

CASES OF DISEASE OF THE APPENDIX AND CÆCUM.

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I have recently had occasion to look over my notes of cases of disease of the cæcum and appendix, and the following records illustrate the anatomy of some of the commoner affections of these parts:

ANOMALIES OF POSITION.—The appendix is extremely variable in position and may be found very far from the right iliac fossa. I have seen it in every region except the left hypochondriac and the left lumbar.

Case I.—Phthisis. Cæcum, appendix, and the first parts of the ascending colon unattached. The cæcum with a short appendix was turned up and lay in close contact with the gall-bladder, separating it together with the edge of the liver from the right costal margin. There were no adhesions; it could readily be replaced.

Case II.—Cirrhosis of liver. Man, aged 31. The appendix passes behind the cæcum and is adherent on the peritoneum covering the right kidney. There had been an old localized peritonitis.

Case III.—Pneumonia. Woman, aged 40. Appendix long and descends into the pelvis, where it is firmly attached to the broad ligament, near the ovary, forming a noose, about an inch in diameter.

Case IV.—Male, aged 68. Old peritoneal bands join several of the coils of intestine together. The cæcum and appendix with the ascending colon are drawn up and to the left, the cæcum folded on the colon, and the valve and appendix occupy a position corresponding to a point $1\frac{1}{2}$ inches below and a little to the right of the navel.

Case V.—Typhoid fever; perforation. Woman, aged 25. A long appendix passes vertically down into the pelvis and is attached to the wall of the pelvis not far from the ovary.

I dissected two cases recently, at the Philadelphia Hospital, in one of which the appendix was adherent to the ovary, and in the other to the broad ligament.

Case VI.—Appendix very long, passes behind the cæcum and ascending colon, and the lower end of the right kidney, reaching almost to the pelvis of that organ.

Case VII.—Typhoid fever. "In removal of intestines the appendix is found to occupy a very unusual position. It passes behind the cæcum and ascending colon, along the

anterior surface of the kidney, close to the hilus, and its apex is in close proximity to the under surface of the right lobe of the liver, being distant $1\frac{1}{2}$ inches by measurement from the gall-bladder."

ULCERATION.—This is a not uncommon lesion in phthisis and typhoid fever. No doubt the following list would have been greatly increased had a more systematic examination been made of the appendices in all cases.

Case I.—Girl. Phthisis—pneumothorax. Ulcers in cæcum; appendix dilated; mucosa extensively ulcerated.

Case II.—Phthisis. Male, aged 18. Much recent swelling and ulceration of Peyer's glands in ileum. The appendix large, the mucous membrane swollen, congested; it presented one small ulcer. There were three oval fecal concretions in the tube.

Case III.—Typhoid fever. Girl, aged 17. Many ulcers of ileum, and small ones in cæcum. Several small ulcers at, and just within, the entrance of the appendix, the mucosa of which was greatly swollen.

Case IV.—Man, dead of typhoid fever. Extensive ulceration of cæcum. "In appendix vermiformis, mucosa at distal end much swollen, and there is an ulcer the size of a five-cent piece with the slough still adherent."

Case V.—Phthisis. Woman, aged 29. No ulcers in ileum, cæcum, or colon. Appendix large, swollen, and unattached. It contains soft feces, and half an inch from the end there is an irregular ulcer the size of a five-cent piece.

Case VI.—Phthisis. Woman, aged 19. Ulcers in ileum and one in cæcum at valve. Appendix dilated and large, particularly the distal end. When slit open, mucous membrane swollen. Two tuberculous ulcers at the extremity.

Case VII.—Phthisis. Male, aged 36. Ulcers in ileum, cæcum (very extensive), and colon. Appendix large and thick, adherent on iliac fascia. Several ulcers, and at its extremity a small localized abscess the size of a walnut, due to perforation of one of the ulcers.

Case VIII.—Ann W., aged 22; typhoid fever. Cæcum lies in pelvis, no attachment; the peritoneum covers it completely; the appendix ascends from tip of cæcum to the margin of the pelvis and ends in a fibrous cord just under the meso-colon. Much ulceration in cæcum; in appendix several ulcers with adherent sloughs; mucous membrane much swollen.

Case IX.—Ellen R., aged 16; phthisis. Extensive ulceration in ileum and cæcum; appendix swollen; mucous membrane tumid and extensively ulcerated.

Case X.—Male, aged 28; typhoid fever. No ulcers in the cæcum. In the appendix, which is long, the mucous membrane is swollen, and there are two ulcers with adherent yellow sloughs.

Case XI.—Male, aged 35; phthisis; University Hospital, 1886. Ulcers in cæcum and ileum; appendix swollen, and presents two tuberculous ulcers.

OBLITERATION OF THE LUMEN OF THE APPENDIX.—This may be partial or complete, and is more frequent, I think, than the scanty number of cases in my records would indicate. When complete, it may be regarded as advantageous, but obliteration of the cæcal end is a serious danger, as many cases of inflammation and perforation result from the retention of secretion and dilatation. The distended tube may be as thick as the thumb, or even as large as a sausage.

Case I.—Typhoid fever; man, aged 29. Tube of appendix partially obliterated.

Case II.—Typhoid fever; male, aged 40. Appendix obliterated for half an inch of its cæcal end; dilated in the distal part, one inch in length.

Case III.—Male, aged 33; dead of phthisis. The appendix vermiformis obliterated and represented by a firm fibrous cord, one and a half inches in length. There was no special thickening or adhesions in the neighborhood.

Case IV.—Woman; death from a large burn. "Appendix is small, and the lumen completely obliterated."

FOREIGN BODIES.—I have never met with a foreign body in the appendix; but I was once brought four or five apple pips which had been removed from the tube in a subject in the McGill College dissecting-room, and Dr. William Sutherland, while acting as Pathologist during my absence in 1884, has recorded a case in which six or eight snipe-shot were found in the appendix of a man dead of Bright's disease.

Moulds of fæces are not uncommon, shaped like a date-seed. Sometimes these form concretions and may cause ulceration. It is rather surprising, considering the situation of the appendix, that we do not more often find foreign bodies in it.

PERFORATION WITH PERITYPHLITIC ABSCESS.—*Case I.*—J. B. N., aged 20, admitted October 4, with peritonitis. Notes not available. Death on the 8th. Body well

developed. In abdomen, omentum is glued to the anterior wall, and beneath it much creamy pus. The tip of the omentum is closely adherent in the neighborhood of the right internal ring, and here the coils of intestines are matted together. There is general peritonitis and an unusual quantity of thick pus. The ileum, carefully removed and slit open, shows no disease of the mucosa. It contained numerous hard dry fæcal masses. The cæcum looked normal, was placed low, and adhered to the iliac fascia. The mucous membrane was not ulcerated. The appendix passed down toward the internal ring, and adhered closely, covered by the omentum. A probe passed into it enters directly a small abscess near the ring. Slit open, a perforation is seen near the end, on the under side, which leads into the abscess. There was no foreign body.

Case II.—C., male, aged 28, patient of Dr. George Ross, in 1882. Sudden acute pain in right iliac fossa, with great tenderness and high fever. After leeching, the pain subsided, and for several days the condition improved. Then he had a chill, with increased fever. Most careful exploration of the affected region failed to determine any fulness, fluctuation, or signs of localized tumor, and yet it was clear that the patient had a septic process from some acute abdominal affection. Several consultations were held with a view of operation, but the absence of local symptoms determined against it. He had repeated chills, and death occurred from septicæmia. At the autopsy, two quarts of turbid fluid in peritoneum; intestines covered with recent lymph and matted together. The transverse colon was adherent to the ileum, two inches from the valve. About the cæcum the parts looked natural, except at the inner margin, where there was considerable pigmentation. The cæcum itself was normal. On slitting open the appendix, the mucosa for half an inch was healthy; the remainder of the tube was dilated and presented two perforations, the larger of which was the size of a five-cent piece, and communicated with an abscess situated in the angle between the cæcum and ileum, and was partly covered by both these structures. The sac of the abscess, which had the size of a small apple, was closed; had thick dark walls, and contained two ounces of creamy pus. There was an extensive abscess of the mesentery, with suppurative phlebitis of the veins. The portal vein and its branches contained dark greenish-yellow pus. The orifice of the splenic vein was closed with a thrombus.

Case III.—I. L., aged 42. Had typhoid fever, from which he never recovered completely; septic symptoms developed, signs of pleurisy, and finally acute general peritonitis. Duration of illness, three months.

Autopsy.—General peritonitis; eighty ounces of turbid exudation; much lymph on the intestinal coils. The appendix passed out at right angles to the cæcum and lay directly upon the promontory of the sacrum. It had about the length and size of the index finger, and was much swollen and soft. The cæcum was normal; proximal end of appendix closed; a probe passed a couple of lines beneath the mucous membrane, and then met with a firm obstruction. Beyond this the tube of the appendix was dilated, and, when opened, showed a perforation one-third of an inch in diameter, which communicated with a small localized abscess cavity on the promontory of the sacrum. No foreign body; no concretions; extensive abscess of mesentery; liver enlarged; portal vein and branches distended with pus; empyema of left pleura.

Case IV.—J. P., aged 26, patient of Dr. F. W. Campbell. Inflammation of cæcum in July, from which he partially recovered. Recurrence in September: pain in abdomen and local symptoms; then chills and sweats. Death suddenly, October 10.

Autopsy.—Body emaciated. Slight peritonitis. Intestines very dark-colored. Cæcum healthy. Orifice of appendix closed and the tube obliterated for a quarter of an inch; distal portion dilated. On the upper surface, which was covered by peritoneum, there was a localized slough, not extending through the coats. The mucous membrane of the tube was dark-colored and swollen, but not ulcerated. Extensive abscess of mesentery, chiefly in the mesenteric veins. The suppuration extends into the gastric and portal veins, the branches of which on the liver were dilated and full of a creamy greenish-yellow pus.

Case V.—The following case illustrated a most unusual mode of termination, viz., hemorrhage from the bowels:

Male, aged 45. Had a "bilious attack" in February, lasting three weeks. Fourteen months later, another attack—vomiting, flatulence, and constipation; very slight abdominal pains. The motions became offensive, there was irregular fever, and he began to lose flesh. Suddenly, one morning, he passed a large amount of blood in the bed, and the hemorrhage recurred through the day and proved fatal the same

evening. The autopsy showed a smooth peritoneum. The lower coils of the ileum were matted together on the promontory of the sacrum, upon which lay a large flat abscess. The cæcum and colon were normal. The appendix passed out at right angles and was attached to the abscess on the sacrum, with which it communicated by two openings at the apex of the tube. There were two perforations from the abscess cavity into the ileum. The hemorrhage had evidently come from this part, but the precise locality could not be determined.

Case VI.—Patient aged 50; was the subject of right inguinal hernia, and on Sunday evening, February 27, was seized suddenly with intense pain in the lower abdominal region. He vomited, and the next day the abdomen was swollen. The pain persisted. On Wednesday he had diarrhœa, and the pain continued to be very severe. On Friday, when admitted to hospital, the belly was tympanitic, vomiting very urgent, and the pain severe. He refused surgical interference, and died on Saturday night. At the autopsy, the cæcum was found adherent to the iliac fascia and passed into the ring, and was attached for at least two inches to the wall of the canal. The ileum was normal, and the finger passed freely through the valve. On searching for the appendix, the proximal orifice was found at the extreme end of the hernia of the cæcum, in the inguinal canal. It then curved upon itself, passed back into the abdomen immediately behind the terminal portion of the ileum, crossed to the left and became adherent to the wall of an abscess cavity lying to the right of the promontory of the sacrum. The lumen of the tube was free; the terminal three-fourths of an inch had sloughed and communicated directly with a small circumscribed abscess-sac with pigmented and indurated walls. This opened into a larger pus-cavity, bounded by the mesentery and ileum in front, and the sigmoid flexure and peritoneum behind.

PERITYPHLITIS FROM CÆCAL DISEASE.—The following cases of round ulcer of the cæcum are of interest, as the condition is not common:

Case I.—M. G., aged 19, a well-built young man, was in hospital for four days with symptoms of peritonitis; at first it was thought to be obstruction. Three weeks previously he had had an attack of what was supposed to be internal strangulation, from which he recovered.

The autopsy showed recent peritonitis, most intense in the right iliac fossa. There were evidences of bygone peritonitis in the form of opacities and puckering on the serous surfaces. The cæcum was adherent closely to the iliac fascia. When opened *in situ*, an ulcer was seen on the outer wall, and a large perforation over an inch in diameter, leading into a localized abscess in the iliac fossa. The peritonitis had evidently started at this point, though there was no sign of rupture of the abscess. The appendix was normal. It seems probable that in the first illness, three weeks before the fatal attack, the perforation occurred, with the formation of the localized abscess.

Case II.—I. T., aged 38, patient of Dr. Armstrong. Symptoms at first were those of perityphlitis. A septic condition supervened, lasting 15 days; repeated chills. There was dulness in the right lumbar region, due, it was thought, to a tumor of some sort; but on aspiration a clear fluid was obtained.

Autopsy.—Body much emaciated. No tumor or fulness to be felt either in the right iliac fossa or in the lumbar region. In abdomen, intestines very dark-colored; two coils of ileum adherent to the cæcum; two pints of turbid serum in the peritoneum. The cæcum closely adherent by its posterior wall; tissues about it dark, and look thickened. Between the caput cæci and the psoas muscle, lying thus to the inner side of the bowel, was an abscess cavity the size of a small apple, its walls rough, irregular, and shreddy. It contained only a small quantity of a thin sanious pus. The colon and cæcum were opened *in situ*. On the posterior wall of cæcum, was a dark-colored area, in the centre of which was an ulcer the size of a ten-cent piece, which communicated with the abscess cavity by a perforation which would admit a quill. The appendix was unaffected. There was a small ulcer on the lowermost Peyer's patch of the ileum.

Tuberculous and cancerous disease of the cæcum not infrequently lead to perforation and extensive suppuration in contiguous parts, as illustrated by the following case:

Case III.—Middle-aged man. Ill for some months; symptoms of obstruction, and latterly of septic poisoning.

Autopsy.—In abdomen, the cæcum and appendix were seen to be large and distended, and the bowel is constricted just above the entrance of the ileum. The colon and cæcum opened *in situ*. A stricture, with thick hard walls, involved the

first two inches of the ascending colon, and just admitted the tip of the little finger; when cut through, the appearance of the mucous surface is that of an open cancerous ulcer. At the posterior wall, this has perforated and communicates with a large abscess by an orifice admitting the index finger. The abscess extends behind the psoas muscle, and has eroded a lateral process of one of the lumbar vertebræ; above, it extends for a short distance behind the kidney; and externally it reaches the crest of the ilium. The appendix was not involved.