An analysis of a second series of forty cases of intussusception / by W. McAdam Eccles.

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8.

AN ANALYSIS OF A SECOND SERIES OF FORTY CASES OF INTUSSUSCEPTION.

BY

W. McADAM ECCLES.

In the volume of the Reports for 1892 (vol. xxviii.) I was enabled, by the kindness of many members of the staff, to publish an analysis of twenty-eight cases of intussusception which had been admitted into the Hospital during the twenty years 1871–1890 inclusive.

As this paper has been somewhat extensively quoted from, especially by Dr. Wiggin of New York, Mr. D'Arcy Power, and Mr. Lockwood, I have made an analysis of the cases which have occurred subsequently, that is, during the six years 1891–1896 inclusive, the number of which amounts to forty.

I have again to thank the physicians and surgeons of the Hospital staff under whose care these cases have been for their renewed permission to use the notes, and for their assistance on many points.

A full table of the cases, with references to the notes, will be found at the end of the paper.

I propose to give a detailed analysis of the cases, under the same headings as in my former analysis.

1. *Sex of the Patients.*—Of the 40 cases, 26 occurred in males and 14 in females. This again bears out the fact that intussusception is more frequent in males than in females. With the 28 of the former series, it will be seen that in the total of 68 cases 43 were males and 25 females.

2. *Age of the Patients.*—No less than 27 out of the 40 cases were under the age of 12 months, one was 13 months old, 8 were between 2 and 5 years of age, one was between 5 and 10 years old, and 2 were 12 years, and one 30 years of age,

this being the oldest patient, the youngest being a boy aged 4 weeks.

Taking the 28 cases recorded before as well, 45 out of the 60 cases were below one year of age, or 75 per cent. of all cases of intussusception occur at this early period of life.

3. *Causes of the Affection.*—As in the former analysis, the notes give no precise indication of any definite causes of the disease. There is again a marked absence of any clear history of previous gastric or intestinal trouble.

The patients are usually stated to have been in good health up to the time the symptoms appeared, and that these commenced suddenly. In one case, that of a woman aged 30 (No. 3), a polypus was found growing from the intestinal wall at the site of the beginning of the invagination.

3*a*. *Variety of Intussusception.*—By far the larger number of the cases seemed to have been, or were shown to be, of the ileo-cæcal variety. Three, however, consisted entirely of small intestine (enteric variety, Nos. 3, 35, and 36), one of the ileo-colic form (No. 17), and one of colon wholly (colic variety, No. 33).

4. *Duration of Symptoms before Admission, and Mortality.*—Of the 40 cases, 21 recovered and 19 died; of the 28 cases in the former series, only 9 lived while 19 died. It will thus be seen that early diagnosis and prompt treatment is already beginning to have a decided bearing on improvement in the final results.

Within the *first twenty-four hours* after onset of symptoms 20 cases were admitted, of whom 11 recovered and 9 died—that is to say, of all the cases which lived, more than half were admitted on the first day of the disease.

It is interesting to note that whereas in the former analysis out of 28 cases only *one* was admitted on the first day, in this second series of 40 no less than 20, or half, of the cases were brought up to the Hospital within the first twenty-four hours.

After the first twenty-four hours, but within the *first forty-eight hours*, 5 cases were admitted, of whom 3 lived and 2 succumbed.

On the *third* day 4 were received, of whom 3 died and only 1 recovered. In the first analysis this was the day on which the largest number of cases was admitted, namely, 8, and only 2 of these lived.

On the *fourth* day 5 cases were brought, of whom 3 died and 2 recovered.

On the *fifth* day 3 cases were admitted, of whom 2 died and

1 survived, and this (No. 24) was a very doubtful case of intussusception.

Two cases in addition were admitted, but the notes being mislaid, it is unknown how long the symptoms had been in evidence. Both these patients recovered.

No case in this second series recovered after sloughing and separation of the intussusception—such a circumstance having never occurred in any case—but it will be remembered that there was one instance of this in the former series. Thus such a result has happened once in 68 cases, which shows its great rarity.

5. *Symptoms and Signs.*—Twenty-six cases presented the three cardinal symptoms or signs of abdominal pain, vomiting, and the passage of blood and mucus per rectum. Five cases had the vomiting and blood-stained mucus, while three had abdominal pain and vomiting only, and two blood-stained mucus as the sole representative of the three; and one had abdominal pain and blood-stained mucus.

It will thus be seen that no less than 34 out of the 40 cases had the most important and characteristic sign of blood-stained mucus being voided from the bowel. Of the remaining cases, in two there was absolute constipation, while in two it is not recorded whether the bowels were moved, but it is stated that no blood was passed per rectum. The notes of the two last cases are missing.

The occurrence of a definite tumour, caused by the invaginated bowel and its sheath, to be felt through the abdominal wall and per rectum, was observed no less than eleven times. In 20 other cases it was felt in the abdomen only, while in one other case it was discovered only per rectum. Thus in 32 cases out of 40 a tumour was made out. In the first series 18 out of 28 cases presented a tumour; therefore, of the 68, as many as 50, or 83.3 per cent., had a tumour which could be palpated.

It is very interesting to observe the following facts:—In 6 out of the 11 cases in which the tumour was found per rectum as well as per abdomen, the tumour itself is stated to have been on the *left* side of the abdomen, and only twice on the right; and again in the 20 cases where it was felt only in the abdomen, in no less than 6 cases it was definitely found on the *left* side, and in 3 transversely.

Moreover, in several of the cases the swelling could not be evidently palpated until the patient was placed under the influence of chloroform, a fact which emphasises the truth that it is always better to examine with the help of an anæsthetic.

In only five cases is it actually stated that no tumour could be felt either per abdomen or per rectum; and in one it is not stated whether any swelling was discovered, while in the remaining two the notes are missing.

6. *Treatment.*—This will be reviewed under four headings:—

(1.) That of leaving the patient without any active interference whatsoever. This occurred in three cases. In two cases (Nos. 20 and 24) recovery followed, but the diagnosis is uncertain in both, particularly the former. The third case (No. 33) died, and a purely colic intussusception was found on post-mortem examination, but had not given rise to clear evidence of its existence before death.

(2.) That of external manipulation alone through the abdominal wall. This was apparently the successful cause of the reduction in one case (No. 26), though the manipulation was not undertaken with this intention, but was performed by a number of observers who were desirous of feeling the distinct tumour through the abdominal wall.

It is, however, probably very rare that simple massage or kneading of the swelling per abdomen is likely to produce a satisfactory reduction, and no reliance should be placed upon this method of procedure.

(3.) That of attempting to reduce the invaginated gut by means of the distension of the bowel below the intussusception either with liquid or gas, combined in most cases with manipulation of the swelling through the abdominal wall.

This treatment employed *alone* was successful in nine cases. Injection of fluid alone gave good results in five cases, inflation alone in three cases, and inflation followed by an injection in one case.

In six of these successful cases the injection or inflation was undertaken while chloroform was being used, in two the notes do not state whether an anæsthetic was used or not, while in the remaining case chloroform was not used.

The injection or inflation had to be repeated in six cases, and in three only was the inflation or injection successful. In case No. 21 injection was used no less than four times before a satisfactory result was obtained. In seven cases the patients were under 12 months of age, one case was aged $6\frac{1}{2}$ years, and one $2\frac{1}{2}$ years.

The treatment by inflation when used alone failed to bring about a final and complete reduction in one case (No. 8). It failed to reduce, or the reduction was followed by a reappearance of the tumour, which necessitated laparotomy in thirteen cases; that is, inflation in two cases and injection in eleven.

With regard to this method of treatment, there is no doubt that, given an early case, it will be most efficacious if carried out with the child under chloroform; but if there is the slightest doubt as to complete reduction, an exploratory laparotomy should not be delayed an hour; in fact, it is always well to have every preparation for opening the abdomen made prior to an attempt at reduction either by injection or inflation.

It would seem from the thirteen cases in which the tumour reappeared after apparent reduction by injection or inflation, that either reduction was complete and that a fresh intussusception was afterwards formed, or, what is to my mind much more likely to be the true state of matters, that the last portion of an ileo-cæcal invagination has remained unreduced, but being so small in amount, it has escaped detection by external palpation.

Given that the valve is never really reduced, it is easy to see how the whole tumour may very rapidly reappear. Laparotomy and post-mortem examination both bear out the fact that it is probably in the majority of cases the correct explanation of the recurrence of the trouble.

iii. That of performing abdominal section and reducing the intussusception, or, if this be impossible, of excising it and making an intestinal anastomosis, or of making an artificial anus above the obstruction.

Laparotomy, as the primary treatment, was undertaken in eleven cases, of which seven terminated fatally and four recovered. Of the seven fatal cases, the duration of symptoms before operation was respectively:—24 hours, 3 days, 4 days, 6 hours, 2 days, 18 hours, 3 days. It will be noticed that four of these seven may be considered to be late cases, and the condition found in them, that of gangrene of the invaginated portion, proves this, and militated much against a successful result. In the first case of the seven, the intussusception was easily reduced, but the child died a few hours after operation, the temperature having risen to 105.8° F. In another, the invagination was not discovered at the operation, and the child died unrelieved; and in the other too much difficulty was experienced in bringing about reduction.

Laparotomy was performed after an attempt or attempts had been made by injection or inflation to reduce the intussusception, and had either failed entirely or the tumour had reappeared after apparent reduction, in fourteen cases, of which ten were fatal and four successful.

Of the fatal cases, in the first the intussusception was not discovered at the operation and the child died unrelieved. In

the second, gangrene was found, the patient being a woman aged 30 years. In the third, the operation was very difficult, and somewhat prolonged owing to the chloroform being taken very badly. In the next case (No. 12), a boy aged 3½ years, lived after the abdominal section with all the symptoms produced by the intussusception relieved for eight days. He then developed intestinal obstruction owing to a kinking of a piece of adherent bowel. He died after a second laparotomy. This case therefore is perhaps one which should not be included among the fatal ones after laparotomy for intussusception. In another case, where the symptoms had been in evidence for four days, a female infant succumbed after an excision of an irreducible intussusception and the formation of an artificial anus. The following case was of a similar nature, and in the one after it the child died of shock. In two others the intussusception was irreducible, and in the last again not found.

Altogether, then, 25 cases had abdominal section performed, out of which 17 died and 8 recovered.

In the previous series of 28 cases, 13 cases were submitted to laparotomy, and out of these 11 died and only 2 recovered. The results, therefore, of the second series show a decided improvement.

Briefly, the treatment employed and its result in the 40 cases under review was the following:—

I. *Three* cases were left without active treatment; of these *two* recovered and *one* died.

II. *One* had merely external manipulation through the abdominal walls, and it lived.

III. (*a.*) *Four* had inflation alone performed; three survived and one succumbed.

(*b.*) *Five* had injection only, each one followed by a satisfactory result.

(*c.*) *One* had inflation, succeeded by injection, which succeeded in reducing the bowel.

(*d.*) *Eleven* had injection alone, followed subsequently by laparotomy, seven dying and four living.

(*e.*) *Two* had inflation alone, followed by laparotomy, and both died.

(*f.*) *One* had inflation and then injection, and this followed by laparotomy with a fatal result.

IV. *Eleven* had laparotomy performed primarily, that is, without previous treatment by injection or inflation, and seven died and three recovered.

The remaining case is without detailed notes, but the result was that of recovery.

The conclusions arrived at from the previous analysis of 28 cases are emphasised by the facts evinced by the analysis just completed.

Early diagnosis is of the utmost importance, and any child presenting one or both of the most important signs or symptoms of intussusception, namely, the passage of blood-stained mucus per rectum, and the presence of a tumour felt per abdomen or per rectum, should at once be treated as if it were a case of invaginated bowel. If seen early, a trial of injection of liquid under chloroform should be made in cases presenting a definite tumour, followed by *immediate* laparotomy if the tumour remain unreduced, or if there is uncertainty as to its reduction.

Laparotomy as a primary treatment is to be undertaken in cases where a definite tumour is not discovered, but where symptoms are sufficiently suspicious to make intussusception likely, and it is to be undertaken when the case is a late one, or where injection or inflation has failed.

I venture to think the above analysis tends to prove that intussusception in the last few years is being more accurately diagnosed, and that in its all-important early stages; that its treatment is more prompt, and that the results are greatly better.

Still the condition is one of most grave moment, and its death-rate is all too high, but it is to be hoped that this will be still further considerably diminished in years shortly to come.

I have refrained from including in this analysis any cases but those which have occurred within the wards of St. Bartholomew's Hospital, but other statistics which have been published elsewhere all go to prove the truthfulness of the above conclusions.

FORTY CASES

No. of Case.	Year.	Physician or Surgeon.	Sex.	Age.	Duration of Disease on Admission.	Symptoms.
1.	1891.	Dr. Church, Mr. Butlin.	F.	4 mos.	18 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in *left* loin, and per rectum.
2.	1891.	Sir T. Smith.	F.	8 mos.	?24 hours.	Blood-stained mucus per rectum. Tumour felt per abdomen and per rectum.
3.	1891.	Sir T. Smith.	F.	30 yrs.	3 days.	Abdominal pain. Vomiting. *No* hæmorrhage per rectum. *No* tumour felt per abdomen or rectum.
4.	1891.	Mr. Willett.	M.	5 mos.	3 days.	Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen and per rectum.
5.	1891.	Mr. Willett.	M.	5 mos.	5½ hours.	Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen and per rectum.
6.	1891.	Mr. Bruce Clarke.	M.	13 mos.	24 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum.
7.	1892.	Mr. Bruce Clarke.	F.	5 mos.	24 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour per abdomen in region of descending colon and per rectum.
8.	1892.	Mr. Butlin.	F.	4 mos.	5 days.	Vomiting. Blood-stained mucus per rectum. *No* tumour felt per abdomen or per rectum.
9.	1892.	Mr. Bruce Clarke.	M.	6 mos.	12 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt in *left* iliac fossa and per rectum.
10.	1892.	Mr. Bowlby.	M.	4 mos.	36 hours.	Vomiting. Abdominal pain. Blood-stained mucus per rectum. Tumour felt in *left* side per abdomen and per rectum.
11.	1892.	Mr. Baker.	M.	2½ yrs.	...	.....

OF INTUSSUSCEPTION.

Treatment.	Result.	Remarks.	Reference.
Inflation on second day. Tumour disappeared, but felt again soon after. *Laparotomy* on second day. Intussusception not found.	Death.	A good deal of previous constipation. No post-mortem.	Faith, 134.
Inflation with air, and external manipulation under chloroform. Reduction.	Recovery.	An early case with good result.	Female, ii. 1662.
Injection of two pints of oil on third day. *Laparotomy* on fourth day. 5-inch intussusception. Gangrene. Artificial anus.	Death.	A purely *enteric* intussusception, two feet above valve. Polypus found in bowl.	Female, ii. 2092, Museum Specimen, No. 2191C.
Inflation with air under chloroform.	Recovery.	A rather late case, but with good result.	Male, iii. 1599.
Inflation with air under chloroform. Reduction. Return of tumour. *Inflation* again; no return.	Recovery.	This was the same patient as No. 4. Readmitted with same symptoms.	Male, iii. 1661.
Laparotomy on second day. Intussusception reduced easily.	Death.	Temperature rose to 105°–8° F. before death, a few hours after operation. *P.M.* Nothing abnormal.	Male, v. 2267.
Injection of water. Reduced. No return of intussusception.	Recovery.	This patient, nine days before admission into St. Barth. Hosp., had had similar symptoms, and had been taken to Paddington Green Children's Hospital.	Female, v. 391.
Inflation on fifth day with air under chloroform. Apparent reduction. Reappeared three days later, and child died.	Death.	Apparently, not a very acute case. *P.M.* No difficulty in reducing intussusception. No peritonitis.	Female, v. 1094.
Injection on first day with hot milk. Apparently reduced. *Laparotomy* on second day. Intussusception easily reduced.	Recovery.	Opium was given freely after operation.	Male, iii. 2265.
Injection on second day of hot water under chloroform. No result. *Laparotomy* immediately; some difficulty in reducing gut.	Death.	Considerable difficulty during operation owing to chloroform being taken badly.	Male, iv. 911.
.....	Recovery.	Notes of case missing.	Male, v. 533.

FORTY CASES OF

No. of Case.	Year.	Physician or Surgeon.	Sex.	Age.	Duration of Disease on Admission.	Symptoms.
12.	1892.	Dr. Church, Mr. Harrison Cripps.	M.	3½ yrs.	46 hours.	Abdominal pain. Vomiting. Diarrhœa; no blood at first. Tumour felt on *right* side of abdomen and per rectum.
13.	1893.	Mr. Bowlby.	F.	9 mos.	6 hours.	Abdominal pain. Blood-stained mucus per rectum. Tumour felt per abdomen to *left* of umbilicus and per rectum.
14.	1893.	Mr. Marsh.	F.	9 mos.	8 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen on *right* side above umbilicus.
15.	1893.	Mr. Butlin.	F.	6 mos.	3 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in *left* iliac fossa.
16.	1893.	Mr. Bruce Clarke.	M.	7 mos.	4 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in *left* iliac region. Not felt per rectum.
17.	1893.	Mr. Lockwood.	M.	8 mos.	30 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in *right* iliac fossa, but not per rectum.
18.	1893.	Dr. Church, Mr. Willett.	F.	4 years.	2 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen transversely across above umbilicus. Not felt per rectum.
19.	1893.	Dr. Church, Sir T. Smith.	M.	9 mos.	24 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour not felt on admission. Under chloroform tumour felt indistinctly high up in *right* side of abdomen.
20.	1894.	Mr. Langton.	F.	6 mos.	30 hours.	Vomiting. Slight amount of blood per rectum. *No* tumour felt.

INTUSSUSCEPTION—*Continued.*

Treatment.	Result.	Remarks.	Reference.
Inflation on third day with air under chloroform. Tumour partially disappeared, but still felt under liver. *Laparotomy* four hours later. 8-inch intussusception, easily reduced, except the last inch.	Death.	The symptoms were not very acute. The child did well for eight days, then had pain in abdomen. Intestinal obstruction supervened, and a second *laparotomy* was performed fourteen days after first. A piece of small intestine was found adherent and kinked.	Faith, 178.
Injection on first day of water. Apparent reduction. Tumour reappeared next day. *Injection* again on second day. Reduction.	Recovery.	An early case. Probably not complete reduction at first. Good result in the end.	Female, iv. 1712.
Laparotomy on first day. Intussusception easily reduced.	Recovery.	An early case, with a good result. Temperature rose to 102° F. after operation.	Female, iv. 2141.
Laparotomy on third day. Gangrene of bowel. Resection, with suturing of ends.	Death.	A late case. Died three hours after operation. *P.M.* No peritonitis. Sutured intestine water-tight.	Female, v. 1250.
Laparotomy on fourth day in left linea semilunaris. Intussusception irreducible. Gangrene. Resection; ends sutured together.	Death.	A late case. Death two hours after operation.	Male, iii. 2137.
Injection on second day of water under chloroform. No reduction. *Laparotomy* immediately in right linea semilunaris. Intussusception easily reduced.	Recovery.	A fairly early case. *Ileo-colic* variety.	Male, v. 873.
Injection on second day. Tumour said to have disappeared. Reappeared three days later. *Manipulation* under chloroform said to have reduced it. Tumour reappeared soon after. *Laparotomy* on second day after reappearance. Intussusception reduced easily, except last inch.	Recovery.	A sub-acute case. The recurrence of the tumour points probably to incomplete reduction. Cystitis occurred during convalescence.	Faith, 30.
Laparotomy on second day. A very small intussusception, easily reduced.	Recovery.	The advantage of an anæsthetic in diagnosis is well seen in this case.	Faith, 182.
Rest in bed.	Recovery.	A very doubtful case of intussusception.	Female, iii. 68.

FORTY CASES OF

No. of Case.	Year.	Physician or Surgeon.	Sex.	Age.	Duration of Disease on Admission.	Symptoms.
21.	1894.	Mr. Butlin.	F.	7 mos.	4 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour easily felt per abdomen in *right* iliac fossa under chloroform and per rectum.
22.	1894.	Mr. Langton.	M.	5 mos.	6 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen on *right* side, but not per rectum.
23.	1894.	Mr. Marsh, Sir Dyce Duckworth.	M.	7 mos.	2 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen on the *right* side at the lower part, very distinct under chloroform, but not felt per rectum.
24.	1894.	Mr. Marsh.	M.	4 wks.	5 days.	Abdominal pain. Vomiting. *No* blood or mucus per rectum. Under chloroform tumour felt in *right* iliac fossa. Nothing felt per rectum. Patient passed healthy motion during examination.
25.	1894.	Mr. Butlin.	M.	6½ years.	15 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen, at the level of and to the *right* of umbilicus.
26.	1894.	Sir Dyce Duckworth.	M.	3 years.	6 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in its upper half between umbilicus and ribs, but not felt per rectum.
27.	1894.	Dr. Brunton, Mr. Walsham.	F.	9 wks.	18 hours.	*No* apparent abdominal pain. *No* vomiting. Blood-stained mucus per rectum. *No* tumour felt per abdomen or per rectum at first. Thirty hours later a tumour was felt per abdomen.
28.	1895.	Mr. Willett.	F.	2½ years.	12 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in region of splenic flexure.

INTUSSUSCEPTION—*Continued.*

Treatment.	Result.	Remarks.	Reference.
Injection on fourth day of 10 oz. of water under chloroform with Higginson's syringe. Tumour said to be reduced. Reappeared a few hours later. *Injection* again effectual. Reappeared again. *Injection* once more; again reduced, but reappeared shortly after. *Injection* for the fourth time. Reduced and remained so.	Recovery.	A late case, and yet reduced by injections. Illustrates well the liability to recurrence after supposed reduction. It is possible the last portion was never completely reduced.	Female, v. 2315.
Laparotomy on first day. No intussusception found. Abdominal lymphatic glands enlarged.	Death.	*P.M.* lying in the upper and left-hand part of the abdomen, under the stomach, was an intussusception about five inches long. Reduction easily effected.	Male, iii. 1975.
Injection on second day of 8 oz. of warm milk without chloroform. Tumour *not* reduced. *Injection* of 20 oz. under chloroform, by hydrostatic pressure of $2\frac{1}{2}$ feet, quite effectual.	Recovery.	The advantages of chloroform both in diagnosis and treatment are well shown in this case.	Male, iii. 2727.
Rest in bed.	Recovery.	A very doubtful case of intussusception.	Male, iv. 2769.
Inflation on the first day. Failed to reduce. *Injection* of hot water by syringe under chloroform.	Recovery.	An early case, but acute, with excellent results.	Male, v. 1883.
Manipulation of the abdomen was performed by many observers with a view of feeling the definite tumour, and apparently this reduced the intussusception.	Recovery.	A very interesting case, early in its history, but with acute symtoms. The manipulation was borne without pain.	Elizabeth, 138.
Laparotomy on second day, thirty hours after admission. Six inches of intussusception reduced, but the colon was ruptured in so doing.	Death.	*P.M.* No peritonitis, and the portion of small intestine did not look as if it had been gripped for forty-eight hours.	Faith, 166.
Injection on first day of water without chloroform. Some uncertainty as to reduction. Child was then placed under chloroform, but no tumour detected.	Recovery.	An early case. The value of anæsthetic clearly shown.	Female, ii. 2752.

FORTY CASES OF

No. of Case.	Year.	Physician or Surgeon.	Sex.	Age.	Duration of Disease on Admission.	Symptoms.
29.	1895.	Mr. Marsh.	F.	4 mos.	4 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour *not* felt per abdomen, but felt per rectum.
30.	1895.	Sir T. Smith, Dr. Church.	M.	4 mos.	24 hours.	Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen on *left* side of abdomen and per rectum.
31.	1895.	Mr. Walsham.	M.	10 wks.	18 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. *No* tumour to be felt per abdomen or per rectum even under chloroform.
32.	1895.	Mr. Willett.	M.	6 mos.	22 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen across the upper part, and down to *left* iliac region, but not felt per rectum.
33.	1895.	Mr. Willett.	M.	6 mos.	4 days.	Abdominal pain. Vomiting. Blood and mucus per rectum on second day. Bowels not open since. *No* tumour felt per abdomen or per rectum even under chloroform.
34.	1895.	Mr. Langton.	M.	3½ years.	12 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in *left* iliac fossa.

INTUSSUSCEPTION—*Continued.*

Treatment.	Result.	Remarks.	Reference.
Injection on fourth day with water. Failure to reduce the tumour from rectum. *Laparotomy* on fourth day, when it was found impossible to reduce the gut. It was excised, and an artificial anus made.	Death.	A late case. Much difficulty was experienced at laparotomy in returning small intestines into abdomen.	Female, iv. 2799.
Injection on first day with water under chloroform. Reduced, but reappeared next day. *Injection* on second day; again reduced, but reappeared next day but one. *Injection* on fourth day, but not reducible. *Laparotomy* on fourth day. Intussusception irreducible, and therefore artificial anus made.	Death.	The repeated reappearance of the tumour tends to show that it was never really completely reduced by the injections.	Male, i. 1908.
Laparotomy on first day. Intussusception reduced with some difficulty.	Death.	An early but very acute case in a very young subject.	Male, i. 2490.
Injection on first day with soap and water; no effect. *Inflation* then with air; no effect. *Injection* again with oil; no effect. *Laparotomy* on second day. Intussusception fairly easily reduced.	Death.	*P.M.* The mesenteric lymphatic glands were markedly enlarged.	Male, ii. 1150.
No operative procedure, as diagnosis so uncertain.	Death.	*P.M.* An unreduced intussusception in *right* lumbar region. Reduced with much difficulty. It was *purely colic*. An interesting case without any well-marked symptoms, and therefore very difficult of diagnosis.	Male, ii. 1173.
Injection on first day of 15 oz. of milk and water by 2½ feet of hydrostatic pressure under chloroform. Reduced, but reappeared eight hours later. *Injection* again on second day under chloroform. Again reduced, but soon returned. *Laparotomy* on second day, when a portion of gut was found inflamed and ecchymosed, and it was therefore thought to be reduced intussusception.	Death.	*P.M.* An intussusception 3½ inches long was found lying over the lumbar spine. Reduced with some difficulty, especially the last portion. It is questionable whether the injections ever completely reduced the intussusception.	Male, iii. 1533.

FORTY CASES OF

No. of Case.	Year.	Physician or Surgeon.	Sex.	Age.	Duration of Disease on Admission.	Symptoms.
35.	1895.	Mr. Langton.	M.	12 years.	3 days.	Abdominal pain. Vomiting. *No* blood or mucus per rectum, the bowels being confined altogether. Tumour felt per abdomen in the *right* side.
36.	1895.	Mr. Butlin.	M.	12 years.	4 days.	Abdominal pain. Vomiting. Bowels not opened. A softish swelling could be felt to the *right* side near the edge of rectum.
37.	1896.	Sir T. Smith.	M.	2 years 8 mos.	8 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen on *right* side below umbilicus.
38.	1896.	Sir T. Smith.	M.	4 mos.	9 hours.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in epigastrium.
39.	1896.	Dr. Hensley, Mr. Marsh.	M.	6 mos.	?? 3 weeks. ? 5 days.	Abdominal pain. Vomiting. Blood-stained mucus per rectum. Tumour felt per abdomen in umbilical and *left* iliac regions, and also felt per rectum.
40.	1892.	Dr. Church.	M.	2 years 2 mos.	...	Notes of case missing.

INTUSSUSCEPTION—*Continued.*

Treatment.	Result.	Remarks.	Reference.
Laparotomy on third day; gangrene of intussuscepted portion. Resection. Anastomosis by Murphy's button.	Death.	A *purely enteric* intussusception. Patient died four days after operation. *P.M.* Intestinal matter found in *right* iliac fossa. No general peritonitis. Intestine at site of anastomosis found in a state bordering on gangrene. There was a duodenal ulcer which had perforated and had probably been the immediate cause of death.	Male, iii. 3491.
Laparotomy on fourth day. Three distinct intussusceptions found. All easily re-reduced. Bowels were not opened till six days after operation.	Recovery.	Another *purely enteric* case. A very interesting companion with Case No. 35.	Male, v. 2096.
Injection on first day of water under chloroform. No reduction. *Laparotomy* on first day. Some difficulty in bringing intussusception to the surface, but it was easily reduced.	Recovery.	An early case of older age than is usual, with a good result.	Male, i. 1365.
Injection on first day of milk under chloroform. No reduction. *Laparotomy* on first day. Intussusception could not be reduced, and patient too collapsed for resection.	Death.	An early case, but an acute one in a young child, with fatal result. Compare Case No. 37.	Male, i. 2185.
Injection with warm oil without chloroform. No avail. *Injection* with milk and water under chloroform. ? Reduction. *Laparotomy* the day after injections. Intussusception fairly easily reduced.	Death.	*P.M.* A two-inch ileo-cæcal intussusception found unreduced, but it did not seem to have been invaginated for long. The history somewhat points to a chronic intussusception. It is doubtful whether injection caused reduction.	Surgical Male Register, iv. 1023; also Medical Male Register, iv. 89.
Laparotomy.	Recovery.	.....	.....