FATAL CASES OF INTESTINAL OBSTRUCTION IN WHICH THERE WAS SIMPLE DILATATION AND HYPERTROPHY OF THE LARGE INTESTINE.

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CASE I.—The patient, a young man, aged seventeen, was admitted to St. Thomas's Hospital on March 20, 1885. Inquiries, I believe, were made as to the habitual state of his bowels, but no history of constipation was obtained. He came ashore from a training-ship at Devonport ten days before admission, and since that date he had passed nothing by the bowel. After the constipation had lasted four days he began to have paroxysmal pains in the abdomen.

On admission he was a well-nourished, healthy-looking lad, complaining of pain in the abdomen and back, and of constipation. He sat up in bed leaning forward, in which position he felt easiest. The skin was cool, the temperature normal, the tongue clean. There was no sickness or hiccough. The abdomen was tympanitic and distended, especially above the umbilicus and on the left side, the parietes in the latter situation being rigid. The abdominal pain was paroxysmal, and pressure did not aggravate it. The chief seat of pain was the lumbar spine and the adjacent muscles, and there was tenderness in this position. The rectum was empty. The urine was 1030, loaded with urates, and contained no albumin; large quantities were passed without difficulty. The heart and lungs were healthy. The pulse was 92, full and regular.

A simple enema was administered, and after a few hours an enema of olive oil, but neither was retained and no fecal matter came away. On the evening of the same day a pill containing one grain of opium was ordered to be taken every six hours.

On March 21 (the day after admission) there was more fulness and distention of the abdomen, and it was tympanitic all over. He com-

plained of pain in the epigastrium, which seemed to be relieved by pressure. The pain in the back was still very severe. The patient continued to sit up in bed as the easiest position. The tongue was red and dry. There was some flatulence, but no hiccough and no vomiting. He had tenesmus several times, and passed a little blood. An enema composed of eight ounces of olive oil and two of castor oil was given, but not retained. Mustard, followed by liniments containing chloroform and belladonna, was applied to the abdomen and back. A grain of opium was given every four hours. His temperature, which had been normal or a little subnormal since admission, rose to 100° at 8 P.M., but soon dropped to the normal again.

On March 22 the pain was greater, although the patient had been under the influence of opium for thirty-six hours. The abdomen was still distended, but not more so than on the previous day. There was no vomiting nor hiccough, and there had been no action of the bowels.

At noon Mr. Croft performed abdominal section. The small intestine appeared healthy, but the large intestine was distended and deeply congested. About two feet of the large bowel was so affected, and it was thought that the sigmoid flexure was twisted on itself. The incision was extended upward for two inches, but it was found impossible to untwist the gut; it was punctured with a fine trocar and canula and some gas evacuated. The intestine was then brought to the edge of the wound and opened where the puncture had been made. Some dark-red fluid, consisting of mixed blood and fæces, escaped.

The patient bore the operation well, and for a few hours seemed much relieved. Four hours later the temperature was 97.4°, the pulse 120, full and incompressible. There had been no sickness nor hiccough. There had been a good deal of fecal discharge, and the iodoform dressings had been changed twice. Two or three hours later he became restless, and complained of pain about the wound. The temperature was 100.8°, and the pulse 148. At midnight (that is, about twelve hours after the operation) it was noted that he was suffering a good deal of pain, but that he had dozed occasionally. He had passed no urine since the operation. The temperature was 101.8°, and the pulse 142. He was taking a grain of opium every four hours.

All the next day the abdominal pain was very severe, at first being paroxysmal, but later on constant. The abdomen was much distended and very tender. He had no sickness nor hiccough. In the morning there was a good deal of fecal discharge from the wound, but none later in the day. The temperature ranged from 99° to 101°, and the pulse, which was feeble, from 125 to 148.

On March 24 (the day following) Mr. Croft performed right lumbar colotomy. Much flatus escaped when the ascending colon was opened, and subsequently a considerable quantity of fæces. For a few hours the patient was much easier. Later in the day the pain became very intense, in spite of repeated injections of morphine, and he died the same evening.

Post-Mortem Examination.—There was nearly general peritonitis, most intense about the abdominal incision. The artificial anus in the middle line of the abdomen was situated three and a half feet below the ileo-cæcal valve, and was formed by a portion of the sigmoid flexure. The gut for about an inch up was a little dilated, but below the artificial anus the whole sigmoid flexure was enormously dilated and hypertrophied, measuring in parts ten inches in circumference; it lay nearly in the median line of the abdomen, its mesentery being very broad and loose. No twist or abrupt turn in the intestine was found. There was a large amount of liquid and formed fæces in the affected intestine; the mucous membrane was much congested, and showed a few slate-colored adherent sloughs and numerous enlarged solitary glands. The rectum was moderately dilated, apparently not hypertrophied, and contained some semi-fluid green fæces; there was no stricture, ulcer, nor anything which might cause obstruction. Lastly, it may be mentioned that the cæcum was much distended with fæces, and that the artificial anus in the right loin was formed by a portion of ascending colon, six inches from the ileo-cæcal valve.

Case II.—The patient was a man, aged sixty-six, who was admitted into St. Thomas's Hospital, under my care, on August 5, 1892. His bowels had not been opened for five days. Three days before admission he began to have paroxysmal abdominal pain, and about the same time he had some vomiting, which recurred from time to time. I questioned him very carefully about the habitual state of his bowels, as I was inclined to consider the case as belonging to the class now under consideration. He declared that he had never suffered from habitual constipation, and when closely pressed only allowed that "he might miss a day."

The abdomen was generally distended, and every now and again there were acute attacks of pain referred to the hypogastric region. During the paroxysms it became harder and more prominent in this part and in the umbilical region. Nothing was felt per rectum. A simple enema was administered soon after admission, but it was returned almost at once and without result. Later in the day a warm olive-

oil enema was given by the long, soft tube, which passed quite easily nearly its whole length, but the oil was retained and there was no result. It was determined to try half an ounce of olive oil by the mouth every two hours; but after the second dose he began to vomit, so it was stopped. No flatus had been passed since admission.

The next day the pain became more severe and more frequent, so it was decided to perform abdominal section.

Sir William MacCormac made an incision three and a half inches long in the right iliac region, and the cæcum, being found distended, was sutured to the parietal peritoneum and the abdominal wall. The bowel was not opened, but later in the day it was punctured by a trocar and canula and much flatus evacuated, to the patient's great relief. He stood the operation well, the pulse remaining good. A hypodermic injection of morphine was given after the operation, and repeated later in the evening. He passed a good night; the pain was much less, and the distention of the abdomen considerably diminished. The tongue remained, as it was on admission, dry and furred; but he took nourishment well, the vomiting ceased, and the pulse was good.

On August 8 (the next day) the bowel was opened and a small quantity of fecal matter and some flatus escaped. During the subsequent two days the pain was much less, but there had been no evacuation by the rectum and very little by the artificial anus.

On August 11 the pain and vomiting recurred, so Mr. Ballance, in the absence of Sir William MacCormac, opened the abdomen in the middle line below the umbilicus, and found an enormously-distended portion of large intestine, which he punctured, allowing the escape of some fæces and flatus. The pulse had been getting weaker during the preceding two or three days, and it was occasionally irregular. The patient died the day after the second operation.

Post-Mortem Examination.—The artificial anus in the right iliac region had been made from the cæcum. In the middle line of the abdomen, extending from the umbilicus to the brim of the pelvis, there was an enormously distended and hypertrophied portion of large intestine, consisting of the lower part of the sigmoid flexure and the upper part of the rectum. The centre had been punctured and fæces could be forced through the opening. The rectum, as low down as the anus, was also much dilated, but not nearly so much hypertrophied as the bowel above. The descending colon was of normal size throughout. The first part of the sigmoid flexure, which was little, if at all, dilated, passed directly upward parallel to the course of the descending colon, and was concealed by the dilated portion of the sigmoid flexure. The

transition from the undilated to the dilated portion was rather abrupt, but there was no constriction, ulceration, or stricture. The mesentery of the sigmoid flexure and rectum was thickened, and unusually loose and broad. The length of the dilated and hypertrophied sigmoid flexure and rectum was twenty inches; the circumference of the former was ten inches, and of the latter seven to eight inches. The muscular bands of the affected portion of bowel were enormously hypertrophied. The gut contained much semi-solid fæces, but no hard lumps; the mucous membrane was not ulcerated. There was no ulcer nor stricture at the lower end of the rectum. The cæcum and the ascending colon were distended with fæces, but not hypertrophied. The small bowel was of normal size, and contained ordinary fecal matter in most parts; but there were some coils which were collapsed and nearly empty.

There was a good deal of bile-stained mucus in the large intestine and in the lower portion of the small intestine, but there was no change in the mucous membrane.

The stomach showed an excess of mucus and some recent hemorrhages.

The lungs were emphysematous, and there was hypostatic pneumonia along the posterior borders.

In both these cases there was no mechanical impediment below the dilated and hypertrophied large intestine, and the question therefore arises as to the causation of this condition. That the intestines may undergo enormous dilatation and hypertrophy from prolonged constipation is undoubted. An interesting communication by Dr. Bristowe,[1] to which I shall refer, deals fully with this point.

After narrating cases in which dilatation and hypertrophy of the large bowel dependent on constipation were suspected during life, Dr. Bristowe proceeds to give other instances in which the condition of affairs was found, after death, to be such as I have described. In these cases there was good reason to believe that the actual cause was prolonged constipation, and in all three there were great dilatation and hypertrophy of the large intestine, with extensive ulceration of the mucous membrane from fretting by the fecal lumps.

Reverting to my two cases, I may say that we were not able to satisfy ourselves that the patients were the subjects of habitual constipation. I am not sure that this was as strictly inquired into in the

[1] Clinical lecture on the "Consequences of Long-Continued Constipation," British Medical Journal, May 30, 1885.

first case as it might have been, but in the second case I carefully cross-questioned the man myself more than once, and I failed to obtain a history of the cause which I strongly suspected. The clinical history in both appeared to indicate that the condition was rather acute, but there can be no doubt that the dilated and hypertrophied bowel had existed for a time long antecedent to the onset of the urgent symptoms. I suspect (and Case II. supports the view) that the abrupt onset of symptoms was due to some misplacement or twist of the affected bowel. If constipation as a cause be excluded, I am inclined to the belief that the undue laxity of the mesocolon and mesorectum, such as was found post mortem, might account for the dilatation and hypertrophy. It was suggested to me by Mr. Bland Sutton that possibly a fissure of the anus might give rise to the condition of things which I have described. I must admit that this did not receive special inquiry, but I believe that its presence would probably have been detected had it existed.

Before speaking of the treatment of these cases it may be of interest if I give the notes of the case of an infant who died of obstruction which appeared to be due to prolonged and neglected constipation. I have never seen or read of another example in so young a subject.

Case III.—The patient was a male infant, aged eleven weeks, who came under my care on August 27, 1891. It was stated that the bowels had been natural until three weeks after birth, when he had pain, vomiting, constipation, and abdominal distention. These symptoms continued until admission. The child had been brought up on the breast alone.

On admission the abdomen was found greatly distended and tympanitic all over. The coils of intestine were visible through the abdominal wall, and peristaltic movements could be seen at times. A catheter was passed four inches up the rectum, and a little flatus and fecal matter escaped. The child remained much in the same condition, the bowels being unopened, and there being occasional vomiting, until September 18, when there was a free evacuation of fæces, and later in the day small quantities of fecal matter were passed after an enema of olive oil. The next day the bowels were again freely relieved, but the child, who had been getting more and more feeble since admission, died the same day.

During life we suspected the true condition of affairs, but the child's state contra-indicated operation even during the first few days after admission.

Post-Mortem Examination.—There was found to be great distention of the lower two feet and a half of the small intestine and of the large intestine as far as the junction of the descending colon and sigmoid flexure, but there was no stricture at this point. The sigmoid flexure and the rectum were empty. There were many ulcers laying bare the muscular coat of the large intestine and of the lower few inches of the small intestine. There were no tubercles.

In discussing the treatment of the first two cases one has to bear in mind the difficulty in diagnosing the condition during life. If there is good reason to suspect it, the chief means to be adopted are kneading or massage of the lower part of the abdomen, the exhibition of laxatives, such as large and repeated doses of olive oil or castor oil, and copious enemata administered by the long tube. I agree with Dr. Bristowe that the use of drastic purgatives should be avoided.

One must admit the probability that such measures as I suggest may be without avail, and that the urgency and obstinacy of the symptoms may call for abdominal exploration. Provided that the diagnosis be established (and this, of course, is the difficulty), the best means to adopt would be to expose the distended sigmoid flexure by an incision in the middle line below the umbilicus, to rectify any misplacement, and to endeavor to force through the anus part, at least, of the fecal contents, or, failing in this, to make an artificial anus.

GASTRIC ULCER.

CLINICAL LECTURE DELIVERED AT THE BUFFALO GENERAL HOSPITAL.

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GENTLEMEN,—The patient is a physician, forty-four years old, and since the age of twenty-one he has practised his profession. His father died at seventy of what is believed to have been gastric ulcer of that form which has been described to you under the name of round or perforating ulcer or the ulcer of Cruveilhier. The patient's mother is living, at the age of seventy. He has one brother who suffers from indigestion, and four sisters, one of whom has some heart-difficulty and two have slight dyspepsia. When a student at this college, the patient suffered intensely from indigestion. He subsequently practised medicine, and, although he has been active and able to work, he has been rather delicate and has suffered with painful dyspepsia during all this time. About four years ago he had a very severe hæmatemesis, while suffering from pain and distress in his stomach, with vomiting. Subsequent to the hæmatemesis he vomited mucus and had great pain in the epigastrium and right shoulder. After this severe attack he became better than he had been for some years, but from time to time his trouble has recurred, with slight vomiting of blood and mucus and with pain, inability to eat, loss of sleep, and it became necessary for him to take anodynes. He came to me about three weeks ago suffering intensely from pain in the epigastrium and right shoulder; he was vomiting persistently, the vomited matter containing large amounts of mucus. Three or four months ago he had vomited a small amount of blood. He was digesting little, and was very much excited from his long-continued pain, and his nervous condition was not improved by the use of morphine, of which he was taking one-quarter grain hypodermically every six hours. Ice-cream he had found to be about the only nourishment that he could retain, and often his stomach would not tolerate even that.