Original Articles.

TWO CASES OF LAPAROTOMY FOR ACUTE INTUSSUSCEPTION.¹

BY J. COLLINS WARREN, M.D.

THE following reports of two cases are submitted to the Society as examples of successful treatment of this affection by opening the abdominal cavity and reducing the invagination by taxis. The medical features of the cases will be described by Drs. T. M. Rotch and C. P. Stickney, who have kindly furnished me with notes. The salient points in diagnosis, as presented to my mind, were the sudden onset of the symptoms, the presence of a tumor, and the bloody mucus which was discharged. In neither case could the tumor be felt by the rectum.

The question of laparotomy for intussusception is one which can be discussed with profit at the present time, and it is for this purpose that those two cases are reported this evening.

CASE I. (Seen with Drs. Reid and Rotch.) F. C., male, six years old. General health good. Was attacked at 7 A. M., April 11, 1896, with severe abdominal pain, coming on every five or ten minutes, and accompanied by small movements from the bowels, at first fecal in character, but later of clear blood. A dose of medicine given by his mother was followed by excessive vomiting. The movements later contained blood-stained mucus. The extremities were cold. The pulse was slow. The temperature at 4 P. M. was 97° F. There was much prostration.

The attacks of pain and the movements from the bowels lessened in frequency in the afternoon, and there was no vomiting after 1 P. M. The pulse, which was 60 and intermittent when taken by Dr. Reid at 4 P. M., was 84 and strong at 8.30 P. M. Dr. Reid was first able to feel a tumor in the left side of the abdomen at 4 P. M.

The tongue was slightly coated.

The boy was seen by Dr. Rotch, in consultation with Dr. Reid, at 9 P. M.

The rectal examination was negative.

The abdomen was soft and resonant, except in the left hypochondrium, where there was dulness corresponding to a hard mass, apparently the colon.

Dr. Reid's diagnosis of intussusception was confirmed by Dr. Rotch.

April 12th, at 2 A. M., laparotomy was performed, nineteen hours after the first symptoms, and an extensive invagination of the transverse colon into the descending colon was found and reduced. There was much congestion, but there were no adhesions.

The operation consisted in an incision on the median line, about five inches in length, which was subsequently joined by a transverse incision on the left side about two and one-half inches opposite the umbilicus. The tumor was readily grasped, but was with difficulty brought into view, owing to the shortening of the mesocolon. The intussusceptum being finally held by the thumb and forefinger of the left hand, gentle traction was made upon the intussusciens by the right hand which enveloped the tumor. By alternate traction and compression the intussusceptum was gradually delivered, and found to be in the condition above mentioned. The bowel was replaced

and the peritoneum was carefully stitched with catgut. The divided rectus muscle was also sewed separately. The skin and linea alba were then approximated by silk sutures. The patient bore the operation well. Convalescence took place without any accident of special interest, the wound healing by first intention. The patient has been well since and has worn an abdominal supporter with a pad made to fit the wound.

CASE II. (Seen with Drs. Stickney and Rotch.) S. S., age nine months, male. Until present attack always well. Always nursed.

First seen by Dr. Stickney May 22, 1896. Irritable in the morning and vomited the breast-milk at noon. Following this had a semi-solid movement of the bowels, with a small quantity of bloody mucus. In the afternoon restless, and had sharp, short attacks of abdominal pain, drawing up his legs. At 8 P. M., had a large, watery movement, with considerable blood and mucus; and during the night the pain and restlessness continued every quarter- or half-hour, lasting about one minute. It would roll and writhe about, and beads of perspiration would stand out on forehead and face. Between the attacks it seemed exhausted.

May 23d. The watery movements with blood and mucus continued. Quieter than on previous day, and remained so until late in the afternoon. The physical examination was negative until about 6 P. M., when a distinct tumor could be felt to the left and a little above the umbilicus. The tumor was somewhat larger than a large olive, and slightly tender. Rectal examination negative. Diagnosis, intussusception.

The case was seen by Dr. Rotch, in consultation with Dr. Stickney, on the evening of May 23d. Temperature on May 22d, P. M., 100° F.; May 23d, A. M., 100.5° F. Pulse 130, good strength, regular; respiration slightly accelerated. Tumor distinctly felt in left side of abdomen, but not by rectum. Dr. Stickney's diagnosis confirmed.

May 24th. One A. M. Laparotomy about forty hours after first symptom.

An incision, almost four inches in length, was made on the median line, starting from above the umbilicus and skirting around its left margin. The hand introduced into the abdominal cavity easily grasped the tumor in the left hypochondrium. It was gradually drawn forward and brought into view. The intestines appeared to be in good condition and there were no adhesions. The invagination appeared to be at the junction of the transverse and descending colon. The tumor thus found appeared to be about six inches in length. Reduction was effected in the following manner: The right hand grasped the intussusciens, the little finger overlapping and exerting compression upon the apex of the intussusceptum. The neck of the intussusceptum was held firmly between the thumb and forefinger of the left hand and the intussusciens was gently pulled upon by the right hand, which at the same time exerted light compression upon its contents so as to push them out. After a few minutes' manipulation of this sort, as the bowel did not unfold, the finger was introduced and swept around the ring, through which the bowel entered the invagination, so as slightly to compress it and reduce the swelling at the outlet. After further taxis the bowel gradually unrolled itself. At no time was any traction made upon the intussusceptum. The loop of bowel, which appeared to be uninjured, the only change apparent, being a slight thickening of the mesentery, was re-

¹ Read before the Boston Society for Medical Improvement, November 2, 1896.

turned to its normal position, and the abdominal incision was closed. The time of the operation did not exceed thirty minutes, and was probably somewhat less than that. A laparotomy dressing was applied.

The bowels were moved on the second day after the operation. The temperature did not rise above 102° F., and the stitches were all removed, and the temperature was normal on the thirteenth day after the operation.

In reporting these two successful cases, I do not wish to be considered as advocating the operation in all cases. To what extent this method should be employed, and in what class of cases the treatment by enemata should be resorted to, are points which I trust will be brought out during the discussion this evening.

ACUTE INVERSION OF THE UTERUS FOLLOWING DELIVERY OF PLACENTA.¹

ABDOMINAL SECTION, REDUCTION, RECOVERY.

BY D. J. BROWN, M.D., SPRINGFIELD, MASS.

THE case which I desire to present to your attention is one of acute inversion of the uterus.

The patient, Mrs. R., white, aged thirty-five, married, mother of five children, oldest twelve years, youngest eight days. All labors were reported as being difficult, though not instrumental. No puerperal complications had existed. Menstruation at the age of fourteen, and no trouble since. Health had been fairly good. Tuberculosis on mother's side.

Present History.—First saw the patient eight days after the delivery of her last child, and obtained the following history: Pregnancy advanced to the full term without any complications; health good during that period. Labor lasted seven and one-half hours, and was the same as all others with the exception of delivery of placenta. In this the attending physician experienced considerable difficulty, and at last resorted to great traction on the cord. Upon delivery of placenta the uterus immediately followed. This was followed with severe post-partum hemorrhage and collapse. At the time of my visit the following conditions were noted: A patient quite anemic, with loss of appetite, severe cough, papular eruption on trunk and lower extremities; temperature 103.5°, pulse 120, and of poor quality.

Examination *per vaginam* revealed a rounded, dark-colored, roughened mass, which bled very easily when touched. There was considerable discharge and some odor. An attempt under ether was made to reduce it, but it was found impossible, on account of almost complete involution of the cervix having taken place, the hemorrhage produced and the poor condition of the patient. Forceful reduction at that time would mean rupture of the uterus, on account of its spongy condition. Twenty-four hours later, and with the patient's condition improved, abdominal section was performed. The cervix was dilated, pressure and internal counter-pressure were applied, and after twenty-three minutes the uterus was returned to its normal position without injury to it or surrounding parts. A stout silk suture was then passed through the uterus, brought out through the muscular layer of the abdominal wall and ligated. The wound was then closed with deep and superficial sutures, dressings and bandage applied.

¹ Read before the Hampden Medical Society, October 20, 1896.

Next the uterus was thoroughly curetted, irrigated with bichloride solution (1 to 2,000), and packed with sterilized gauze drain.

After-Treatment.—During the first twenty-four hours, patient was given nitroglycerin, gr. $\frac{1}{60}$, and strychn. sulph., gr. $\frac{1}{20}$, every three hours; the total amount of brandy in twenty-four hours, eight ounces. At the end of twenty-four hours gauze drain was removed, and intra-uterine douches, bichloride (1 to 2,000) given once in four hours; catheterized once in six hours.

Second day. Calomel (five doses, one grain each) was given every hour, followed by magnesia sulph., one drachm every hour, until decided results were obtained. Brandy and strychn. sulph. still continued (brandy increased to twelve ounces). Beef extract and milk with lime-water. Quinine sulph., two grains every four hours. Still catheterized. Cough troublesome, odor very slight. Morning temperature 100.5°, pulse 100; evening temperature 104°, pulse 120.

Third day. Bowels moved quite freely. Stimulants and nourishment practically the same. Morning temperature 100.3°, pulse 108; evening temperature 103.2°, pulse 120. Coughed less during the night. Catheterization stopped.

Fourth day. Morning temperature 99.5°, pulse 80; evening temperature 101.5°, pulse 102. Douche still continued, odor ceased, discharge diminished. Brandy diminished by four ounces.

Fifth day. Evening temperature 100.2°, pulse 94. Diet, egg-nogg with whiskey, one-half ounce every two hours. White of egg with lemon-juice. Beef-juice, one and one-half ounces three times daily. Strychnia, gr. $\frac{1}{20}$, still continued. Bowels still moved quite freely.

Sixth to ninth day. Improvement gradual. Brandy now diminished to four ounces in twenty-four hours. Elix. calisayæ, ferri et strychn. was now given, one drachm three times daily. Diet increased.

Tenth day. Deep sutures removed. Improvement continued.

Twelfth day. Morning temperature 98.4°, pulse 80; evening temperature 99°, pulse 88. Superficial sutures removed. Wound well healed, rash almost entirely disappeared, patient's condition very good. From this time on recovery uninterrupted.

ETIOLOGY.

"As regards the etiology of this accident, Buchler considers its chief factors are the relaxation of the walls of the uterus, the enlargement of its cavity, and a power which, acting upon the uterus, either from without or within, forces the uterus downwards." "This becomes evident when it is noted that the accident almost always occurs immediately after the expulsion of the child and during the delivery of the placenta, through forcible attempts to deliver the latter, either by forcing down the fundus or by pulling upon the cord, especially when it is unusually short. The latter was the cause in the case under discussion.

Prof. Barton Cooke Hirst has had experience in three cases. He thinks it almost invariably caused by traction upon the cord or by the manual removal of the placenta. In one of his cases the womb was turned inside out by the suction of his hand, with the placenta grasped in it. He had loosened it from the uterine wall to which it was adherent, and he states that up to this time the walls of the uterus were in