

ACCIDENTAL REMOVAL OF INTESTINES THROUGH THE VAGINAL VAULT.

BY

EDWARD J. ILL, M. D.,

Newark, N. J.

THE following case made a great stir in the court circles of my county a couple of years ago. I relate the circumstances as I remember them, having heard both sides of the case. I am not judging the guiltiness or the innocence of the operator. My object is simply to clear up a question on which there seemed to be great difference of opinion.

A young woman, pregnant for several months, had been flowing for some time. The operator, with the assistance of the husband, who was a dentist, and a nurse, attempted to remove the fetus and secundines. The husband gave the anesthetic. The doctor removed, with a pair of forceps, what he thought were fetal intestines, and burned them up under a heater. Very soon, and before the patient was taken from the table, she died.

A very superficial autopsy was made by the operator in the presence of a deputy county physician, and the body was allowed to be interred after embalmmment.

A month later the body was disinterred on the demand of the woman's family, and an autopsy then showed an empty uterus with a large rent in the left side, and all the intestines had been removed. At this autopsy, it was reported that the small intestines with the mesentery, had been removed at the spine. A good deal seemed to have been made from this assertion, and various causes were assigned to this queer condition. Among them was that the undertaker, who had closed the abdomen at the first autopsy, had removed the organs. These were the facts as they were brought to my attention.

In my earlier days it was my good fortune and privilege to make many autopsies, and I promptly made the assertion that the mesentery could not have been severed from the spine by any instrument, unless it be a very sharp knife. The question arose in my mind whether the embalming fluid, formalin, would so contract the mesentery, that it was not apparent to the casual observer. Experiments were made to clear up these points. They were not made however until the case had passed through the courts, when they could no longer influence the judge nor jury. If there were other points in the case on which a verdict was to be rendered, our investigation

was not to interfere. Scientific investigation was intended, which might clear up other cases, for there is no doubt that they are of frequent occurrence.

I have seen a case operated on the eve of my departure for the Pan-American medical meeting in Mexico City, in which 18 inches of intestines had been removed through a ruptured uterus. At that time it was remarked that the bowel, found in the vagina, was stripped from its peritoneal covering. Since then, like cases have been brought under our observation in hospital practice. They have always been fatal, so far as I can remember, unless the bowel had not been injured. In all cases the intestine was pulled out of its peritoneal covering or away from the outer edge of the mesentery. Experimentally, the following will assist to clear up the subject.

CASE I.—In a fat man of about forty-five years, dying of acute alcoholism, a small incision was made in the lower part of the abdomen. The tissue was somewhat edematous. A loop of small intestine was grasped with a polypus forceps and dragged down until it came away, considerable force being necessary before it parted with the mesentery. The bowel came away at its junction with the mesentery; but left some of its peritoneal covering adhering to the same. Continued traction brought away all of the small intestine to within 5 inches of the ileocecal valve, where the peritoneal covering separated entirely, and the mucous and muscular coat continued to follow the dragging of the forceps, when finally the bowel gave way at the ileocecal valve. The sigmoid was then grasped and the bowel pulled away from its mesentery, almost immediately the whole colon was pulled out of its peritoneal covering down to the appendix and the ileocecal valve, both of which were left behind. The peritoneal covering of the colon made a complete casement. The abdomen was closed and filled with embalming fluid (formalin). In three days the abdomen was reopened and hardly any retraction of the mesentery was observable.

CASE II.—Medium fat body of a man aged sixty-five years, a suicide. The small intestine was grasped through an incision in the abdomen and 50 inches were pulled away before it broke off. Continuous traction brought away the ileum down to the caput coli. Other pieces of bowel were grasped, but they broke off every 15 or 20 inches. Everywhere the mesentery of the small intestine gave way at its junction with the bowel. The sigmoid was then grasped and pulled away from its mesentery. Continuous traction broke it off at the splenic flexure. From there the muscular and mucous coats were stripped from their peritoneal covering until the bowel broke off about 4 inches from the beginning of the caput coli. Powerful forceps were now applied to the mesentery at several points; but nowhere could the mesentery be pulled away from the spine. These two experiments were made by Doctor Wm. D. Minningham in my presence. Later Doctor Minningham made the following experiment alone, and kindly reported the result to me.

CASE III.—Postmortem removal of intestines through artificial perforation of uterus: Woman, white, thirty-nine years old, alcoholic, married, two children; height, 5 feet and 1 inch; weight, about 135 pounds. Cause of death, valvular disease of the heart. Menstruating at time of death. Body well developed and in fairly good state of nutrition. Experiment, sixteen hours after death. Body was kept in a cool room, but not on ice, and was well preserved; rigor mortis was marked and complete. Postmortem lividity posteriorly. No odor or discoloration from decomposition. No purging at mouth or nose. The body was placed in the dorsal position and the legs strongly flexed on the thighs and abdomen. A bivalve speculum was inserted into the vagina and the cervix pulled down and steadied. A long curved dressing forceps was thrust through the fundus of the uterus, and five unsuccessful attempts were made to pull a loop of bowel through the uterus. The failures I attributed, first, to the forceps teeth, which were good, but not of the best; and second, to the rigor mortis which had also involved the uterine muscle.

The abdomen was then opened by a small incision and the loop nearest the forceps was tied with a fine cord to the end of the forceps. The gut was easily pulled out through the vagina. The forceps was now applied to the bowel and the pulling process continued until the gut was torn away on both sides.

The primary attempts to grasp the bowel did not cause any apparent injury other than a partial stripping of the peritoneal coat. The piece of gut removed consisted entirely of small intestine and appeared very much smaller than the normal gut *in situ*. It measured 13 feet and 6 inches in length, and was flattened, rather than rounded. The average width was $\frac{5}{8}$ inch. It was practically free from gases, and contained a small quantity of a thin yellowish material. The bowel was surrounded by peritoneum over three quarters of its circumference, the remaining quarter being bare throughout its entire length. The raw area presented the muscular coat, and corresponded with the former site of the mesenteric attachment. A careful examination failed to show any mesenteric tissue attached to the bowel.

The abdomen was then examined. The subcutaneous fat measured 1 inch in thickness. The peritoneal cavity showed no leakage of intestinal contents. The remaining small intestine and colon were moderately distended with gas and fluid. Two torn ends of small intestine were rather firmly impacted into the perforated muscular wall of the uterus.

The gut on the left side was withdrawn abdominally from the uterine rent. It was found that one inch rested within the uterine muscle and cavity. This segment of bowel measured two feet from the duodenojejunal angle.

The gut on the right side was then withdrawn from the uterine rent, and it showed that two inches of its length was within the uterine muscle and cavity. This piece of bowel measured nine feet from the cecum. Except for moderate distention with gas, the large bowel showed nothing unusual. The uterus was hard,

normal in size, and not adherent. The uterine rent presented itself almost like a clean transverse cut one-half inch long at the uppermost portion of the uterus, slightly to the right of the median line.

As a result of this study and observation, the following points seemed important:

First.—That any portion of the bowel can be pulled away by traction with a forceps through a rent in the uterus or vagina.

Second.—That the point of separation will be the junction of the bowel with the mesentery.

Third.—That in some subjects the separation will be extraperitoneal in a large measure.

Fourth.—That the mesentery *cannot* be pulled away from its origin of the spine or elsewhere.

I have reported these observations because of their medico-legal value and that they may constitute a guide for others.

DISCUSSION.

DR. G. VAN AMBER BROWN, Detroit, Michigan.—I desire to mention a case in which I accidentally punctured the uterus during a minor operation. It has been my experience twice to puncture the uterus. I have never been unfortunate enough to curet the intestines. We are told that when we go through the uterus it is like going through wet brown paper. To those of you who have not been unfortunate enough to have this happen, I will say that it is easier than a great many suppose; it is like putting a sound or instrument into water. You apparently meet with absolutely no resistance whatever.

In this patient I was about to do a simple repair of the cervix and perineum. The family refused to have the woman sent to the hospital. They said I could have anything I wanted at the home. I had the assistance of two nurses and two doctors. This woman had been confined several times, and her last baby was four months old. I think we should have waited longer before repairing the cervix or perineum, at least six or eight months. I passed a sound and found that the uterus was about 3 inches in depth. I then began using graduated dilators, passing them in one after another carefully when, to my surprise, the dilator kept going in farther and farther. I wondered if I might have overlooked a pregnancy. The cervix was pretty well dilated, and I could feel something; I thought I had unruptured secundines. I introduced forceps and pulled down on it a little bit to investigate and it felt thicker than secundines. I left the forceps attached; pretty soon I could see the forceps move a little from the vermicular motion of the intestines. I pushed the forceps up a little being pretty sure to get beyond the fundus, and packed the uterus. Then I repaired the perineum. After thinking the matter over carefully, I came to the conclusion that if

I were to open the abdomen now the woman would probably die, and without interfering might do better. I found the woman that evening with a pulse that was beginning to get thready and rapid. The next morning when I visited her she had had a chill and was sweating; her pulse was more rapid and wiry, with definite tympany. The woman was sitting up on the eleventh day and made a good recovery.

DR. HERMAN E. HAYD, Buffalo, New York.—This is an exceedingly interesting subject for us to discuss, and so far as the possibility of perforating the uterus is concerned, Dr. Brown has shown us, in this dramatic case he has cited, that it is an easy thing to do. But I think the important part of this paper is its value to the Association by reason of the experiments of one of the nestors of our profession, Dr. Ill. I would never have believed it was possible to pull all of the small bowels out and even the colon to the splenic flexure by simply taking hold of a gut and pulling it, and that it would separate from the mesentery and leave only pieces of the peritoneal coat attached to the mesentery. I think this is a very important contribution on this subject and from the standpoint of possible medicolegal complications arising in the future, is of great value to us in giving testimony.

I have never had any personal experience in dealing with one of these cases, but Dr. Mann told me of a case he had. A young practitioner in cleaning out the uterus after abortion, pushed a long placental forceps through the uterus and kept on pulling at what he thought was placental and decidual tissue, until he pulled away so much of bowel that he saw it and smelt fecal contents. He had pulled out over 12 inches of the gut in his manipulation. The woman, of course, promptly died.

MAJOR ROBERT T. MORRIS, New York City.—When a doctor finds that he has punctured the uterus and the bowel has descended and there may be a beginning peritonitis, one extremely important step in technic is this: Get the patient's respiration down to about 12 per minute with opium (do not use morphin), and that will stop peristalsis. When the respiration is down to 12 it is an indication that peristalsis has ceased. If you can hold the respiration there for a few hours the peritonitis will probably stop right off, and you can then do any further work that you require. Too many of us have forgotten about this old-fashioned Alonza Clark method for halting an acute peritonitis, but it is very practical.

DR. K. I. SANES, Pittsburgh, Pennsylvania.—About eight years ago a patient was admitted to my service at the Western Pennsylvania Hospital with 9 feet of bowel hanging down through the vagina. Four hours before the admission a physician in a mining town had tried to remove placental tissue from the uterus after an abortion.

After cleansing the vagina I tied off the nine feet of bowel, closed the cut ends with circular sutures and pushed them back through the uterine tear into the abdomen. The abdomen was then opened. After the removal of about 2 inches of bowel on either side to make sure of the circulation and asepsis, I made a lateral anas-

tomosis and closed the abdomen without drainage. The woman recovered.

DR. ILL.—What did you do with the mesentery?

DR. SANES.—The mesentery looked normal, it was free and did not bleed. I brought it together with sutures, being careful that the two ends of the bowel had their mesenteric attachment.

DR. ILL.—In other words, the mesentery was still intact?

DR. SANES.—Yes.

DR. GORDON K. DICKINSON, Jersey City, New Jersey.—Some years ago a New York surgeon came over to Jersey City and operated on a woman. The next day the woman was brought into the hospital with a knuckle of intestines coming out of the vagina. I opened the abdomen and found that forceps had perforated the mesentery of the sigmoid and the operator had pulled down a knuckle of small intestine which was moved from about the splenic flexure. I was somewhat embarrassed by this perforation of the mesentery of the sigmoid and left fornix of the uterus. I pulled out the intestine and made an anastomosis with the Murphy button above the sigmoid flexure. There was not a fringe of the mesentery of the intestine down on the gut where it was torn. To go further, curiously the fundus of the uterus had been nibbled out in repeated attempts at emptying the uterus, so that there was quite a crater. I had to free the edges of torn material, sew it up, and three years later this woman had a child.

DR. WILLIAM SEAMAN BAINBRIDGE, New York.—Some twelve years ago I was called by a fellow practitioner to see a patient whom he had curetted during the afternoon of the same day. He said, "I am very anxious about this patient. I curetted her for incomplete miscarriage at four o'clock this afternoon. She is a member of a good family living on Fifth Avenue, and I have no reason to suspect anything. She has two children and was some three months' pregnant." When I saw the specimen which he presented to me I at once recognized pieces of adult small intestine. A laparotomy was done immediately. I found that 19 inches of the small bowel had been removed through the fundus of the uterus; the opening in the uterus had tightly contracted down upon the intestine so that the two open ends hung into the center of the cavity of the uterus. The operator had used a pair of large sponge (as placental) forceps and had pulled down the bowel. The mesentery was present and where the intestines had been removed, the free edge of the mesentery was as if a pair of shears had cut it away. End-to-end enterorrhaphy was performed, and the opening in the uterus sutured. The patient did well until the eleventh day when she developed pneumonia and died on the seventeenth day.

Postmortem examination of the abdomen showed nothing except the healed wound of the uterus and the end-to-end anastomosis.

My experience in teaching operative surgery on the cadaver at the Post-Graduate Medical School in New York for seven years, showed conclusively the frequency with which post-graduate students, many of them experienced surgeons, went through the uterine wall in the operation of curettage. I believe this accident more frequently occurs than is usually recognized.