

to wash his bladder out also, and in that way, starting him with a perfectly healthy bladder, by the rest we shall give it, I hope we will prevent the re-formation of the stone. The question of further treatment here I hope will not arise. If it should, it will be very easy to pass a sound and see if there be any new stone developed, and, if necessary, to deal with it with a lithotrite.

This patient did very well for nearly three weeks after the operation, and then, I am sorry to say, he sank into a condition of collapse and finally died. The fact is, he was worn out by the irritation of this large stone, and I have no doubt that if I could have procured a post-mortem we should have found his kidneys in an exceedingly diseased condition, the result of the prolonged irritation.

### TUMOR OF THE HARD PALATE; ACUTE APPENDICITIS; PERINEPHRITIC ABSCESS.

CLINICAL LECTURE DELIVERED AT THE JEFFERSON MEDICAL COLLEGE HOSPITAL.

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GENTLEMEN,—I have three cases to bring before you to-day, one of appendicitis, another a perinephritic abscess, and the third a tumor which arises from the hard palate. I shall operate on the mouth case first, since it is never wise to operate on infectious cases and afterwards on those which are not, lest the later ones become infected and suppurate.

#### TUMOR OF THE HARD PALATE; REMOVAL; RECOVERY.

CASE I.—This man is twenty-six years of age; his father died of phthisis; his mother is healthy, and he himself has always been healthy until ten years ago, when he noticed a small tumor on the back part of the roof of his mouth. This has gradually increased since, and now he has difficulty in swallowing and talking. When I examine the mouth I find that there is a tumor attached to the roof of the mouth at the junction of the hard and soft palates. It is not connected with the base of the skull, as I have determined by the finger and the laryngoscopic mirror. It is about the size of an egg. There is some bleeding and some discharge.

The trouble in these cases is chiefly the hemorrhage. What I propose to do here will be, first, to split the cheek backward and slightly downward so as not to injure Steno's duct, and, as far as possible, to avoid the branches of the seventh nerve. Then I can lay his head on one side with a pillow under his shoulder, and the blood can escape sideways and tracheotomy will not be necessary. I will then sever the attachments to the soft palate on each side and below, next chisel it loose from the hard palate, seize the mass with a pair of forceps and quickly wrench it loose. I will perform the operation as quickly as pos-

sible, on account of hemorrhage. Speed but not haste will be my object. Two or three sponges pressed firmly upon the bleeding surface will arrest most of the hemorrhage, and if pressure does not stop the bleeding I will tie any large vessel, or, if necessary, use the Paquelin cautery. In some of these cases it is difficult to get a good light, and I propose to have a mirror with a small electric light attached to my forehead, so that I can throw the light in the back of his throat, if necessary.

In these cases you must always operate as quickly as possible, not wasting time over each bleeding vessel (except those in the cheek incision), until the tumor is removed. You must operate quickly, too, for another reason,—namely, that you cannot give ether while operating, and you wish to avoid pain by the speedy termination of the operation.

I have now split the cheek and controlled the hemorrhage. Next I get him well etherized again, and now you see the tumor. It is, as I said, about as large as an egg. I think it is a sarcoma of the spindle-cell variety, but it is rather hard, and may be a fibroma, which will have to be determined by an examination with the microscope. The tumor having been quickly removed as above described, I find the hard palate has been left intact except at one small point, and that only the anterior layer of the soft palate has been removed. The bleeding is not very serious. Pressure has stopped most of it very readily, and the Paquelin cautery does the rest. The wound in the cheek is then sutured and dressed. [The microscopic examination showed the tumor to be a small spindle-celled sarcoma. The patient easily recovered, and went home in ten days, with a healing ulcer in the roof of the mouth.]

#### APPENDICITIS; OPERATION; RECOVERY.

CASE II.—This case is an admirable lesson upon the need of operation in appendicitis in spite of seeming but delusive betterment. I wish you to understand it thoroughly, as you will often have to deal with its like, and the treatment of late years has improved amazingly, owing chiefly to the labors of American surgeons. Several series of post-mortem examinations have shown us that about one-third of all adults, taken indiscriminately, at some time or other during their lives have suffered from attacks of appendicitis from which they have recovered. It is, therefore, a very common disorder, though it is by no means always recognized, for the attacks, unless severe, are often believed to be simply colic or other mere intestinal disorder. Willard Parker, who, in 1867, was the first to impress upon the profession the

need for operation, called it, in the vocabulary of his time, "perityphlitis," under the impression that the trouble began in the head of the colon; but we now know, from more accurate observation, that in ninety-nine cases out of one hundred the disorder begins in the appendix; not from the historical grape-seed or the hypothetical apple-pip, but from a concretion of fecal matter, from ulceration beginning in the mucous membrane following occlusion of the calibre of the appendix with retention of its secretion, or from gangrene. Speaking clinically rather than pathologically, these cases may be divided into five classes. First, those with slight but well-recognized symptoms, which after reaching a certain point pass on to resolution. This is probably the course of the large majority of cases, and especially of the unrecognized ones. Secondly, those in which rupture of the appendix takes place without previous agglutination of the intestines. The contents of the appendix escaping into the peritoneal cavity will produce a widespread and often fulminating peritonitis, so that your patient may die even within twelve hours. In the first class no operation is necessary; in the second class no recovery is possible without the speediest operation that can be done. The third class lies between these two, and of this class our present case is an admirable instance.

This patient, a man of forty-five years, began to be ill on February 3, eight days ago, with pain all over the abdomen; but by the third day the pain had gradually become focussed in the right iliac fossa and was quite severe. He entered the hospital night before last, and when I saw him I came ready to do an operation if necessary. He had had considerable fever, but it had abated so that when he entered the hospital his temperature was only 100°. He was not suffering much pain, and was, in fact, what might be called almost comfortable, although sick. In the right iliac fossa I found distinct tumefaction and resistance to the touch over an area about two inches in breadth, parallel with Poupart's ligament. The right leg was flexed at the hip, as this was the most comfortable posture. There was no oedema, nor was the tenderness very great, nor the pain severe. The most tender point was two inches from the anterior superior spine on a line drawn to the umbilicus. To find this point of greatest tenderness (which Stimson has proposed to call "McBurney's point," as McBurney was the first distinctly to formulate its existence and to point out the manner of finding it), examine with the tip of one finger, and not with the whole hand; or, better still, ask the patient to indicate with one finger the point of greatest tenderness. The point corresponds about with the attachment of the appendix to the colon; and if you find tenderness here with the other rational

signs of appendicitis, you may be almost sure that that is the disorder you have to deal with. But this so-called McBurney's point may be delusive. The point of greatest tenderness is really the point of greatest inflammation. I have seen it just under the liver when an abscess was caused by gangrene of the tip of an appendix ascending behind the colon, or at the brim of the pelvis when the appendix lay transversely.

As the case was not urgent, the time evening, and the light necessarily insufficient, I decided to watch the case for twenty-four hours or more. Yesterday morning his temperature was only 99°, and I thought it barely possible that he might escape without an operation. But this morning I found that his temperature had gone up to 101.2° last night, and I decided instantly to operate, and shall do so before you. This is the eighth day of his disorder. Willard Parker laid down the rule that an operation ought to be done between the eighth and twelfth days, but, as the statistics of Dr. Fitz have shown, sixty-eight per cent. of our patients would die by that time, and so, instead of waiting till the eighth or twelfth day, surgeons gradually learned to operate more promptly, until Fitz, in a discussion last year before the Association of American Physicians, declared that the second or third day was not too early, and in my opinion he is quite right.

All this time you will notice that I have been illustrating the third clinical class, in which a localized abscess forms, by the case in hand. You must remember that this third class is suddenly transferred sometimes into the second class by the rupture of the abscess and the consequent lighting up of general peritonitis.

Hence when you operate in such a case as the present, with undoubtedly a local circumscribed abscess, you must be extremely careful to use the greatest gentleness after you have opened it, lest you should rupture the sac and pour out its contents into the peritoneal cavity. I have known a rough assistant to rupture such a sac during the operation, undoubtedly producing the death of the patient; and not rarely it will rupture spontaneously, if the operation is delayed, with a similar fatal result. Hence the great danger of delayed operations.

The fourth class of cases are those which run a long chronic course for months or a year, but these are very rare. The fifth and last class are those of recurrent appendicitis, in which there may be even a dozen attacks, as in Bernardy's case, in this city, in which twelve attacks occurred within eleven months. For a very excellent discussion of the whole question of appendicitis in its various bearings I beg to refer you to the Transactions of the New York State Medical Society for 1891.

To return to our case. Having now looked over its various symptoms, you will see that the man does not seem seriously sick, and that his temperature is not high, and yet, as I think I shall convince you, he must absolutely be operated on, for he undoubtedly has an abscess which, if not evacuated, places his life in the greatest peril. Remember especially that, when two, three, or four days have passed and no betterment occurs and the local and physical signs remain the same, with slight tumefaction, tenderness, and moderate fever, your duty is to operate. If, as in the vast majority of cases, you find pus, you will almost certainly have saved life. If you find none, you will probably find the appendix diseased; and if you find nothing wrong,—which will not be more than once in a hundred times,—the operation will scarcely have added anything to the risk of the patient. If the appendix be found distended, inflamed, or otherwise diseased, tie it as close to the cæcum as possible and cut off the diseased end, and then you may either invaginate the stump and cover it by a few stitches through the outer coats of the colon, or simply disinfect it and let it alone, as you prefer.

I now make an incision parallel with Poupart's ligament and two finger-breadths above it, over the site of the tumefaction. After cutting a little distance into the abdominal wall I notice that the tissues are matted together, which clearly indicates to me that there is inflammatory trouble and probably pus underneath, and in a moment you observe the pus escaping. The amount is nearly half a pint, as far as I can judge. What now shall I do as to the appendix? I shall search for it with great care. Inserting my finger, I feel a round, finger-like body, but considerably thicker than the finger, adherent to what I believe to be the head of the colon. It is bound to the colon by recent lymph, and it is separated with as much ease as the two layers of the pleura in a recent pleurisy. I find this to be the appendix, though it is so surrounded by thickened tissue and new formation that it is almost impossible to assert this positively until I have removed the mass. Having loosened it down to the base, I throw a silk ligature around it and cut it off. You will notice that the portion removed is almost all inflammatory tissue surrounding the undistended tube of the appendix. The free end of the appendix is gangrenous, and has completely sloughed away, thus opening the calibre of the appendix and permitting the escape of the contents. The abscess which we have opened is intraperitoneal, and yet shut off from the general peritoneum by the agglutinated neighboring intestines.

I shall wash this out with hot water, insert a drainage-tube, and

partly close the opening. We shall have necessarily considerable supuration for some days to come, with gradual shrinking of the cavity and its final obliteration. I was not careful, you notice, to disinfect the cut end of the appendix, for the simple reason that the whole abscess is already infected, and it would be needless trouble and waste of time to do so.

One other point in reference to such a case. It emphasizes the need for the physician to call the surgeon in consultation at the very outset of the case, not necessarily for his knife, but for his best judgment. The physician should have the benefit of the surgeon's experience from the very beginning, and the surgeon should know the case "at first hand," instead of through the statements of the physician when he is called at a later period. The surgeon should be familiar with the case, with a view to early and, if need be, instant interference. The longer the delay before the surgeon is called the greater the probability of danger to the patient.

[In five weeks the patient went home well, after a prolonged but uncomplicated convalescence.]

#### PERINEPHRITIC ABSCESS; OPERATION; RECOVERY.

CASE III.—This third case is an example of a comparatively rare form of abscess, and yet, curiously enough, about three years ago I went straight from one house to another and operated on two such abscesses, both patients, I am glad to say, recovering without a drawback. The case is one of perinephritic abscess in a Russian, aged thirty-three. He comes of a tubercular family on his mother's side, but this is the only taint we can discover. He was never sick until the 1st of January of this year, when he was suddenly attacked with great pain in the right lumbar region without apparent cause. This was attended at first with some jaundice, and his temperature was very high. He had all the ordinary phenomena of high fever, but no especial symptom was noted. He was admitted to the hospital on the 7th of February, suffering with great pain in the right loin, marked tenderness, slight fulness, and rather extensive dulness, far more so than would accompany a normal kidney. There was no solid tumor; palpation by bimanual examination simply gave a sense of increased resistance without fluctuation. The skin was not discolored. He was not able to lie on the right side. His morning temperature was 102.3°, but ran up at night to 105°. Physical examination of the viscera, both of the chest and of the abdomen, showed nothing abnormal. The specific gravity of the urine was 1022; no sugar, no

albumin, no pus, no peptones. The diagnosis, you see, is one made by exclusion. There is an acute inflammatory process, as shown by the swelling, pain, tenderness, and induration. There is probably accumulation of fluid, as shown by the dulness and the absence of a solid tumor, and by the increased resistance. It is certainly not pyelitis nor any other affection inside the kidney, for the urine is normal, and there is no increased frequency of urination. His high temperature shows the septic character of the process. I propose, therefore, to dissect down to the abscess, evacuate, scrape, flush, and drain.

The incision I make is an oblique one in the loin, precisely such as you have seen me make to reach a floating kidney. When I reach the muscular wall I find considerable matted tissue,—another evidence, just as in the last case, of the inflammatory process going on at a deeper level. There is no œdema on the surface, but it does not surprise me to find a deeper œdema in the layers of connective tissue between the muscles of the belly-wall. I have now reached, you observe, the lumbar fascia, which looks yellowish, is elastic, and evidently tense; and on my making a slight cut in it you see the pus welling out in large quantities. After making an opening the whole length of my incision, I pass my fingers into the cavity, and I can pass down behind the kidney, in front of the muscles of the abdominal wall, well into the right iliac fossa, and again far up towards the liver. The cavity has held undoubtedly from one to two pints of pus, and, as you can easily understand, for such a cavity to contract and heal will take considerable time.

With a sharp spoon I scrape away the flaky, granular tissue which lines the cavity. There is not much bleeding, and not a vessel has required a ligature. The slight oozing is quickly checked by thorough flushing with hot water, which answers a double purpose as a hæmostatic and a cleansing agent. I then insert two large rubber drainage-tubes, one passing up and the other down, at the ends of the incision, and hold them in place by stitches through the skin. A large sublimate dressing completes the case.

[At the end of a week the patient's temperature, which had been kept up by the septic process, suddenly dropped to 96°, without apparent cause and without apparent ill effect, but after two days it rose to normal and fluctuated a little above it for some time afterwards. In three weeks he went home, with a simple linear wound, not quite healed, but with the cavity entirely obliterated.]