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.,

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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. $\frac{1}{2}$ 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-

dix invaginated into the cæcum in such a way that only a very small portion of its distal extremity was visible. Its wall and the wall of the cæcum over a circular area around it were hard and indurated. The appendix except for this was apparently healthy and contained no concretion; it was removed and the abdomen closed.

After-History.—The wound was dressed and the stitches removed on September 7th, and the boy was discharged on the 21st, having had no pain since the operation.

The case is of interest in relation to (a) the mildness of the symptoms and (b) the invagination of the appendix. The boy had attacks of pain for four weeks before admission, and only on one occasion was there any discharge of blood or mucus from the bowel. The invagination was never found to reach the splenic flexure, and at the operation the swelling of the apex was not extreme, rather a hard induration than a marked congestion; there was never in fact any real strangulation. If the variety of intussusception is to be named according to the portion of gut which forms the apex of the intussusceptum, such a case must be called appendico-cæcal. There are now a sufficient number of similar cases recorded to justify their grouping as a distinct variety; their number, as far as I have been able to discover, being eight.

In none of the above 4 cases were injections given a trial, and though it is not proper to argue from one or two examples, the reasons for this course of procedure may be given. After the use of injections, however apparently successful, the complete reduction of the intussusception must remain to a certain extent in doubt. The frequency of relapse after recorded success with this treatment is evidence of this. To leave a child whose limit of endurance has been probably almost reached in this questionable condition seems to me an unsatisfactory course to pursue. The operative results in the simple easily reducible cases are now good and are gradually improving; in the cases where reduction is difficult or impossible operation is the only chance. In what cases, then, is it worth while spending valuable hours waiting to see whether the treatment by injections has been successful or not?

A CASE OF APPENDICITIS WITH ABSCESS PERFORATING INTO THE BLADDER : RECOVERY.

By A. PERCY ALLAN, M.D., B.S.LOND.
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THE following case—from all I can gather, one of extreme rarity—is of peculiar interest owing to the complete recovery the patient made. Dr. Pye-Smith has thought a similar case, which also recovered, worthy of mention in Fagge's *Principles and Practice of Medicine*:

F. E., aged 16 years, an electric workman, I saw first on June 23rd, the day after his symptoms had begun.

History.—I learned that he had had a similar attack some seven years before, which had been diagnosed, the mother informed me, as "inflammation of the bowels."

Present Attack.—This commenced with abdominal pain, sickness, and diarrhoea. The sickness started after well-marked rigors the previous afternoon, and it had continued on and off all night. When I saw him the vomiting was frequent and the vomit thin and bile-stained.

Condition on Examination.—The abdomen was full and tender, especially in the right iliac region, where dulness was uniform and well marked. McBurney's tender point was very obvious. The temperature was 102° F.

Treatment.—The patient was given a mixture of bismuth carbonate, a dose every two hours, and as soon as possible got under the influence of opium, ext. opii. gr. j being given every 4 hours. Ice poultices were constantly applied to relieve the pain. For a week he was on small quantities of milk and somatose. In a day or two the patient was fairly comfortable, but I continued the opium as before.

After-History.—He complained of great difficulty at times in passing water. The temperature never remained high, the maximum being 103° F. on one or two occasions, but it was frequently normal or nearly so, though rising at night to 100° to 101° F. There were no more rigors, nor were there any exacerbations of pain. The dulness continued as before, being very sharply defined internally, but shading off indefinitely at the lower part. As the case developed I noted a very tender process, feeling like a mass of scybala, deep down, extending

towards the inguinal region, about an inch above Poupart's ligament, and continuous apparently with the general mass. After a week the patient's bowels were moved by an olive-oil enema, the motion being passed with a small quantity of slime and a little blood. The temperature some days afterwards being normal or but little raised, no pain being present, I gradually cut down the opium, and added small quantities of beef-tea, jelly, and custard to his milk diet. The general dulness in the iliac region gradually diminished, but the tender prolongation above mentioned still remained unaltered.

Rupture into Bladder.—On July 4th I left the case to my *locum tenens*, Dr. Sear, having drawn his attention to the tender mass. Three days after I left home the patient was seized with much pain and total inability to pass water. The tender mass had disappeared and the iliac region was more resonant. A catheter was passed and a quantity of putrid urine drawn off. A rectal examination revealed nothing. Dr. Sear called in a local consultant, and the conclusion was come to that an abscess had formed round the appendix, which, burrowing downwards and inwards, had ruptured into the bladder. They decided to drive the patient up at once to a London hospital. There, owing to some mistake, he was kept waiting three hours in the surgery, and sent home again, a distance of twelve miles. He arrived back in a very exhausted condition.

Treatment.—Dr. Sear continued to wash out the bladder daily with a solution of Sanitas for four days, until my return, and gave him a mixture containing hyoscyamus. I found the patient much altered on my return, very thin, weak, and sunken round the eyes. I continued to wash out the bladder daily, using a solution of chinosol, and gave him hexamethylene tetramine, gr. v, t. d. s. After a week the urine became less foetid, and I then washed out the bladder on alternate days. Finally the urine became quite normal, and all pain and physical signs disappeared. I got the patient up each day until July 28th, when he was again seized with rigors, and the urine became again as foul as ever. I concluded from this that the opening had temporarily closed, and that the pus had again collected.

Convalescence.—After daily washing out, I got the urine into a normal condition. His appetite was good all the time, and I kept him well fed, so that he gained strength and put on flesh. He made an uninterrupted recovery, except that two weeks after I had given up attending he developed double orchitis after a long walk which he injudiciously took. In a few days the testicular swelling went down under treatment, leaving the patient perfectly well. There have been no relapses since, nor are there signs that any mischief remains.

OPERATION FOR SEVERE HYPOSPADIAS.

By R. HAMILTON RUSSELL, F.R.C.S.ENG.,
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THE operative treatment of the severer forms of hypospadias has always been a source of despair to surgeons. Various methods have been from time to time designed for the purpose of improving the lamentable condition of the unfortunate subjects who have been born with this hideous deformity; but the success that has hitherto attended all such efforts has been so meagre, and the results of operation in even the most successful cases so unsatisfactory, that it is not surprising to find many authorities holding the opinion that operation in bad perineo-scrotal hypospadias is not worth attempting. On the other hand it has been suggested that, in view of the hopelessness of providing the subject with an effective sexual organ, it would be a wise and humane proceeding to perform castration during childhood. I need make no apology, therefore, for bringing before the profession a new method of operating which appears to me to hold out a prospect of benefit such as has never been offered by any method previously devised. Let me first set forth the difficulties with which we are confronted in a case of severe hypospadias such as is depicted in Fig. 1.

While the urethra opens in the perineum at A, there is seen extending forwards from the orifice for a short distance a sulcus (A, B) lined with mucous membrane, which for convenience of description I will designate the "perineal urethra."