HARVEIAN LECTURES ✓ ON THE MODE OF DEATH FROM ACUTE INTESTINAL STRANGULATION AND CHRONIC INTESTINAL OBSTRUCTION.

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LECTURE II.—ON THE MODE OF DEATH IN INTESTINAL OBSTRUCTION, AND ITS TREATMENT.

I DISCUSSED, in my former lecture, the subject of intestinal strangulation; and I hope I well justified, in your judgment, my separation of it from the class of cases with which hitherto it has been associated, namely, that of intestinal obstruction. I trust, moreover, that I made it clear to you that, when a patient dies from intestinal strangulation, his death is not caused by the obstruction, although obstruction may have been one of its symptoms, but from changes brought about in the intestine itself, due to its strangulation.

In my present lecture, the subject of intestinal obstruction will occupy our attention; and, more particularly, the way in which it destroys life. I shall show you what changes the intestine undergoes as a result of obstruction, and how these changes tend to kill. I shall then go back, and consider what affections lead up to obstruction, and subsequently point out the indications for the treatment of its different varieties.

And, first of all, one may ask, "How does obstruction of the intestines destroy life?" "What changes does it bring about in the bowels which tend towards death?" As an answer to these questions, it may be said, by way of summary, that a simple obstruction may destroy life, either by bringing about exhaustion due to the inability of the patient to take or retain food, the consequence of vomiting; or by peritonitis, the result of back-pressure upon the bowel above the seat of obstruction, if not more directly occasioned by sloughing, rupture, or ulceration of the cæcum or colon, the consequence of overdistension. When obstruction is the result of ulceration, cancerous or otherwise, the disease which causes it may help to bring about a fatal result; but the changes in the bowel above the seat of obstruction are the main cause of death when these cases are left to take their natural course.

I will now proceed to prove the truth of these views. The best examples of death from pure obstruction are those due to congenital malformations of the rectum. And of these I can quote one case which ran its natural course, and in which death occurred on the fifth day, from peritonitis (Case XXIII); three others, in which operative relief had been ineffectually made, in two cases of my own by enterotomy, and in the third by a perineal incision. In none of these instances, however, was success achieved, on account of previous peritoneal changes. I should also quote a fifth case, in which a man, aged 26, died from obstruction, the result of the contraction of an artificial opening made into an imperforate rectum in infancy. In this case, the man died, under my care, from exhaustion and peritonitis; and at the *post mortem* examination (Hospital P. M. Inspection-Book, No. 226, 1874), the rectum above the seat of obstruction was found to occupy half the abdominal cavity. It measured 13 inches in length, and 11 inches in circumference. The walls were of three times their natural thickness. I have given a drawing of this case in my book on the *Practice of Surgery*. In all these cases, however, death was due to the obstruction, and peritonitis as a consequence.

CASE XXIII. *Imperforate Rectum: Death on the Fifth Day from Peritonitis*.—T. S., aged 4 days, was admitted into Guy's Hospital on November 24th, 1875, and died on the following day. The infant had been born on the 20th, and had never had an action of the bowels. When brought to Guy's Hospital, he was dying with peritonitis. An anus existed, and a short tube, which ended in a blind pouch. At the necropsy (469) the peritonitis was general. The whole of the large intestine, as far as the rectum, was normal in position and relations. The rectum ended in a blind pouch, which was

separated by a quarter of an inch of fibrous tissue from another blind pouch, that represented the lower end of the rectum.

CASE XXIV. *Malformation of the Rectum; Enterotomy on the Right Side*.—A boy, aged 7 days, was admitted under my care on March 22nd, 1880. The anus was found to end in a *cul-de-sac*, not half an inch from the orifice. Enterotomy was performed in the right iliac fossa. The vermiform appendix appeared through the wound, and was cut off. The bowel was opened at the part, and stitched to the margins of the wound. The baby died next day. At the *post mortem* inspection (134) the large intestine was seen to form a rounded pouch in the middle line in front of the sacrum, which projected down into the pelvis, where it ended. The right side had been laid open in the operation; its walls were thickened. The caecal appendix had been cut off near the cæcum. (Preparation in Guy's Hospital Museum, No. 1881, 40.)

CASE XXV. *Imperforate Rectum: Hypospadias: Enterotomy: Peritonitis*.—J. D., aged 12 days, was admitted into hospital on December 11th, 1876, under my care, and died on the 19th. He had an imperforate rectum, an anal *cul-de-sac*, and hypospadias. The bowel was opened in the right iliac fossa, an anal operation having failed, and the child died eight days later. The necropsy (496) revealed acute general peritonitis. The artificial anus opened into the cæcum; the ileo-cæcal valve protruded. The coats of the large intestine were thickened. The rectum formed a pouch in the pelvis, and almost filled the pelvic cavity. There was an anal *cul-de-sac* in front of the pouch, with peritoneum between them.

CASE XXVI. *Imperforate Anus: Operation*.—Eliza C., one week old, was admitted into the hospital with obstinate vomiting and imperforate anus. The abdomen was distended. A perineal incision was made, the bowel opened, and stitched to the skin. Death occurred thirty-six hours afterwards. At the necropsy, no abnormality was found in the abdomen, except that the sigmoid flexure was very large and thick, and coiled over into the right inguinal region, whence it descended into the pelvis, but it had no external outlet. In this case, had right inguinal enterotomy been performed, as in the two former cases, the sigmoid flexure would have been opened. These three cases, therefore, support the suggestion and practice of opening the bowel in the right inguinal region in congenital malformations of the anus and rectum, since, by such an operation, either the cæcum or the sigmoid flexure will thereby be opened. I regard this measure as being far preferable to left lumbar colotomy in cases of congenital malformation, and preferable likewise to any blind incision or puncture into the pelvis from an anal *cul-de-sac*.

Again, death may take place from simple fecal impaction; and it is well to remember that this condition may give rise to conditions which may simulate other forms of rectal obstruction. On this account, a careful digital rectal examination should be insisted upon by all practitioners, in cases in which signs or symptoms of obstruction do not yield readily to ordinary means. I have before me the notes of two cases in which death actually took place as a direct consequence of fecal obstruction. They are as follows. One was a woman, aged 22; the other a child, aged 7 months. The former died from exhaustion; the latter from peritonitis.

CASE XXVII. *Intestinal Obstruction from Fæces*.—Caroline V., aged 22, was admitted into Guy's Hospital on September 3rd, 1870, and died on September 15th. On August 22nd, she had been seized with pain in the bowels and limbs. She had constipation, and took aperients with some effect. There had been no action afterwards, that is, for eleven days. When she was admitted, the abdomen was flat and flaccid, but not tender. She vomited after taking food. The rectum was empty. Subsequently a tumour was discovered to the right of the umbilicus, and later a hard cord on the left side of the abdomen. Then the rectum contained fæces, and an injection brought some away. The day before death, another injection was given, and seven pints of liquid were thrown up, after which much fecal matter came away. She was afterwards collapsed. The bowels acted again; the patient became convulsed, and died. For some days before death, she lay on her right side, complained of great weakness, and could not turn in bed without help. One day she had retention of urine, and a catheter was passed. At the necropsy (196), made six hours after death, the medulla of the cord appeared soft in the middle of the dorsal region. Opposite the upper dorsal vertebrae the grey matter was not distinct, and on the left side it was hollowed out into a cavity. No granule-masses were subsequently discovered. The right lung was hard and airless; the left lung healthy. The intestines were healthy and pale; the small intestine was contracted; the cæcum large and floating; the transverse colon contracted; the splenic flexure distended; the descending colon contracted; the sigmoid flexure contained hard masses, which could be cut with a knife. The liver was healthy. There was no disease anywhere except in the spinal cord.

CASE XXVIII. Constipation: Peritonitis: Slight Ulceration of the Large Intestine: Contraction around Impacted Faeces.—Flora G., aged 7 months, was admitted into Guy's Hospital on October 22nd, 1875, and died on October 27th. She had had constipation since birth; and the bowels had acted for the first time six days after birth. She was admitted with constipation and extreme distension of the abdomen. The rectum was examined, and a small os-uteri-like opening felt with the finger. This was thought to be an intussusception; and an injection was used, but without effect. At the necropsy (416) the abdomen was found to be immensely distended, except in the loins. The intestines were distended, dry, and injected; there was no lymph upon their surface. The large intestines were enormously distended, the cæcum and sigmoid flexure forming large prominences in either flank. A mass of hardened faeces was found in the sigmoid flexure, completely blocking up the bowel, which was collapsed below. This child clearly died from constipation.

I will now pass on to demonstrate how by obstruction from any cause the cæcum or colon may slough, rupture, or ulcerate, as a direct result of pressure backwards. Indeed, this complication is the most common consequence of chronic obstruction from any cause, and as a cause of death is to be counted as the most frequent. It is the general exciter of peritonitis in all cases of obstruction, and is too often the cause of death after colotomy, the operation having been performed "too late." I have before me the notes of twelve cases of stricture of the rectum in which one or other of these complications was the direct cause of death, and the records of many others in which ulceration of the cæcum, or colon, due to distensive pressure, was found.

I will give you the headings of some of these cases.

CASE XXIX.—A woman, aged 54, admitted with cancerous stricture of the rectum, died from peritonitis in 1879 (necropsy 444), due to gangrene of the transverse and descending colon.

CASE XXX.—A man, aged 61, with cancerous stricture of the descending colon, died with peritonitis in 1883 (necropsy 71) from a sloughing cæcum, which was found, after death, distended and perforated.

CASE XXXI.—A man, aged 35, with cancerous rectal stricture, died in 1881 (necropsy 85), with his cæcum enormously distended, occupying one-third of the abdomen; the colon was also greatly swollen. The cæcum and colon had each a patch of slough on their walls.

CASE XXXII.—A woman, aged 52, admitted with cancerous rectal stricture, died from peritonitis in 1878 (necropsy 472); and, after death, when the abdomen was opened, the large intestine was seen to be dilated to the size of a woman's arm. The cæcum projected forwards; the transverse colon arched downwards. The coats of the bowel were intensely injected and ecchymosed.

CASE XXXIII.—A woman, aged 58, admitted with epithelioma of the rectum, died from exhaustion and vomiting in 1878 (necropsy 424). After death, fecal extravasation was found into the peritoneal cavity in all directions, the faeces having escaped from a ruptured cæcum.

CASE XXXIV.—A woman, aged 79, with cancer of the rectum, sank in 1871 (necropsy 265). After death, the large intestines were much distended. Near the cæcum, the walls of the bowel had sloughed.

CASE XXXV.—A man, aged 40, admitted with cancer of the sigmoid flexure, died from acute peritonitis in 1870 (necropsy 146). After death, at the *post mortem* inspection, gas escaped from the peritoneal cavity. The colon was greatly distended, and had ruptured.

CASE XXXVI.—A man, aged 56, died with intestinal symptoms and peritonitis in 1874 (necropsy 295). After death, a rent in the transverse colon, three-fourths of an inch long, was found some thirteen inches above a mass of obstructive disease in the splenic flexure. From this rent, faeces had escaped.

These brief notes of cases, not to mention many others that might be quoted, are enough to demonstrate the fact that, with rectal obstruction, from whatever cause, the distending pressure in the bowel above, caused by the accumulating motion, together with the ineffectual efforts of the intestine to urge on its contents, is prone to be followed by ulceration, sloughing, and perforation of the distended bowel. In some cases, it is the cæcum that suffers; in others, the colon; but in all cases the risk is run that, from overdistension or ulceration, some perforation of the walls of the bowel will take place, and with it death. I would, therefore, ask all my medical friends, in cases of chronic obstruction, to have the probability of this change before them, and not to allow time to pass by unnecessarily, when relief to the overloaded bowel can be afforded. The trouble demonstrated will come sooner or later, and it is well to make provision against it by surgical means as soon as medical measures have been proved insufficient; the practice of prevention being as valuable in the treatment of cases of intestinal obstruction as it is known to be in those of intestinal strangulation.

Having dwelt upon the changes found in the portion of bowel above the seat of obstruction which may justly be attributed to that condition, I propose now to consider what the obstruction itself may be. And, putting aside the mechanical obstruction of tumours placed outside the bowel, most other causes must be classed amongst the ulcers, which may be subdivided into the simple, syphilitic, and cancerous. I would wish here to emphasise strongly the fact that ulcerations of the rectum and sigmoid flexure, which lead on to stricture, are not all cancerous; that many are simple, or of the dysenteric type; whilst some are syphilitic. Thus, at Guy's Hospital, out of 49 consecutive cases of stricture of the bowel examined on the *post mortem* table, 13 were registered by the able pathologists of that institution as being of a simple character, 2 of syphilitic origin, and 34 as cancerous; or, in rough numbers, one out of every three cases has its origin in a disease other than cancer. All, however, eventually lead to obstruction, many to a narrow stricture, and some tend to occlusion.

That one-third of the cases of stricture of the rectum or lower bowel are not cancerous, is an important practical point to recognise; since it suggests the possibility of saving life if the evil effects of obstruction can be neutralised or done away with; whereas, with cancerous stricture, the best that can be promised, as a rule, is a prolongation of life from two up to six years. I have reason to believe, however, that these facts are not sufficiently recognised; consequently, I propose to support my assertion by quoting some cases of simple and syphilitic stricture; and, to make the diagnosis sure, I shall again quote from the Guy's Hospital *post mortem* records.

CASE XXXVII. Ulceration and Stricture of Rectum: Ulceration of Vagina: Suppuration of Ovarian Cyst: Peritonitis.—Harriet C., aged 30, was admitted February 19th, 1869, and died on February 26th. She came from Guildford, and was thought to have syphilis, but no history of syphilis could be obtained. She had had difficult defæcation for five years, with passage of blood. The rectum was found strictured for 2½ inches by a fibrous band; it admitted the tip of the index-finger; the sphincter was relaxed. Below the stricture, the mucous membrane could be felt rough, and the surgeon thought it to be cancerous. Bougies were passed. On February 25th, peritonitis supervened. At the inspection (necropsy 63) the lungs were found healthy. There was acute peritonitis, and a suppurating ovarian cyst, of the size of a walnut. The rectum at its last four inches was deeply and extensively ulcerated all around. There were small remains of the mucous membrane. The base of the ulceration was formed by muscle and fat. The tissues outside were not much indurated. There were no signs of growth of any kind.

CASE XXXVIII. Ulceration of the Rectum: Fatty Liver.—Charles H., aged 38, was admitted July 24th, 1875, and died on September 27th. He had had rectal disease for more than a year; had never been abroad. He was admitted for stricture of the rectum; was passing blood and mucus: and had not had syphilis. He died exhausted. At the necropsy (No. 365) the intestine was healthy from above downwards until the middle of the transverse colon was reached, when the mucous membrane was ulcerated. The ulcer simulated an old cutaneous ulcer, which had healed, and then opened again. This ulceration extended into the rectum, and down to the anus. It was of a simple character.

CASE XXXIX. Phthisis: Lardaceous Viscera: Simple Ulceration of the Rectum.—Jane E., aged 25, was admitted on December 30th, 1882, and died on February 14th, 1883, of phthisis of two years' standing. She had stricture of the rectum, but no syphilis. At the necropsy (No. 62), the cæcum and colon were both healthy. For five inches above the anus there was superficial ulceration, not extending beneath the mucous membrane. Its surface was pale. For three inches upwards, the bowel was contracted to half its normal size. The walls here were slightly thickened. There was phthisis; and the viscera were lardaceous.

CASE XL. Chronic Ulceration of the Rectum: Acute Inflammation and Ulceration of the Large and Lower Part of the Small Intestine.—J. J., aged 27, was admitted on October 13th, 1871, and died on the following day. When admitted, he was almost dying. For four years he had had attacks of diarrhoea, with vomiting and abdominal pain. He had also piles, or, at any rate, a protruding oedematous mass at the anus. There was intense abdominal tenderness, but not distension. The legs were drawn up. He died in the course of a few hours. At the *post mortem* inspection (No. 308), the rectum, for six or eight inches from the anus, was contracted, hypertrophied, and ulcerated. The edge of the ulceration was sharply defined above, with a raised border. The lower part of the ileum, and the cæcum and colon, were thickened. The mucous membrane was entirely destroyed in the cæcum, and in parts elsewhere.

CASE XLI. Stricture of the Rectum (Fibrous): No Evidence of

Syphilis: Acute Peritonitis.—A. H., aged 27, was admitted in May, 1877, and died on May 5th. At the necropsy (No. 161), there was acute suppurative peritonitis, which had evidently started from the pelvis. The pelvic organs were matted together, and there was much thickening of the pelvic subperitoneal connective tissue. The rectum, in its lower six inches, had its coats greatly thickened, and indurated, with hypertrophy of its muscular fibres. The lining membrane was represented by a smooth cicatricial layer, which was uneven, puckered, and traversed by numerous bands of fibrous tissue. The upper line of the cicatrix was well defined. Two openings led into sinuses lined by membrane, one of which passed towards the right Fallopian tube and bent over the ovary, so that it was at first thought the tract might be the tube. The uterus was virginal; the Fallopian tubes were matted together by inflammatory product. There was no proof of syphilis in the body. The kidneys were soft.

To illustrate the view propounded still further, I propose to show how, after colotomy, these non-cancerous ulcerations heal, though it may be with a narrowing, and, possibly, occlusion of the rectum. I shall quote extracts from the report of those tabulated in Table III, which I shall bring before you. Most of these cases came to me for supposed cancer; but, from the subsequent progress of the case, this diagnosis was evidently wrong. Indeed, the group of cases, taken as a whole, not only demonstrates the fact that extensive simple ulceration of the rectum takes place, and that such leads on to stricture; but that, after colotomy, by which rest to the ulcerating bowel, and the removal of sources of irritation, is guaranteed, the most extensive ulcerations rapidly heal.

Thus, in one case (2), after colotomy, the bowel was very narrow and thickened for some inches. In Case 3, there was ulceration of the rectum for many inches. In Case 4, the patient, a man aged 65, had had, twelve years previously, a recto-vesical fistula, and passed wind with his urine. This ceased of itself, and he remained well for eleven and a half years; that is, till six weeks before his admission, when the symptoms returned, associated with rectal obstruction, and the passage of feces into his bladder. He was relieved by colotomy, but died on the seventeenth day subsequently; and, after death, there was evidence of old ulceration into the bladder, as indicated by a cicatrix and a large recent fistula, the result of a simple ulceration into the bladder. In Case 5, the rectum and colon had evidently been the seat of chronic inflammation; they were ulcerated and thickened. Indeed, the colon was so friable that it ruptured during the operation. In Case 6, there was a double stricture, and all ulceration had become repaired in the twenty-eight days that followed the operation. One stricture near the anus was three inches in length; a second, narrower, was six inches higher up; both were cicatricial, the result of repair after simple ulceration. In Case 8, the bowel had undergone repair, and had contracted during the five months that had elapsed between the operation and death. In Case 9, one of recto-vesical fistula and rectal ulceration, after colotomy, all the ulceration healed, and the fistula remained; but, as no motion had passed down the bowel beyond the lumbar wound since the operation, performed fourteen years before, the patient was quite comfortable. In this case, the disease was supposed to have been cancerous, which it clearly was not, since the ulcers in the rectum cicatrised soon after colotomy was performed, and left only the urinary rectal fistula. The same occurred in Case 18, in a gentleman, aged 64, who was colotomised for supposed cancer and recto-vesical fistula. He recovered from the operation, and lived in comfort for five and a half years, when he died from a ruptured heart. In him the rectum had completely cicatrised, though the urinary fistula remained, and discharged urine into the bowel. In Case 10, where there had been ulceration of the rectum for years, a rapid cure followed colotomy. When the patient died, nearly three years after the operation, from kidney disease, the rectum had quite healed, but was much contracted. In Case 13, where rectal symptoms had existed for two years, and rapid convalescence followed colotomy, the report, eighteen months later, states that the bowel had healed and almost closed. The same report was added to Case 15, and the patient was alive and well two and a half years after colotomy. These extracts, to which more might be added, are enough to show how the most intractable ulcers of the rectum, not cancerous, heal rapidly after colotomy.

I will now proceed to quote a few undoubted examples of *syphilitic* ulceration of the rectum, and at the same time point to cases 1, 11, 15, 16, and 17, in Table III, as additional evidence.

In Case 1, the repair after colotomy had almost obliterated the rectum from cicatricial bands.

In Case 11, the lower three inches of the rectum had lost its mucous membrane with cicatricial tissue outside.

In Case 15, in which the patient, when last seen, had survived colotomy for four and a half years, the report states that at the end of the second year the bowel had healed and almost closed by cicatricial contraction.

In the other cases, good repair had followed operation.

In some of these cases quoted, as well as in those I am about to quote, I may likewise add that the disease was thought to be cancerous.

CASE XLII. *Syphilis: Stricture of the Rectum, and Recto-vaginal Fistula: Colotomy.*—Eliza O., aged 29, was admitted on February 28th, 1872, under my care. Colotomy was performed on March 19th; death occurred on April 1st. She was married, and had had four still-born and two living children. She had been well until four years previously, when, in her last confinement, the child had to be delivered with forceps. She subsequently had a vaginal discharge, and feces came through the vagina. On her admission, the region of the buttock was riddled with sinuses, and there was a stricture of the rectum one inch from the anus, through which the finger could not be passed. She died on the twelfth day after colotomy. At the *post mortem* inspection (No. 89) the peritoneum, in parts, was injected and covered with lymph. It showed no evidence of having been wounded in the operation. The rectum was strictured one inch above the anus; the canal admitting the distal joint of the little finger. The tissues around the gut were much thickened. Many sinuses passed from the bowel above the stricture into the vagina and buttock. The bowel was covered with bands like those of the heart. The kidneys were normal.

CASE XLIII. *Syphilis: Stricture of the Rectum: Burrowing Abscesses of the Buttock and Perineum, Invading the Hip: Colotomy: Cure of the Stricture: Death from Hip-joint Disease.*—Louise P., aged 24, was admitted on August 29th, 1873, under my care. Colotomy was performed on September 2nd; death occurred between four and five months later, on January 14th, 1874. She was married, and had had one child, and one miscarriage. She had had difficult defecation for one year, and had had syphilis for the same time. When admitted, she had stricture and ulcer of the bowel, recto-vaginal fistula, and abscess in the buttock. Her feebleness was so great as almost to forbid an operation. On September 2nd colotomy was performed, as much for purposes of relief as of cure, and the patient afterwards rapidly improved. On November 25th she had pain in the thigh, from thrombosis of the femoral vein. On December 16th there were pus in the groin and thigh, and hip-joint disease. From this she died. At the *post mortem* inspection (No. 17, 1874), there was found a perfect artificial anus; no peritonitis. The lower four inches of the rectum were much diseased and covered by irregular bands; above the anus were many irregular openings leading to an abscess-cavity in the buttock, behind the hip-joint, with which it communicated from behind. The calibre of the bowel was good. The hip-joint was completely disorganised.

CASE XLIV. *Syphilis: Ulceration of the Rectum: Cicatrices in the Liver: Chronic Pericarditis: Tubercular Phthisis: Mixed Lardaceous, Granular, and Fatty Kidneys.*—Eliza G., aged 29, was admitted on May 6th, 1876, and died on July 18th. She had had rheumatic fever ten years before; had miscarried two years since; and, one year before admission, had gripping pains in the bowels, diarrhoea, and blood in the stools. These symptoms continued till her death. At the necropsy (No. 264), the intestines were healthy down to the lower end of the rectum, the coats of which were very thick, and irregularly ulcerated. An aperture led into an abscess in the left broad ligament, by the side of the uterus. There were cicatrices, with white fibrous tissue, in the liver.

CASE XLV. *Syphilitic Ulceration of the Rectum: Recto-vaginal Fistula: Peritonitis: Abscess about the Rectum.*—Emily W., aged 37, admitted on April 30th, 1873, died on May 10th. She was married, and had had one healthy child, one miscarriage, one still-born child, and one child delivered by instruments three years beforehand, which died. After this, within three weeks of labour, she noticed that wind passed *per vaginam*. Three months after this, she had difficulty in defecation, and, six months before admission, complete obstruction of the bowels. Seventeen days before she came to Guy's Hospital, feces passed *per vaginam*. She was admitted with stricture of the rectum, an inch and a half from the anus. The abdomen was distended. On May 7th, there was diarrhoea, so-called, and death three days later. At the necropsy (No. 139), acute peritonitis was found. The lower inch of the rectum was healthy; above this, the rectum was ulcerated to the extent of two inches. The mucous membrane was destroyed. There were two openings from the rectum into the vagina, which was healthy, except for the fistulae. The upper part of the ulcerated bowel was extremely narrowed, not measuring an inch

and a quarter in circumference, when laid open. Above the stricture, the bowel measured four and a half inches. The connective tissue around the stricture was full of pus.

CASE XLVI. Syphilitic Stricture of the Rectum and Fistula: Phthisis of the Apices: Ulceration of the Cecum: Amyloid Degeneration of the Liver, Spleen, Kidneys, and Stomach.—Jane J., aged 26, admitted on January 5th, 1876; died on February 14th. She was a charwoman; had had one child four years before, and one miscarriage. She had been very healthy until three years before admission, when she had rheumatic fever; five months since she had uterine inflammation, and three weeks ago her knees began to swell. When admitted, she had an oedematous face, and a red raised eruption on the neck and forehead. The urine was of specific gravity 1009, and albuminous. On January 26th, diarrhoea supervened; and the patient died from vomiting and diarrhoea on February 14. At the necropsy (No. 71), the whole of the small intestine was found extremely lardaceous; the large bowel less so; the cecum contained three large ulcers. The parts about the uterus were matted together by inflammatory material of some date. An abscess behind the uterus communicated with the bowel, and contained grape-stones, etc. The rectum at this spot was dilated, and its mucous surface ulcerated. Lower down, an inch and a half from the anus, the bowel was so narrowed by cicatricial contraction as only to admit the tip of the little finger. There was no evidence of ulceration at the part.

CASE XLVII. Syphilis: Stricture of the Rectum: Recto-vaginal Fistula: Old Ulceration of the Colon: Gummata in the Lung: Amyloid Viscera.—Amelia T., aged 28, admitted on November 2nd, died on November 26th, 1877. She had been married at the age of 16, but had had no children; had never menstruated; had had syphilis. She had had stricture of the rectum one year, which had been treated with boggies. She was readmitted with amyloid viscera and vomiting. The necropsy (No. 408) revealed thrombosis of the cerebral sinuses; the arteries were sound. Gummata were softening down in the lungs. The greater part of the large bowel was contracted, evidently from old ulceration. The contraction was more marked towards the rectum. About one inch above the anus, there was puckering of the stricture from old ulceration; but all the parts had now healed. The viscera were lardaceous.

CASE XLVIII. Syphilis: Ulceration of the Rectum: Periproctitis: Cellulitis of the Buck: Atheroma of the Aorta.—Amelia P., aged 50, was admitted to Guy's Hospital on March 2nd, 1883, and died on April 7th. She was a charwoman, and was admitted for diarrhoea and pain in the right hip. At the age of 20, she had had sore-throat and loss of voice, and had been ill five weeks. She had had no rash or other symptoms. She had otherwise had good health. In January, 1883, she fell on her right side, which caused local pain. She went to bed, and had not since risen from it. She vomited the day after the accident, and soon afterwards diarrhoea set in, which had continued. She lost flesh. On admission, she had pain behind the right trochanter. The right hip was sound; no pain was produced on the iliac crests being pressed together. There were symptoms of enteric disease. At the necropsy (No. 127), there were condylomata about the vulva. In the rectum, about five inches and a half from the anus, was a clean-cut ulcer, with rounded edge, of the size of a fourpenny-piece, which had perforated into the peritoneal cavity. Below this, the mucous membrane was congested and thickened; lower still, a large serpiginous ulcer existed, two inches and a half long. There was a second perforation. The rectum was dissected out by suppurative.

Conclusion.—From these data, I trust, therefore, you will feel no hesitation in accepting the proposition that both simple and syphilitic ulcerations of the rectum are most obstinate in healing, and that they, as a rule, lead on to stricture; and that, after colotomy, these ulcerations rapidly heal.

(To be continued.)

MEDICAL MAGISTRATE.—Dr. John Wardleworth has been placed on the Commission of the Peace for the borough of Bury, Lancashire.

EPIDEMIC DYSENTERY.—A telegram from New York, through Reuter's agency, announces the outbreak of a fatal epidemic from some remote counties of South-west Virginia and some adjoining parts of Kentucky. Drought having dried up the ordinary wells, the inhabitants drank the water from some surface wells, which produced a dysenteric disease as deadly as cholera. Several entire families are said to have perished, the effects of the disease being terribly sudden. The mortality is variously estimated from 400 to 800. Few of those attacked recovered, the proportion of fatal cases being from 60 to 80 per cent. The whole district is reported to be in a condition of great destitution.

ANÆSTHETICS, AND THEIR ADMINISTRATION.

Read before the Medical Society of London.

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IN considering the subject of anæsthesia, the first and principal point to be determined is, which of the numerous anæsthetic agents now in use shall we choose?

For my own part, I unhesitatingly answer that, for all short operations, we should give nitrous oxide gas for all general operations. The best plan is to commence with nitrous oxide, and continue the effect with ether. I am pleased to see present many of my brother anæsthetists who give other anæsthetics; and you will have the benefit of hearing from them which they prefer, and their reasons for liking them.

We have yet to discover an anæsthetic which will not prove fatal at times; but, if some of those we now use may destroy life in two ways, while others only do so in one, I think we should accept the single risk, and use the latter, and avoid the double risk by refusing the former.

Anæsthetics, when they produce a fatal result, may practically be divided into two classes. 1. Those which produce death in the double manner, through the circulation as well as through the respiration. In this class must be included chloroform, bichloride of methylene, dichloride of ethylene, bromide of ethyl, ethylic methylic ether, and many others of the chlorine series. 2. Nitrous oxide and ether; in which the fatal result, when it does occur, is due to cessation of the respiration only, the heart's action continuing for some time after the respiration has entirely ceased.

I do not wish you to think that the fatal effect of chloroform and other drugs in the first class takes place as frequently through the lungs as through the circulation; for, in the very large majority, death begins at the heart, and is instantaneous. Those cases which recover, after causing the greatest trouble and anxiety to all concerned, are those in which death is commencing at the lungs. Let a heart once thoroughly stop, and death always ensues; but let a patient entirely stop breathing for a minute and a half or two minutes, even then full and forcible artificial respiration, as a rule, produces a happy result.

The three factors you must consider, to enable you to choose your anæsthetic judiciously, are: 1, the nature of the operation; 2, the amount of insensibility necessary; and 3, the length of time required.

For instance, in ovariectomy, I very often give bichloride of methylene by means of Junker's inhaler; for in this operation, after the first incision, there is very little, if any, pain until the final sutures are put in; and during the whole remaining time the smallest degree of anæsthesia suffices, patients often being able to answer questions, and to open and close their eyes when directed to do so, and being totally unconscious that at that very time the hand of the surgeon is in the abdominal cavity breaking down adhesions.

I shall be glad to hear from those who have used this drug as to the amount of sickness which follows its administration; and I fancy the general practitioner who watches the case will be able to afford more genuine information than the administrator, or the operator himself; inasmuch as the former often does not receive the information, and the surgeon, at his first visit after the operation, is more occupied by the condition of the patient, and the state of the part operated on, than by any little sickness which may, by that time, have passed away.

After-sickness is often a question of degree, for I have frequently asked two different people about the same patient, and have been told by one, "Oh, there was no sickness at all," and, by the other, "The patient was very sick for some time."

The sickness following ether is very different from that following chloroform, the former being accompanied, and often caused by, large quantities of flatus; and, as it generally takes place very suddenly and forcibly, it is always advisable to stand behind the patient when holding the basin. Chloroform-sickness, on the other hand, is preceded by much more faintness and nausea, and takes place more quietly.

Hiccough following an anæsthetic is most quickly stopped by the administration of a very small cup of green tea, without milk or sugar; and, should this prove ineffectual, by small doses of dilute hydrocyanic acid.

Of all the anæsthetic agents, the quickest and the safest, but the