FÆCAL ACCUMULATION.

BY ELBRIDGE G. CUTLER, M. D.

1. A YOUNG woman, twenty-two years of age, had pleurisy with effusion about two years ago; some three quarts of serum were removed by tapping. The lung appears never to have wholly expanded, and she has suffered from cough and expectoration ever since. Of late she has had fever, loss of flesh and strength, loss of appetite, and has failed considerably. For the past month has had a diarrhoea which has resisted all remedies used to check it, and it was for this that she sought advice. The movements were described as frequent, involuntary, dark, watery, having a bad odor, and accompanied by considerable slime. It was learned that she had been using a morphia suppository twice a day for a long time. Physical examination of the chest showed an advanced phthisis, and the sputa contained bacilli. The abdomen was full and rather prominent on the left; it was somewhat tender on palpation in the same locality, and a number of small lumps could be felt inside, the size of a hen's egg or larger; at the same time there was a general fullness of the pelvis. The lumps were arranged in a row in the region of the descending colon, and were considered to be perhaps fæcal masses, and it was thought that the sigmoid flexure was probably packed. Rectal examination confirmed this view. She was treated by enemata, and after several days of patient washing she was relieved of a large number of hardened lumps and soft fæces, and the bowels became natural. The symptoms for which she had summoned aid were ended; subsequent care has kept her free from trouble thus far.

2. Not very long since a man about thirty-five presented himself, saying he suffered considerable pain in the right inguinal region, which kept him from walking erect, and prevented sleep. He had suffered several days, and had been somewhat constipated for quite a while. An examination of the abdomen revealed a somewhat prominent belly, with percussion resonance everywhere except in the right inguinal region, in an oval space three inches in diameter. Tenderness was a marked feature, and was so great that the percussion had to be very gentle. Palpation showed the tumor to be somewhat larger than was believed on percussion; its boundaries were sharply defined and regular, and it was thought to be confined to the region of the cæcum. The temperature was $101\frac{1}{4}^{\circ}$ Fahr., pulse 90. It was believed that he was suffering from typhlitis, and he was therefore sent to bed, and a few large oily enemata were cautiously given, which soon brought away a considerable mass of fæces, and caused the tumor to diminish very much in size, and abolished the pain. A few days later he felt so much better that he got up and went out, but within a month returned to me in the same condition as at first. A repetition of the treatment, and subsequent care in following out directions as to the treatment of the bowels, brought him to his natural condition of health. I have since seen him twice walking on the street, when he has assured me that he has remained perfectly well.

A very similar case I saw last winter in the outpatient department of the Massachusetts General Hospital.

3. Mrs. S., about forty years old, had been under treatment for some uterine difficulty, and having been relieved of that, she was referred to me as possibly having typhoid fever. She complained of a sensation of great heat, pain in the head, sweating, anorexia, chills, extreme feebleness, and feeling of faintness on attempting to sit up. The pulse was rapid and feeble, temperature $101\frac{1}{2}^{\circ}$. The face was flushed, the eyes were dull, appearance despondent. Under simple treatment she was nearly well in a few days, when some paroxysms of pain in the left hypochondriac region led me to examine the abdomen very carefully. I then found some hard round masses on the left side, apparently inside the intestine. To bring these away an enema of soapsuds, castor oil, and vinegar was ordered. This was given by a midwife. The patient was much exhausted by the process, and only a little hardened fæces was brought away. Paroxysmal pain of great intensity followed, and after several times repeating the enema, evacuation of all the fæcal masses followed, with complete relief. The masses were half the size of the fist, and as "hard as rocks," as the patient described them. Seen by me they certainly were very hard, and seemed to consist of masses of dried fæces.

In looking over a considerable number of reported cases, I find that the affection is met with far more frequently in women than in men. The causes of the fæcal accumulation in these cases were constipation (in a very large proportion), pregnancy, dilatation and pouching of the rectum or colon, vaginal rectocele, presence of an ulcer or fissure causing pain, hæmorrhoids, congenital smallness of the anus (Matthews Duncan reports the case of a valve-like obstruction about one inch within the external orifice of the anus), cicatricial contraction following too thorough operation for piles, rectal scybalum, tumors inside and outside the bowel, bands outside, cicatricial contraction outside, malignant, lupus, syphilitic, catarrhal contractions, hernia, pessary in the vagina, foreign bodies of all sorts in the colon or rectum.

The diagnosis of fæcal accumulation is frequently very difficult. If a tumor exists it may be and often is mistaken for anything but its true character. The tumor may be either hard and consistent, or, to a certain extent, soft, with a smooth even surface capable of being easily indented. When hard it is often irregular, elongated, and may consist of several balls, such as were found in cases 1 and 3.

The presence of an increased amount of indican in the urine is available for diagnosis in certain cases only, and as the increase may be found in stasis of the small intestine, due to any cause, as well as in cachectic conditions, and as tumor without stasis may occur, its field of usefulness is very limited.

The tumor may sometimes be located by the cautious slow injection of air into the gut by means of a Davidson's syringe attached to an English catheter or rectal tube, passed several inches up.

The effect of high enemata is probably the best

¹ Read October 5th, 1888, before the Boston Society for Medical Improvement.

means of arriving at a diagnosis, and it is rarely the case that they cannot be used.

The faecal tumor is by no means constant in these accumulations, for a very considerable amount of matter may be present in the colon without a defined tumor being formed.

Thus Blakiston² reports a case in a short, fat man, where no tumor could be felt, but a general hardness existed, and where appropriate treatment gave the man an "enormous evacuation." I have met with the same thing in a patient who was habitually constipated. There was merely an unusual density of the abdomen to the touch. After the first rather dry movement was secured, a mass of faeces, both hard and soft, was passed at once, which more than half-filled a large tin slop pail, much to my own surprise and that of the patient.

Faecal tumors appear to be most common in the sigmoid flexure, at the apex of the loop, then in the descending colon and about the flexures, and least frequent in the ascending colon. The caecum, said to be the seat of temporary accumulation³ more usually, nevertheless sometimes has the chronic tumor. I found the case recorded of a girl of fourteen, who had had enlargement of the right side of the abdomen since the age of two, and the tumor, which was finally found to be faecal, was in this region.⁴

Another case was that of a woman in whom the tumor was found some time after confinement in the right iliac region.⁵

The changes in position which are frequently observed may depend on progress of the mass along the colon, but more usually, I fancy, are due to changes in the position of the coil of intestine in which it lies. Such changes of position are more apt to be observed where the mass is in the loop of the sigmoid flexure or in the transverse colon. The changes in shape and size may be either real, by addition to its bulk, or apparent from the changes in position above mentioned, or from a subsidence of gas in its immediate neighborhood allowing the mass to be reached by palpation. The mass has also been seen to soften. The most irregular masses are those found in the descending colon or sigmoid flexure, and appear to be due to moulding in the sacculi of the gut. Ulcerations of the mucous membrane, which sometimes occur, have proved serious complications, but have only been superficial in the cases which I have seen. These ulcerations are not necessarily accompanied by tenderness; in fact, in one case reported, where ulceration was very marked and death occurred, tenderness was not felt.⁶

The diarrhoea which is frequently mentioned as alternating with constipation appears to be due to catarrh set up around and above the accumulation, and is no evidence of ulceration, or it may be due to liquid from above finding its way through channels or around the sides of the mass.

Treves⁷ made a careful and systematic examination of the abdomen in one hundred fresh bodies, paying special attention to the viscera in those who had been the subjects of chronic constipation. In

a large proportion of these there were no gross changes other than those incident to simple distension of the colon. In some there was a narrowing of the large intestine at the splenic, and less frequently at the hepatic, flexures, due to local peritonitis. This inflammation, where it had not produced some degree of stenosis, had rendered the bowel fixed and had evidently hampered its movements. The parts of the larger bowel that were most conspicuously involved were the caecum, the sigmoid flexure, and the transverse colon. The caecum was large, sacculated, lying free in the peritoneal cavity, and often hanging as a pendulous bag in the pelvis. In rarer instances it had been distorted by adhesions and even somewhat bent upon itself. The most frequent deviations from the normal were in the sigmoid flexure. The flexure was usually longer than the normal standard, and it was very common to find that adhesions bound down that bend in the colon at which the flexure and the descending colon meet. It was also common to find that a contracting peritonitis had involved the root of the sigmoid meso-colon, and had led to a considerable approximation of the ends of the loop. In other instances, chiefly as the result of peritonitis of the meso-colon, the "omega" loop had become considerably dilated. It is obvious that these various deformities would greatly impede the progress of faeces along the bowel. The transverse colon, Treves states to average twenty inches in length in the adult, the extremes being twelve and thirty inches respectively. An elongation of this part of the bowel is a frequent feature in chronic constipation. In certain cases the central portion of the transverse colon descended towards the pelvis, and the colic arch had assumed the outline of the letter V. The apex of this V-shaped loop may be found at the symphysis pubis, or even in the pelvis, and in one instance it had formed an attachment to the bladder.

The chief complication which is to be feared, happily very rare, is acute obstruction which may occur from blocking up of the channel or from twisting or flexion of the tumor.

Faecal poisoning is another complication which at times may prove a serious condition. This was fully described by Dr. R. M. Hodges in a paper before this society last winter. Abscess is yet another, and is apparently due to the ulceration set up around the mass.

These accumulations are to be treated locally, and it is a mistake usually to give cathartics at first. Enemata are doubtless the most efficient means known of dealing with faecal accumulations. The injections should be copious, and should be given where possible in the knee-head, knee-elbow, or lateral position. The best material is water at a temperature of about 100° Fahr., though there is no objection to soap and water, or turpentine and water, or oil. It is advisable to dispense with the use of an anæsthetic, unless the mass is situated low down in the colon, within easy reach from the outside, as the patient's sensations are often of great service as a measure of the force to be used, or the amount injected, and the presence of deep ulcerations cannot frequently be excluded. The fluid, enough to fill the colon, should be slowly introduced and be retained for some fifteen minutes, and the mass be

² Medical Times and Gazette, 1874, p. 46.

³ Treves, Lancet, 1885, vol. ii. p. 1135.

⁴ Heslop, Lancet, 1871, vol. i. p. 647.

⁵ Lancet, 1874.

⁶ Times and Gazette, 1872, vol. i. p. 308.

⁷ Lancet, 1886, vol. ii. p. 1181.

kneaded gently. The best instrument, according to Treves, is the inflator designed by Mr. Lunt,⁸ of Manchester, England, as it allows of very large injections without permitting the escape of any fluid from the anus. By its use such enemata can be given without assistance. I have used the ordinary syringe stem with a rubber shield shaped like a doughnut, the central hole being quite small.

Where the seat of the tumor is the cæcum, and accompanied by tenderness and fever, the procedure advised by Harley seems to be the best. After a fair amount of fecal matter has been brought away by the enemata, given every six or twelve hours, he causes the patient to take half an ounce of castor oil, with two teaspoonfuls of brandy, and eight or ten minims of laudanum or deodorized tincture of opium, and repeats the dose after each evacuation produced by the enemata. In this way two or three fecal motions are produced daily, to the great relief of the patient. The tumor decreases and becomes less tender daily, and in cases of ordinary severity the cæcum will be emptied in the course of one week, and the patient restored to convalescence. Where there is much pain, a hot flaxseed and mustard poultice should be kept applied to the abdomen. The subsequent treatment should be that of typhoid fever, and for one week or more after all pain and febrile disturbance have ceased there should be no solid food given. If the case is severe and protracted there is a tendency to reaccumulation in the cæcum. To avoid this an occasional dose of castor oil should be given, a compress worn with a flannel bandage over the region of the cæcum, and massage be made over the part. Strychnia in some tonic infusion may be given to promote tone in the weakened intestinal wall.

Where the accumulation is in the rectum, it is sometimes necessary to dig it out with the handle of a spoon or the fingers. A device described by Duke⁹ in the British Medical Journal would appear to be serviceable at times. It consists of a brass, nickel, or silver-plated speculum armed with a plug, which when pushed forward allows fluid to be injected into the gut through a hollow pipe at the side. He thus describes its use. The speculum is gently introduced, and when placed the plug is pushed up, which raises the cover and allows the fluid injected to penetrate the mass or accumulate above it as the case may be. The mass is thus either broken up or soaked and its removal facilitated. When all has passed which will, and still large, hard, lumps present, and form a ball valve which want of tone in the bowel and abdominal parietes does not allow of the patient being able to expel, he supports the abdomen with a tight roller, and introduces as large a cylindrical vaginal speculum as will pass through the sphincter, and breaks up through it what will not freely pass, by means of a spoon handle. This he thinks saves much pain and the frequent introduction of the fingers, which produces so much subsequent soreness and discomfort.

After the mass has been cleared away the case is resolved into treating the condition on which the accumulation has depended, if it be possible to make it out.

A CASE OF ULCERATIVE PERFORATION OF THE TRANSVERSE COLON: LAPAROTOMY TWELVE HOURS LATER; DEATH ON THE SEVENTH DAY FROM SEPTIC PERITONITIS CAUSED BY FÆCAL EXTRAVASATION.¹

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THE following case, though resulting in death, illustrates the importance of early exploration in those cases of sudden, acute pain in the abdomen, accompanied by rapidly rising pulse, temperature, and respiration, in which the diagnosis has hitherto been made too frequently on the autopsy table. Although the case resulted fatally, the course of the disease was such as to convince me that under similar conditions an early operation may be brilliantly successful.

E. J. K., thirty-nine years old. Twelve years ago had typhoid fever. Since then comparatively well, though not robust. For past two years in better health than usual. *Never any trouble with the bowels*, the movements of which have always been regular and normal. Catamenia normal and painless.

September 10th, 1888. This morning was as well as usual. At nine o'clock was standing on a chair wiping windows about twenty minutes. In doing this did not strain herself at all. Soon after getting down from the chair had sudden sharp pain in the epigastrium, shifting in a few moments to the hypogastric and left iliac regions. Pain became very severe. Vomited once. She sent for a neighboring apothecary, who gave her an anodyne.

An hour or two later she was seen by Dr. Lena Ingraham, to whom I am indebted for the history of the patient, who, recognising the serious nature of the symptoms, sent the woman into the Massachusetts General Hospital, where she arrived late in the afternoon.

On entrance the following notes of her condition were made: "Fairly developed. Facial expression one of pain and anxiety. Decubitus on the left side, with knees drawn up. Pupils, not contracted. Tongue clean. Heart and lungs negative. Abdomen somewhat distended, tympanitic, and very tender in hypogastric and left iliac regions. Palpation negative on account of the abdominal resistance. Urine high, acid, 1022, with slight trace of albumen. Sediment considerable. Increase of leucocytes and vaginal epithelial cells. No casts. Has had a normal, painless movement of the bowels daily. Yesterday, the day before entrance, ate heartily of baked beans."²

Temperature, after three o'clock P. M. continued to rise steadily, as shown by the chart, till 10.30 P. M., just twelve hours after the first symptom of pain, when it had reached 104.2 F. The pulse had risen from 120 upon entrance to 140; the respiration from 39 to 45. I was called to see this woman at about eight o'clock in the evening by the medical house officer, under whose charge she was. The patient was in good condition, looked well, and, though in pain, the amount was not excessive, and the constitutional symptoms not alarming. I examined her very carefully, and was not able to come to any definite conclusion either as to diagnosis or treat-

⁸ Lancet, vol. 1, 1883, p. 588.

⁹ British Medical Journal, 1887, Dec. 24, p. 1390.

¹ Read before the Boston Society for Medical Improvement, Oct. 8, 1888.

² Mass. Hosp. Records.