majority of cases as it can be more rapidly performed, it presents perfect security against sepsis by escape of the contents of the stomach, provided that the opening of the stomach is delayed for a day or two, and it is possible to dispense with the use of buried sutures, which in Witzel's operation cannot be avoided.

SUCCESSFUL REMOVAL OF AN ENLARGED AND DISPLACED SPLEEN.

By D'ARCY POWER, F.R.C.S. ENG.,

Assistant Surgeon to, and Teacher of Surgery at, St. Bartholomew's Hospital; Surgeon to the Victoria Hospital for Children, Chelsea.

A WIDOW lady, aged 43, mother of two children, the youngest being 25, consulted my friend, Dr. W. S. A. Griffith, for an abdominal tumour which was thought to be ovarian. Examination showed that the uterus and its appendages were normal, and the patient then came under my care.

History.—Three and a half years previously she struck her left side just over the lower ribs whilst she was moving a piece of furniture, and she dates the beginning of her abdominal discomfort very definitely from the time of the blow, though it was not until two years later that she noticed the lower part of her abdomen increasing in size. She has suffered much pain and inconvenience from the swelling during the last twelve months, and she has been losing flesh lately and has had attacks of indigestion and vomiting.

Anamnesis.—The patient was a healthy-looking woman with a florid complexion, who complained less of the inconvenience of the tumour than of the remarks to which it gave rise, for her abdomen was as large and prominent as it had been during the sixth and seventh months of her former pregnancies. Examination of the abdomen showed a large tumour filling the whole of the left side and extending to the right of the umbilicus. The surface was smooth and there was a definite edge, notched at its lower part. It was freely movable from side to side, but any attempt to push it upwards caused pain, and it was tender at the upper part just beneath the ribs. The tumour was dull on percussion in the flank, but resonant in front where the intestines lay above it.

Operation.—I opened the abdomen at 3.30 P.M. on Wednesday, September 6th, 1899, in the presence of Mr. S. T. Huggins and his son, Dr. S. P. Huggins, making a 5-inch incision in the left linea semilunaris. The spleen was easily delivered from the abdominal cavity, and measured 8 inches in length. It was attached by so long a pedicle that it hung free by the side of the patient, and almost lay upon the operating table. The patient showed signs of collapse when the pedicle was stretched, but recovered as soon as the spleen was supported. The pedicle measured 4 inches across, and consisted of fatty connective tissue with many large veins; the tortuous splenic artery was easily seen lying in the centre. The connective tissue overlying the artery was first dissected away for about an inch, and a double silk ligature was passed beneath the vessel, which was tied in two places about half an inch apart and divided. The pedicle was afterwards ligatured in half-inch segments from below upwards and was divided. The cut end of the pedicle was carefully examined to ascertain whether any vessel had escaped ligature, and the operation was delayed for nearly ten minutes until I had satisfied myself that it was absolutely free from oozing. When everything appeared secure the stump of the pedicle was returned to the abdomen. The suspensory ligament was only represented by a little loose connective tissue, and gave no trouble, as it was secured by a single ligature of silk. The wound was closed by a continuous suture of fine silk through the peritoneum, three interrupted sutures of sterile catgut through the abdominal muscles and aponeurosis of the external oblique, and a continuous suture of silkworm gut through the skin. There was very little hæmorrhage during the operation, but the spleen contained a good deal of blood, which ran out and clotted after the organ had been removed. The operation lasted an hour and a-half from the beginning of the anæsthetic—gas and ether being administered during the first three-quarters of an hour, chloroform afterwards—to the application of the dressing, some part of the time being occupied in making the skin aseptic.

After-History.—The patient bore the operation excellently, her pulse being 96 and of good volume after she had been put to bed. She passed a fairly good night, and on the following day was only complaining of a little flatulence, which soon passed off. From the time of the operation until the fifth day the patient presented evidence of sympathetic irritation in a curiously agonised expression, of which she was quite unaware, reminding me of those who suffer from abdominal cancer or commencing tetanus. It seemed to be due to a slight tonic contraction of the platysma and its connections, but in no other way was there any indication of sympathetic disturbance, and the patient was quite cheerful. She remained comfortable for many days with a normal temperature and a pulse of 64. The stitches were removed on the seventh day, when the wound was healed except for a slight stitch abscess at the lower part, which had disappeared on the ninth day. I then went away for my summer holiday, and on my return found that she had progressed satisfactorily until September 28th—the twenty-second day after the operation—when her temperature began to rise. Two days later she was suddenly seized with intense pain in her left side, whilst the action of the heart and diaphragm was impeded, and she was thought to be dying. The symptoms, which were evidently very alarming for a short time, passed off spontaneously, and were succeeded by a similar attack two days later. Mr. Walsham then kindly saw the patient in my absence, and opened a localised subdiaphragmatic abscess by an incision carried parallel to the scar of the former wound, and about 2 inches to the outer side. There was free bleeding for several days, apparently from a small artery at the bottom of the abscess cavity, pus was discharged by the bowel, and a small fecal fistula formed. The fistula soon closed, leaving only a small sinus through which

a silk ligature came away from time to time. The general condition of the patient remained good; she increased in weight; her temperature again became normal; and she went home on October 18th, the forty-second day after the operation. I have since seen her on two or three occasions, the last time being in September, 1900, and except for the sinus and some occasional colicky pains on the left side, she appears to be well, and is meditating a return to her former profession. Physiologically, she has sustained no inconvenience from the loss of her spleen.

Description of Spleen Removed.—The spleen was estimated to weigh about 2½ lbs. immediately after the operation, and whilst it was full of blood. It weighed between 17 and 18 ozs. after it had been kept in spirit for six months. The enlargement was due to simple hypertrophy.

Blood Examination.—Dr. J. H. Drysdale, who kindly examined the blood of the patient on September 14th, 1899, the eighth day after the operation, reports: "Hæmoglobin, 69 per cent.; red cells, 4,230,000; number of leucocytes, 17,000; lymphocytes, 18.75 per cent.; large mononuclear, 12.5 per cent.; polymorphonuclear, 65.5 per cent.; eosinophile, 3.5 per cent. There were no myelocytes or atypical cells. The blood was taken before the midday meal, the patient having had a boiled egg, toast, and coffee for breakfast, with lamb, vegetables, and a fried sole on the previous day. *Remarks.*—Leucocytosis, the large lymphocytes (mononuclear), relatively as well as positively increased."

The case bears out the conclusion that the splenectomy is a successful operation in cases of enlarged and displaced spleens when the enlargement is not leucocythæmic. Some credit may be given to the patient's statement that the whole mischief started from an injury over the region of the spleen, as she was a healthy woman who had not been pregnant for many years, but had not approached the menopause, and consequently there had been no disturbance of the relations of her abdominal contents. The operation showed that some absorption of the suspensory ligament had enabled the spleen to weigh anchor and sail away into the depths of the peritoneal cavity, whilst it also proved that the shock attending manipulation of the enlarged organ is due chiefly to impulses communicated through the pedicle, and not, as some have suggested, to interference with the diaphragm through the suspensory ligament. The gradual elongation of the pedicle led to alterations in the vascular supply causing chronic congestion of the spleen ending in hypertrophy. The etiology of the enlargement, therefore, is somewhat clearer than usual. I was somewhat surprised during the operation to find how little the spleen shrank when it was handled, due apparently to the fact that the muscular tissue had not increased proportionately to the other elements in its structure. The formation of an abscess near the pedicle was a most unfortunate occurrence, and marred what would have otherwise been a very successful result. It was due, apparently, to a contamination of one of the silk ligatures used in securing the pedicle. The organism, however, could not have been very virulent, as the patient seemed to be perfectly well for twenty-two days after its introduction. The sudden and alarming effects which the abscess produced when it reached the under surface of the diaphragm are well worthy of remembrance.

The interesting statistics collected by Dr. Vanverts¹ show that between 1876 and 1897 16 cases of movable, displaced, and enlarged spleen had been removed with a single death. All the cases occurred in women.

I owe my best thanks to Mr. S. T. Huggins for his kind and skilful attendance upon the patient during my absence, and to his son, Dr. S. P. Huggins, formerly my House-Surgeon at St. Bartholomew's Hospital, for taking careful notes of the case.

REFERENCE.

¹ *De la Splenotomie*, Paris: Steinheil, 1897.

ABDOMINAL TUMOUR (INCLUDED FŒTUS)

OCCURRING IN A CHILD AGED 3 MONTHS: LAPAROTOMY: DEATH.

BY

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[With a report on the Specimen by J. W. BALLANTYNE, M.D., F.R.C.P.E.; and drawings by W. E. FOTHERGILL, M.D.]

HISTORY (BY DR. WYLIE).

THE child was a female, aged 2 months when admitted to the Manchester Hospital for Sick Children on March 10th, 1899. The mother gave the following history: The child's abdomen had been swollen since birth, labour having been long and

difficult. The abdomen had gradually increased in size, with the result that the patient developed a cough and difficulty of breathing. She also wasted and seemed poorly in herself.

Condition of Child on Admission.—The child was a moderately well-nourished infant. It had slight general bronchitis. On examining the abdomen, one found an enormous mass on the left side, which, commencing in the left lumbar region, reached forward to beyond the umbilicus. There was a distinct interval between it and the right costal margin, also between it and the anterior portion of the left costal margin; behind, however, it was lost under the left lower ribs. The tumour was quite dull; its front and upper portion seemed to be cystic, but it was more solid behind. The tumour was smooth and uniform and not tender; it bulged into the loin behind, and its edge was fairly well defined. The liver was not enlarged, and was quite separate from the tumour. The spleen could not be felt.

On March 14th the tumour was tapped, and 19 ounces of clear yellow fluid, the colour of pale urine, removed. In this fluid were floating small shreds of mucous-looking tissue. The fluid was slightly albuminous, containing 5 parts per 1,000 by Esbach's albuminometer; it gave a slight reaction with sodium hypobromite solution, and when tested by Southall's ureometer a small bubble of gas was evolved. Two days after the tapping the tumour was on examination found to be much smaller; it felt firm and non-fluctuant, and its left and superior edges were distinctly felt. It was fairly movable, and did not reach either into the loin or under the ribs. It had in addition a nodulated feel.

On March 20th the growth was found to be distinctly larger, and on March 25th it had attained its former size and position, but this time was not quite so far back in the loin. The patient was then transferred to the surgical wards under Mr. Wright, and was operated upon on April 6th.

Operation.—Chloroform having been administered, an incision about $4\frac{1}{2}$ inches in length was made in the left lumbar region, over the most prominent part of the tumour. The abdominal wall was divided, and the tumour immediately bulged forward into the wound, the omentum being in front of it. This was divided, and the cystic portion of the tumour tapped, about 20 ozs. of clear yellowish fluid being removed. The growth was now found to have wide attachments and was evidently not of a renal nature. It was then as rapidly as possible removed, there being a large number of vessels, chiefly veins, in the capsule, these being ligatured. It should be mentioned that the large intestine (transverse and descending colon) had to be carefully stripped from the capsule before the tumour could be removed. The child being now rather collapsed, was given an enema of bovril and brandy, and a small injection of strychnine. The abdominal wall was then quickly sutured up and the usual dressings applied. As the child was now in a condition of profound shock it was given another nutrient enema and then transfused, an operation which was attended with a good deal of difficulty owing to the small size of the child's veins, the left basilic being the one used. About 9 ozs. of normal saline solution was injected, with the result that the child's condition improved materially. It was ordered nutrient enemata every three hours, and remained in much the same condition until half-past 3 the same afternoon, when it had an attack of vomiting, during which it died.

Report of Necropsy.—The growth was found to have been situated in the cavity of the lesser peritoneum, and had been attached to the surrounding tissues merely by general adhesions and not by any definite pedicle. There was no definite attachment to vertebral column.

The great omentum covered it in front, and the stomach was displaced by it into the left hypochondrium. The kidneys and suprarenals were normal. The uterus, ovaries, broad ligaments, etc., were all normal as regards size, position, relations, etc. All the other organs were healthy.

REPORT ON SPECIMEN OF FŒTUS IN FŒTUS.

Dr. J. W. Ballantyne's report is as follows:

In the first week of October, 1899, I received from Dr. D. S. Wylie, of the Manchester Children's Hospital, Pendlebury, a partly solid, partly cystic mass which, it was reported, had been removed by operation from the lesser peritoneal cavity of a female infant two months old. The solid portion it was

stated was intact, but of the cystic portion only a part of the cyst wall remained, and that was attached by means of pins to the solid part. The solid part was somewhat disc shaped, and had therefore two surfaces, one of which was evidently covered with skin, and had been directed towards the cavity of the lesser peritoneum (see Fig. 1); the other showed coils of intestine, and had been directed towards the interior of the cystic cavity (See Figs. 2 and 3). The former surface I shall in future call dermal or epiblastic, the latter visceral or hypoblastic. The whole mass had, it was stated, been attached to the investing peritoneum, not by a pedicle but simply by adhesions. The solid part had a diameter varying from 11 cm. to 7 or 8 cm., and a thickness of from 4 to 5 cm., the thickness being greater at the centre of the disc. I shall describe first the surfaces of the solid part, and secondly the appearances of sections of it.

Fig. 1.—Dermal or epiblastic surface.

The dermal or epiblastic surface presented some projections and some openings. For convenience I name the parts right and left and so forth according to their position on the photograph. Of course this is a perfectly arbitrary procedure, and not warranted by the anatomical details. Towards the upper left corner, according to my plan of arrangement, there was a small projection measuring 1.5 cm. in length and resembling a pair of rudimentary digits (Fig. 1, g). About the middle of the left side, at the point where the mass had its minimum breadth, was another projection, measuring 2 cm. in length and about 1.3 cm. in breadth. Its resemblance to a two digitated rudimentary hand or foot was very striking, e. On the right side of the dermal surface of the mass was a pea-sized projection which may have indicated another but a very rudimentary extremity, d. At a point practically corresponding to the centre of the dermal surface was a linear opening, c, running from above downwards and towards the right side; it measured 1.5 cm. in length. Above and to the right of this slit was a large opening, b, measuring about 2.5 cm. vertically and about 2 cm. transversely. Through this opening the probe could be passed in various directions into cavities in the substance of the mass, and it was specially noted that the linear slit also opened into one of these cavities. The whole surface had the appearance of skin, and a few hairs, dark brown in colour, were seen attached to it but they were quite scanty. In the grooves was a quantity of

a whitish substance resembling the vernix caseosa. Most of the right side of this surface as also its lower end gave attachment to a thick membrane which is now cut into pieces, A, but which, it may be supposed, passed quite round the opposite or visceral surface of the mass, and formed the cavity containing the clear yellow fluid removed at the time of operation. An incision had been made into the mass along the left upper angle.

Fig. 2.—Visceral or hypoblastic surface.

Fig. 3.—Side view of mass, showing rudimentary viscera, etc.

The opposite surface, which I have named visceral or hypoblastic, did not lend itself readily to description (Figs. 2 and 3). On raising the membranous sac covering it one saw several coils

of intestine attached to it, and these coils seemed to be arranged in two pieces not communicating with each other. To one of the pieces was attached a bit of bowel very much like the vermiform appendix of the cæcum. It did not appear that the two pieces of bowel communicated with a cyst lying near them on this surface; this cyst had a thick wall, and when cut into its inner surface was thrown into numerous well-marked ridges, and had an appearance recalling that of the stomach; its size was about that of a walnut. Near the edge of this visceral surface were two small hard bodies resembling a bicuspid and an incisor tooth, and alongside of them was a structure which might be regarded as a rudimentary maxilla containing tooth germs (?). Sections were made of the bowel at two places, and under the microscope the wall showed the characteristic intestinal villi and epithelium and glands; but these structures did not seem to be fully developed.

Sections of the solid mass were now made. It was found to be made up largely of adipose tissue with, scattered through it, irregularly-shaped pieces of cartilage, one or two of which showed commencing centres of ossification. The openings on the skin surface were found to communicate with cavities in the mass, irregular in shape and lined by a darkly pigmented fine membrane thrown into gill-like folds. It could not be traced that these cavities had any connection with the intestine or with the stomach-like cavity. It was quite impossible to identify any of the small pieces of cartilage. Under the microscope the main constituent tissue had the appearances presented by foetal adipose tissue, very regular network of spaces, etc. It may be noted also that the skin had the usual microscopic appearances save for the absence of sweat ducts and glands; sebaceous glands were very plentiful, as were also hair follicles.

It is difficult to say what relation the cyst wall bore to the solid part above described, but it would seem that it covered the visceral aspect of it, and thus formed the cavity containing the fluid spoken of as having been present at the time of operation. The intestines seem also to have been covered with a more transparent, peritoneum-like membrane, but this has been cut away apparently. Under the microscope the membranous sac wall was seen to consist of connective tissue bundles with numerous elastic fibres, but without an epithelial or endothelial investment.

It may be added that both in the wall of the intestine and in the subcutaneous adipose tissue blood vessels were visible, but no single large entering artery was noted at any point of the solid mass.

I think there can be no doubt that this was an example of the monstrosity known as the "included twin" or "foetus in foetu." As regards location it was of the intra-abdominal variety, and as regards organisation it was of the type amorphous or anideus. I have elsewhere described the foetus amorphous, as it occurs not inside another foetus, but attached to another foetus by means of the vessels of the umbilical cord. A reference to that paper¹ will serve to show that the foetus amorphous there described as born along with a normal twin very closely resembled the mass removed from the abdominal cavity of the female infant at Pendlebury Hospital. To account for its position inside the body cavity we have to suppose that it has been caught therein before the closure of the somatopleure (in the manner suggested by Ahlfeld). Its low state of organisation may be regarded as due to the abnormal position and unsatisfactory developmental environment which it had; but it may also have been originally of very low vitality, and its position inside the body of the other foetus may have been the means of perpetuating its existence in a parasitic sort of way. It cannot be said which of the two explanations is the more probable.

Some thirty cases of included foetus in the cavity of the abdomen have from time to time been put on record; but the position occupied by the parasite, as well as the degree of development of it, have varied very much. The present case, however, agrees with the majority in the fact that it was situated in the left side, and in its very rudimentary organisation and the absence of more than a very few recognisable viscera and structures. It may be hazarded that the parasite had advanced little further in development than the stage when there is on one side epiblast and on the other hypoblast with confused mesoblastic derivatives between. The cystic part may have been a development from the umbilical

vesicle, but more probably it was, in part at least, a spurious capsule formed from the surrounding tissues by irritation.

Remarks by Mr. Wright.—The history, the physical signs, the result of tapping and probabilities all led us to think that the tumour in this case was very probably renal or perirenal in origin. It was fully recognised that the operation was a forlorn hope, but it was the only chance. As is so often the case in abdominal tumours, when once the operation is begun it is impossible to stop short. Lacerated soft friable tissue may make partial removal or abandonment of an operation impossible on account of bleeding. The only thing to do is to clear away the whole mass as quickly as possible. In this operation it was recognised fairly early that we had a teratoma to deal with, and that its attachments were such as to make its removal almost hopeless, but it was still the only chance. It is of course very unlikely that another similar case will be met with by any of those who saw this child, but it is worth recording, and the possibility of such a case is worth bearing in mind in doubtful congenital tumours. We are greatly indebted to Drs. Ballantyne and Fothergill for the care and trouble they have taken in examining and drawing the specimen.

REFERENCE.

¹ *Teratologia*, i, p. 1, 1894.

FOUR CASES OF LAPAROTOMY FOR INTUSSUSCEPTION.

By KEITH MONSARRAT, F.R.C.S.E.,

Assistant Surgeon, Liverpool Infirmary for Children.

I HAVE had the opportunity of operating on four cases of intussusception since the beginning of this year, all presenting some points of interest.

CASE I.

A male infant, aged 4 months, was admitted to the Infirmary for Children, Liverpool, at 3 P.M., on February 25th.

History.—Twenty-four hours before admission the child screamed out, and was evidently in great pain. Shortly after he passed a green slimy motion, and the mother then gave him a dose of castor oil. At 6 o'clock he passed some blood *per anum*, and continued to do so off and on until 9 P.M. After this nothing further was passed, and the signs of pain continued until admission next day. On admission the child was very collapsed, and his temperature was 97° F. Rectal examination revealed a tumour within easy reach of the finger, and in the abdomen a characteristic swelling was found extending from the right lumbar region across the middle line and down into the pelvis.

Operation (4 P.M.).—Through an incision in the right semilunar line the tumour was reached, and about 18 inches disinvaginated; the last 2 inches could not however be expressed. Enterotomy was consequently done by Barker's method, the remainder of the intussusception removed, and the severed edges of bowel united. The intussusception was ileo-colic in type.

Result.—The child never recovered from the operation shock, and died an hour later.

CASE II.

A female infant, aged 7 months, was admitted on June 10th.

History.—On the morning of June 9th the child passed a green stool and appeared to have pain in the abdomen. At 9 P.M. she vomited, passed blood by the rectum, and both these symptoms continued during the night and until admission. She was brought to the infirmary at 6 P.M. The abdomen was distended, and a definite characteristic tumour was easily made out; its apex was felt by the finger in the rectum.

Operation (8 P.M.).—An incision was made in the middle line below the umbilicus, and a considerable quantity of blood-stained fluid escaped when the peritoneum was incised. The intussusception was easily and rapidly reduced.

After-History.—The pulse was very feeble and rapid after the operation, and 3 minims of ether were injected subcutaneously. Two minims of tinct. opii were also ordered every four hours until the following morning. Calomel gr. ½ was administered on the 11th, and the bowels acted three times during the day, the stools being green and mainly of mucus. Until June 14th the temperature was above normal, reaching 103° F. on the 12th and 13th, and the signs of intestinal catarrh continued. On the 14th, however, there was marked improvement, and from this onwards the convalescence was uneventful. The child is now (September 25th) quite well.

CASE III.

A male infant, aged 7 months, was admitted on June 16th.

History.—On the evening of June 15th the child vomited and passed several stools in rapid succession, slimy and tinged with blood. He had been fed entirely from the breast, and the bowels had acted regularly. When admitted he was collapsed, but did not appear to be in much pain; no tumour was to be felt on palpating the abdomen or in the rectum; some green, slimy mucus came away on the finger, but no blood. It was thought that the symptoms might be accounted for by gastro-enteritis, and no operative interference seemed to be at the time indicated. At 7 P.M. he was given 2 ounces of peptonised milk by the mouth, and kept them down; the same quantity at 11 P.M. was vomited. On June 17th it was recorded that nothing had been kept down since the 7 o'clock feed the evening before; nothing had been passed *per anum*.

Operation.—During the afternoon, on examining the abdomen, an ill-defined area of increased resistance was felt to the right of the umbilicus;

laparotomy was consequently performed, and an ileocaecal intussusception about 6 inches long found and easily reduced; 3 minims of ether were given hypodermically, when the child was returned to bed.

After-History.—At night one and a-half minims of tinct. opii was ordered every three hours. Next day the general condition was not improved, the pulse was small and rapid, and the temperature 101° F.; there had been two loose motions. A mixture of cream, whey, and barley water had been given three-hourly since the operation. Death took place during the afternoon (18th).

These cases are examples of acute intussusception. The first is chiefly remarkable for the high degree of strangulation found, considering the comparatively short duration of the symptoms. This was probably in part due to the castor oil, aperients notoriously increasing the severity of the condition. The history of some cases appears to indicate an oscillating invagination and disinvagination in the early stages, and in some instances undoubtedly spontaneous disinvagination occurs. I refer to cases which are brought to hospital from time to time with signs of enteritis, and a history of sudden abdominal pain and bloody stools perhaps a week or more previously. On the other hand in a certain number the invagination and strangulation progress steadily and rapidly, and there is no halting in the symptoms. Case I is an example of the latter type. Case III is an example of the oscillating form, and on admission there were no physical signs to guide one, only the history of vomiting and blood-tinged stools the day before.

Comparing Cases II and III the condition of the bowel was much worse in Case II, as indicated by the considerable quantity of bloody serum in the peritoneal cavity, and the severe enteritis for three days after operation. In Case III *post mortem* the invaginated section of gut, though injected, was not much swollen or altered from the healthy. The general condition was much the same in both cases on admission, and the fatal result in Case III must be attributed to the postponement of the operation until the invagination had been present for forty-eight hours. It is not, perhaps, correct to say that this delay was inevitable, but in the absence of all signs and symptoms beyond collapse I hesitated to operate on the ground of the parent's history alone.

In spite of the delay, I am inclined to think that if the child had received a small dose of opium immediately after the operation instead of waiting until five hours later, and if stimulants had been more freely given, the result might have been different. With regard to this dose of opium, it has been objected to on the ground that it checks peristalsis and the recovery from obstruction. In answer to this it may be urged that there does not appear to be any considerable danger of paralysis of the gut after reduction—at any rate, not to anything like the extent to which after-paralysis is to be feared in some other forms of intestinal obstruction; secondly, the histories of those cases where the drug was given in small doses do not point to its delaying the emptying of the bowel; rather the contrary. Many of these infants are almost moribund when admitted from the exhaustion of pain; add to this the shock of operation, and we have a condition which it is imperative to relieve. Opium is probably the only drug which will meet the case, though minute doses of chloral might be useful if opium seemed to be distinctly contraindicated.

CASE IV.

History.—A boy, aged 4 years, had suffered from paroxysms of abdominal pain off and on for a month before admission, and had been treated for this at other hospitals. Sometimes he was without pain for as much as forty-eight hours together. The bowels had been constipated, and aperients had been given often and with good results. He was in the hospital for six days before I saw him, and during that time had frequent attacks of colicky pains on the right side of the abdomen. The day after admission (August 24th) he had four loose motions; after that his bowels were open two or three times daily, and on one occasion (26th) he passed some blood and mucus. There was no vomiting.

Anamnesis.—I first examined him on August 25th; he looked pinched and pale, and complained of pain in his right side. On palpation of the abdomen an elongated swelling was felt in the right lumbar region, and extending from this above the umbilicus an inch and a-half across the middle line. This could be reduced by manipulation into the loin, but could not be made to disappear altogether; it was evidently an intussusception. On August 30th the swelling was of the same character and of same size as before the partial reduction; he had one motion during the morning of this day, fully formed and containing neither mucus or blood.

Operation.—On the morning of August 31st the abdomen was opened in the right semilunar line; the intussusception was reduced very easily without bringing the gut into the wound except the last knuckle, which proved obstinate. It was brought to the surface, and by using the fingers somewhat in the same way as one uses them to undo a paraphimosis, the last portion was turned out. At the apex of this knuckle was the appen-