the posterior displacement. In order to avoid the stiffening of the fingers, which is very apt to occur in patients past middle life, it is a matter of extreme importance to free the fingers from restraint by shortening the splint at the end of the first week, or certainly at the end of the tenth day. The splint then should extend only to the distal ends of the metacarpal bones. The fingers can be moved freely without danger of displacement of the fracture. This precaution should be practised in all cases in elderly patients. The stiffening of the fingers and the loss of motion in the flexor tendons is ordinarily due to an inflammation in the sheaths of the tendons, or to a rheumatic stiffening of the joint and surrounding tissues.

I make it a habit to remove the dressing and inspect the parts two or three times during the first two weeks, and I remove the splint in the fourth or sixth week, the time being determined somewhat by the age of the patient. The patient should carry the arm in a sling after the removal of the dressing, and I inspect it every few days to see that no displacement has occurred and that the fracture is firmly united.

#### FRACTURE OF THE PATELLA.

The patient now presented is a man, aged about thirty years, who suffered eight weeks ago a fracture of the patella. The fracture was transverse, with the line of fracture running much nearer the lower extremity of the patella than the upper; in other words, the lower fragment is the smaller one of the two. There was considerable contusion of the joint, and a slight wound in the skin, which communicated with the fracture of the patella. The swelling of the joint was very marked during the first few days. The leg was put into an extended position, and secured by a plaster-of-Paris splint which enveloped the entire limb from the ankle to the groin. The leg thus enveloped was placed in a Hodgens suspension splint, with the foot elevated so that the thigh was flexed slightly upon the body. A large opening was made in the plaster-of-Paris splint on its anterior surface, so as to expose the knee. This opening was carried well up above the level of the capsule of the joint and extended down below the tubercle of the tibia. It should also be cut laterally, so that the margins of the opening may be placed well back upon the lateral surface of the leg. The support of the plaster splint and the pressure of the cotton batting over the knee, with the antiseptic dressing, no doubt aided mate-

rially in the rapid subsidence of the effusion into the joint and of the swelling about the knee-cap. About the fifth or sixth day I applied over the patella a soft metal ring pessary covered with india-rubber tubing moulded so that it encircled the patella. I then passed a loop through the ring upon either side and carried it back around the plaster-of-Paris splint, putting some batting above and below the knee-cap. Sufficient traction was made on the ring to secure a retention of the fragments of the patella in fairly good approximation. The two fragments of the patella should be approximated by the fingers before applying the ring. The ring should be watched, to avoid undue pressure. I usually keep the patient in bed four or five weeks. The patient is then allowed to move about on crutches. After eight or twelve weeks the splint may be removed and moderate motion of the knee-joint be permitted. The patient should not use the leg in walking for at least three months, and not freely for four or five months.

The results following such treatment have been fairly good, free motion being obtained, and a close fibrous union of the fragments being the rule. I resorted to this treatment in preference to the exposure of the fracture and the wiring of the fragments.

## Genito-Urinary and Venereal Diseases.

### HYPERTROPHY OF THE PROSTATE.

LECTURE II.

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GENTLEMEN,—The urine in cases of patients with prostatic hypertrophy furnishes important indications of their condition. The most significant sign of all is the specific gravity. If a patient with prostatic hypertrophy has a urine with a specific gravity of 1010 or less, no matter whether the urine be free from any other evidences of renal trouble or not, this fact alone indicates danger for the patient, and is an evidence of what has been termed, in the absence of further proof of organic renal disease, *renal insufficiency*, by which term is meant that, although the kidneys are not the seat of sufficient pathological change ordinarily to produce death, nevertheless death is likely to ensue under very slight provocation, from suppression of urine or urinary fever and their consequences. This fact is, to my mind, the most important one in connection with the urinary examination. Other than this the urine, of course, presents, in a case in which cystitis exists, the ordinary characteristics of that disease,—viz., alkaline reaction, pus, mucus, blood-corpuscles, alkaline deposits, such as precipitates of the triple phosphates, etc. It is in these cases of cystitis in connection with hypertrophied prostates that we often see the most severe forms of the disease, the reason for which is the inability of such bladders to empty themselves, as has been already described, and that, as a consequence, pus and mucus and decomposing urine remain within the bladder as a source of ever-increasing trouble; so that not infrequently the latter part of the urine is made up almost wholly of such tough, stringy mucus and pus that it will only flow through a large-eyed catheter, and then often with difficulty. Beyond the facts just pointed out, there is nothing of special importance in connection with the urine of these patients. It is surprising how long a chronic urinary obstruction, going even to the point of urinary retention and an overflow