Case of acute diffuse suppurative peritonitis successfully treated by laparotomy and drainage, but without irrigation / by G.A. Hawkins-Ambler and R. Lawford Knaggs.

5

Reprinted from Vol. XXIII of the 'Clinical Society's Transactions.']

Case of Acute Diffuse Suppurative Peritonitis successfully treated by laparotomy and drainage, but without irrigation.

By G. A. Hawkins-Ambler and R. Lawford Knaggs. *Read April* 11, 1890.

THE patient, a boy æt. 9, with clubbed fingers and a phthisical family history, but no evident disease in the chest, had complained for some weeks of griping pains in the abdomen. These he attributed to a kick by a playmate a year before in the lower part of the stomach.

On May 19, 1889, the boy was taken worse with uneasy feelings in the lower part of the abdomen, and vomited his food. The vomiting continued on the following days, and on the 22nd Mr. Hawkins-Ambler found him complaining of griping pains, the abdomen being slightly tender to pressure. He was sent to bed and ordered a rhubarb and soda mixture with a liquid diet. The symptoms seemed relieved on the 23rd, and on the 24th his grandmother treated him to a large slice of Yorkshire pudding. After this, intermittent abdominal pains came on and increased in severity.

On the morning of the 25th a small slimy motion was passed—the first, as far as could be gathered, since the 19th,—and in the afternoon he was lying in bed with knees drawn up, a pulse of 120, and temp. 101·2°.

The abdomen was tender, resonant all over, but not tympanitic. The chief complaint was of recurring attacks of pain in the stomach, which passed off and left him perfectly easy. Opium was prescribed.

On the 26th the abdomen began to swell and became tympanitic, and slight vomiting (green) returned. The bowels were not moved and no flatus passed, but the pains were easier. He was seen at 10 P.M. in consultation with Mr. Lawford Knaggs. There was then a tympanitic and much-distended abdomen. It was resonant all over and the recti were rigid. It did not move in respiration. No tumour could be felt, but palpation was painful and gave rise to peristalsis, visible through the abdominal wall, and causing the child to become restive and cry. The legs were drawn up. The tongue was moist, the lips dry, and thirst great. Pulse 120, temp. normal.

The diagnosis arrived at was peritonitis secondary to intestinal obstruction, of which the most probable cause was "matting of the intestine." To what the matting was due was uncertain, but a tubercular origin in some or other form was considered not improbable.

Mr. W. L. W. Marshall, who was present at the consultation and afterwards gave the anæsthetic, concurred in the diagnosis. It was decided to open the abdomen without delay and seek for the obstruction.

It is as well to state here the difficulties of the situation. The patient was the son of the caretaker of an uninhabited nobleman's house, situated in the heart of the country. The only water (rain water) to be got was from a cistern on the roof of the house, or from a water-butt, and both were muddy and looked as if they had been freely diluted with ink. Mr. Hawkins-Ambler's filter was sent for and found to be nearly empty, but the little that could be extracted from it was treasured up for cooling down the inky water that was boiled for intra-abdominal use. Added to this, in the hurried collection of instruments the syphon had been left behind.

With as rigid adherence to antiseptic details as was possible, the abdomen was opened in the median line by an incision three inches long between the umbilicus and pubes. The intestines were found adherent, injected, and distended, and yellow lymph was lying in a sulcus between two exposed coils.

The adhesions were easily separated, and two fingers were introduced between the intestines and the abdominal wall, with the greatest difficulty on account of the distention. Nothing could be detected at the hernial apertures, the cæcum could not be isolated, and no tumour could be felt. A little purulent fluid was seen amongst the coils. The distended small intestine was then traced, it was hoped, downwards. When about 12 inches had been passed through the fingers it was found to lead straight to the bottom of the pelvis, where it was firmly fixed. On attempting to explore with the finger the point where the bowel was attached, adhesions were felt to break down, and a gush of very fœtid, yellowish-green pus took place through the abdominal incision. The quantity was perhaps from one to two ounces.

The exploring finger continued to separate adhesions freely until it rested upon a soft patch very different from the touch of the surrounding peritoneum. This was possibly the lining membrane of the abscess. To this spot a Keith's drainage-tube was passed and allowed to remain. Another

drainage-tube was passed into the right lumbar hollow, and so great was the tension that several ounces of thin yellow pus were shot through it quite clear of the operating table. No pus was found in the left lumbar hollow.

An attempt was now made to irrigate the peritoneal cavity by pouring warm water through the drainage-tubes, but it was soon given up as futile. Indeed, so great was the intra-abdominal tension that it would have been impossible to wash out the abdomen except under considerable hydrostatic pressure, and, as we have already stated, we were without the necessary apparatus.

The wound was now closed, the drainage-tube already mentioned being fixed at the lower angle of the incision. An unusual accident occurred in passing one of the sutures. A large vein was punctured, and caused hæmorrhage, which at the moment seemed rather alarming. The suture was withdrawn, and the peritoneal aperture seized with artery forceps and ligatured. There was no further trouble.

For twenty-four hours, during which he was energetically supported by rectal injections of brandy and beef-tea, the patient suffered severely from shock, with cold surface, dry tongue, and a flickering pulse of 150. The only vomiting took place as he recovered consciousness from the anæsthetic. He then began slowly to improve, and to take as much nourishment as he was allowed.

On the third day there were three large liquid motions, and the distention and tenderness completely disappeared. The pulse still continued high (about 120), and intermittent febrile symptoms were thought possibly to depend on incomplete removal of the discharge from the pelvis. It was consequently irrigated regularly by a small tube passed to the bottom of the drainage-tube, and this at first brought away a considerable quantity of pus with some relief.

On June 7, 8, 9, he was worse, and a doughy and resonant swelling as large as a breakfast saucer appeared in the umbilical region. This gradually disappeared, but on June 10 he was very ill, with temp. 101°, pulse 140, a tense and tympanitic abdomen above the umbilicus, and complaining of bouts of pain underneath the left ribs.

On removing the dressing a quantity of thick, greenish-yellow, sour-smelling pus, different from that hitherto secreted, was found lying upon the abdomen and saturating the dressing, and on irrigation a considerable quantity escaped through the tube. The next day all the unpleasant symptoms had

disappeared; the pulse had fallen to 109, and there was a free discharge from the tube.

From this time the progress was steady and uneventful, the pulse and temperature quickly fell to normal; abdominal tenderness completely vanished; the discharge gradually diminished; the boy took food well, and soon got on to a solid diet, and the bowels acted at somewhat irregular intervals.

The tube was changed for an india-rubber one on June 15, and removed on June 22; the wound was completely healed on June 24, and the boy was allowed to be up and walk about out of doors about a week later.

The boy was nursed throughout his illness by his father, a rough but fairly intelligent country labourer.

There are one or two points in the history of this case deserving consideration, and which probably have a direct bearing upon its successful termination. Foremost among these must be placed the early recognition of the gravity and nature of the condition, and the promptitude with which it was treated.

In the present day such remarkable success has attended the practice of abdominal surgery, that there undoubtedly exists a danger lest recourse be had to surgical measures for circumstances which do not warrant such serious procedures.

From the statements of eminent surgeons and abdominal specialists, the idea has sunk deeply into the professional mind that it is impossible to diagnose accurately a considerable number of these abdominal conditions. This is a mistaken impression, and exerts a most unfortunate influence upon practice.

The analytic powers of the mind cease in consequence to be fully and clearly brought into use; the continuous effort to improve diagnosis and make each case in itself a pure and simple demonstration of real fact is hopelessly checked, and in its place there is a strong and growing tendency to set up an exploratory operation *not simply in aid*, but actually *in default*, of diagnosis. It is certainly true that the diagnostic power exists very unequally in individuals, some possessing it in a very high degree of refinement and excellence, others in very infinitesimal proportions. Just as one finds in society a few excellent chess players, but the majority very poor ones, so is diagnosis in the professional world. A few by great cultivation and natural gift possess it in a remarkable degree, and before such trained intelligence the difficulties of abdominal diagnosis would be greatly reduced and simplified.

But the many, by painstaking and accurate methods of examination and thoughtful observation of results, may do something to advance their diagnostic powers; and in no department of surgery are these more urgently needed than in the practice of abdominal surgery.

The points in this case were sufficiently clear to enable us to make the diagnosis upon which we agreed, and which rendered decisive action imperative.

The exact condition was hardly unravelled at the operation. What was the real origin of the fœtid abscess at the bottom of the pelvis must be left to conjecture. It most probably had some association with that portion of the intestine which was adherent in its vicinity and formed part of its wall. The obstruction was due to the kink in the intestine caused by the adhesions, and possibly to the pressure of the abscess, of which no evidence had been found when the rectum was examined. The diffuse peritonitis no doubt arose from leakage from the foul abscess.

Another consideration of interest was that the abdomen was not cleansed by irrigation. This is now so generally employed in these cases that but for the peculiar difficulties which beset our hurried operation it would have been certainly used. The abdomen was not washed out or cleansed; the pus, both from the general peritoneal cavity and from the abscess cavity, when opened, was expelled by the tension of the distended intestines. Not only were the hollows where the pus had accumulated not cleansed, but in those folds formed by the mesentery that were seen, there was a thin layer of pus. This was not removed by sponges, as it would have taken up time, led to much manipulation of the intestines, and must have been in the end inadequate.

The result of the case proves that the cleansing of the abdominal cavity in diffuse purulent peritonitis is not necessary to ensure success. Might it not possibly have been disadvantageous? There are some objections to the practice of washing out the abdomen. For one thing, it much prolongs the operation, and the short duration of the operation is a great factor in contributing to success. The direct influence of irrigation is depressing. A friend whose observations we can trust, and who has had considerable experience in giving anæsthetics in abdominal cases, states that on many occasions he has noticed the pulse become decidedly worse during the progress of irrigation.

It is more than probable that in some cases in which it

has been used, its influence has been to turn the scale against the patient. There is little doubt that it is often done in cases which would do just as well without it. And certainly in the present state of our knowledge irrigation or thorough cleansing would have been considered absolutely necessary to ensure a successful issue in the case narrated, but the event has proved it unnecessary.

The fluid constituents of the pus would seem to be the most harmful element. The micro-organisms propagate and flourish in the fluid, and in it the poisonous products of bacterial life accumulate. This poisonous fluid makes its way through the obstructed lymphatics and induces septic symptoms, and the less dense the fluid medium and the less the absorbing mechanism has been impaired by inflammation the more acute and intense are the symptoms.

The fluid collections in our case were evacuated by the intra-abdominal tension as soon as a means of exit was afforded, and prevented largely from reaccumulation by the drainage-tube.

Though much of the solid constituents of the pus (pus-cells) were left behind, symptoms were immediately relieved, to recur when another collection of pus formed, and to be again relieved as soon as a way was open for its discharge.

Mr. Treves originally compared suppurative peritonitis with empyema, and with abscess in a joint, and advocated the treatment of all on the same principle. Washing out is not altogether devoid of risk in empyema, and in diffuse suppurative peritonitis to thoroughly cleanse every nook and cranny, and leave the peritoneal cavity absolutely free from pus, would require a more extended and careful procedure than is always justifiable at the close of a serious operation.

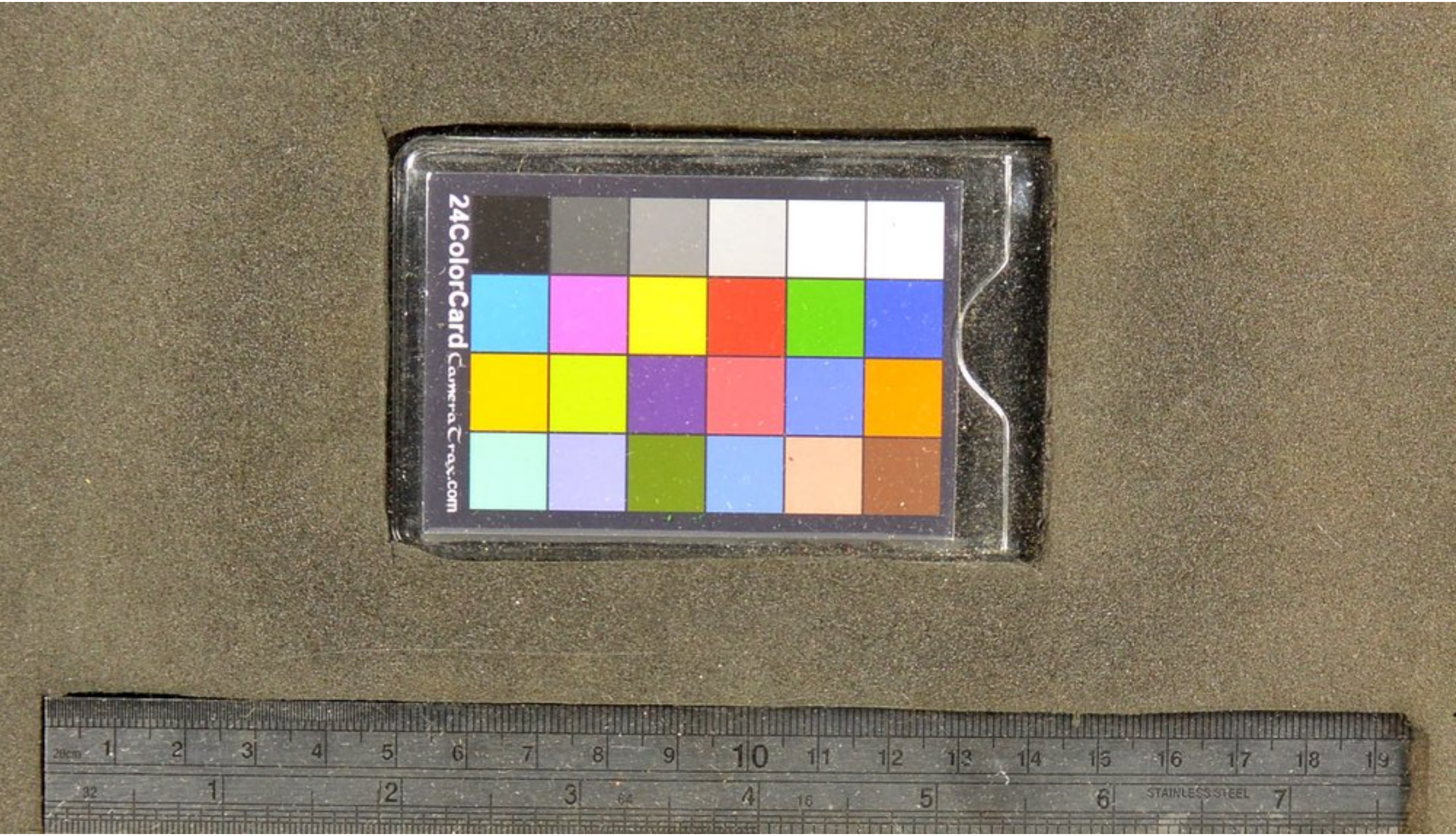
It is to be remembered that the peritoneum has demonstrated both clinically and experimentally its power to absorb and destroy without harm to the body, pus or purulent effusion within it under certain conditions.*

In conclusion we would add that these remarks have reference chiefly to suppurative conditions, and are not intended to apply in their entirety to other conditions in which irrigation is thought to be indicated or successfully practised.

* "Lectures on Suppuration and Septic Diseases," by Mr. Watson Cheyne, Grawitz's experiments, *Brit. Med. Journ.*, March 10, 1888, p. 524.

PRINTED BY ADLARD AND SON, BARTHOLOMEW CLOSE.

No title or copyright information found.


24ColorCard
CameraTrax.com
STAINLESS STEEL