INSTRUCTIVE MISTAKES.

CASE 1.

ACID INTOXICATION MISTAKEN FOR INTUSSUSCEPTION.

D. B., aged 5, was a bright, fat, and healthy girl, who had had no previous illness. She came of a healthy family, but the mother had suffered for many years from typical membranous colitis.

March 27, 1905. The child was taken with what appeared to be a simple "bilious attack," for which the circumstance that she had lately surreptitiously eaten a large quantity of chocolate was given as the cause. The bowels were opened after a mild purgative, and it was noticed there was some mucus in the stools. The vomiting continued in spite of this, occurring in small quantities every few hours. She was restless and uncomfortable, but had no definite pain or tenderness.

April 1. The condition described in the last note had continued with very little alteration. Vomiting incessant, with no special relation to food. Mucus passed by rectum after an enema, but no fæces. Mental condition was drowsy and lethargic, the tongue was furred, and the breath mawkish.

April 2. The condition having remained unchanged, a consultation was held with an eminent physician. The abdomen was decidedly full but not rigid, and the child's natural obesity made it difficult to say whether there was any distention. An elongated resistance could be felt below the right costal margin, and this was thought to be an intussusception. The urine showed no sugar or albumin.

April 3. A second consultation was held with a surgeon, who agreed that the case was probably one of intussusception, or at any rate some form of intestinal obstruction, and advised that an exploratory operation should be done without delay. The pulse and temperature from the outset of the illness had not risen above normal.

Operation (April 3, 1905).—Anæsthetic, open ether and chloroform. Median incision. Nothing abnormal discovered except that the liver was rather large and fatty, and it must have been the lower margin of this that was felt below the ribs. The operation was badly borne, and strychnine had to be administered before the end. The child remained in a drowsy condition, with incessant vomiting, until her death, which took place on the evening of the next day. The pulse became feeble and rapid (144), and the temperature rose steadily to 103·4 before death.

Autopsy.—No organic disease of any kind was discovered by a complete post-mortem examination, beyond the fact already noted of the large, fat liver. A small quantity of urine was in the bladder, and it gave the reactions of both acetone and diacetic acid.

There are several points about this case of great practical importance. After the event, it was easy to see that the combination of drowsiness and vomiting with sweet-smelling breath ought to have led to the suspicion of acid intoxication, which could easily have been confirmed by the examination of the urine for the acetone bodies. But at the time, unfortunately, this idea did not present itself, and the vomiting, passage of mucus by the rectum, abdominal fullness, and sausage-shaped swelling, all suggested the diagnosis of intussusception. The absence of colicky pain ought, however, to have given us warning, and it did indeed make us think that the case was unusual. But the rule which applies to most cases of suspected intestinal obstruction, viz., that it is less dangerous to open the abdomen than to delay, was in this case a fatal mistake. For whatever the nature of the metabolic change which brings about acute acidosis may be, there is no doubt that either the traumatism of a big operation, or the administering of a general anæsthetic, particularly chloroform, will aggravate it to a fatal issue.

CASE 2.

INTUSSUSCEPTION MISTAKEN FOR ONE OF INFANTILE ENTERITIS.

William S., aged 10 months. Admitted on August 1, 1912, for diarrhœa and vomiting. On admission the child was rather collapsed and blue; temperature 97°; pulse 130. The child was constantly crying as if in pain. Motions, three or four each day, were greenish, with a little blood and mucus. Vomiting occurred after each feed. A provisional diagnosis of gastro-enteritis was made. Ten drops of brandy and quarter of a grain of calomel were given every four hours during the first day. From August 2nd to 6th the condition remained much the same as in the last note. The stomach and rectum were washed out twice a day, and a mixture containing bismuth and salol was administered. The stools continued to be loose, and contained both mucus and blood, but were never more frequent than four each day. It was noticed for the first time on August 6, that the abdomen was distended, and the child was transferred to the surgical side of the hospital. On its arrival there the condition was very grave: pulse 160; respirations 40; temperature 96; the child being blue and cold. A rather indefinite resistance was felt above the umbilicus. Diagnosis of intussusception was made, and immediate operation resorted to.

Operation (Aug. 6, 1912).—Median incision. The common type of ileo-colic intussusception was discovered, the apex of the intussusceptum being in the upper part of the descending colon. A reduction was easily effected, and the operation was concluded by performing an appendicostomy through a stab wound. By means of a catheter tied in to this a continuous saline was administered, but the child died twelve hours later.

There can be no doubt that if the nature of this case had been recognized when the child was first admitted it would have had a very good prospect of recovery. Even after five days, and in spite of drugs and purgatives, the invagination of the bowel was readily reducible. The child died as the result of the constant vomiting after food which had continued for six days. The fact

that the abdomen showed neither distention nor tumour during the first four days was due to the fact that complete obstruction did not exist. The principal feature which might have prevented this mistake was the scanty nature of the stools. In a case of gastro-enteritis the motions are usually very much more numerous than three or four a day. In this case, although they were only few in number, each stool contained both blood and mucus. Enteritis, on the other hand, rarely causes blood in the stools unless the diarrhœa is very severe.

CASE 3.

INTERNAL HÆMORRHAGE FROM A DEEP EPIGASTRIC VEIN IN A HERNIA OPERATION.

Frederic P., aged 42, a labourer, was admitted to the hospital for double inguinal hernia which had been in existence for about two to three years. He was a thin spare man, with the lax abdominal wall which is associated with certain types of hernia. There was a direct inguinal hernia on both sides, neither of which descended into the scrotum.

Operation (Sept. 9, 1912).—The left side was operated upon first in the ordinary way. The sac had a broad base, and it was pulled well out of the abdomen, clamped with two forceps, and the cut edges sewn together. Otherwise the usual Bassini operation was carried out. The right side was similarly treated, and on separating the structures of the cord from the sac and opening the latter, there was a good deal of free blood. It was naturally thought that this came from one of the spermatic veins, and some time was spent in searching for a wounded vessel. At last it was noticed that the blood was really welling up from the abdomen through the neck of the sac, and at the same time the anæsthetist complained that the patient's pulse was becoming rapid and weak. As it was probable, but not certain, that the intraperitoneal hæmorrhage arose from the left operation area, the abdomen was opened by a median incision. The pelvis was full of venous blood, and on mopping this out, the bleeding was found to proceed from one of the deep epigastric veins on the outer extremity of the sutured hernial sac. It was readily secured from within the abdomen, the median incision closed, and the operation completed on the right side. The patient made a good recovery.

This severe internal hæmorrhage from one of the deep epigastric veins is an accident the origin of which is easy to understand. The direct hernia had a broad-necked sac, and in pulling this up so as to remove the redundant peritoneum completely, the epigastric vessels must have been lifted up and either cut or torn by the forceps.

It is not so easy to explain why the hæmorrhage was into the peritoneum rather than into the tissues of the wound, as the vessel lies outside the peritoneal cavity. The suture which occluded the neck of the sac must have missed its outer part, together with the wounded vein. The conjoined tendon sutured to Poupart's ligament in front of the neck of the sac, prevented the blood from appearing in the wound. It was very fortunate that in this case the necessity of operating on the other side revealed the presence of the internal hæmorrhage; otherwise the issue might well have been a fatal one.

CASE 4.

HÆMORRHAGE FROM A RUPTURED ILEOCOLIC ARTERY IN THE OPERATION FOR ACUTE APPENDICITIS.

Charles W., aged 35, an ironworker. Admitted to hospital with a typical condition of acute appendicitis. He gave a history of three previous attacks, each of about a month's duration, during the past two years. The present attack began three days previously, with abdominal pain and vomiting. A perfectly definite tender mass could be felt low down in the right iliac fossa.

Operation (Nov. 4, 1912).—Abdomen opened by a gridiron incision, and an indurated mass exposed formed by the cæcum, behind which lay the appendix, pointing almost directly upwards. The appendix was almost entirely gangrenous, and the parts around were infiltrated by inflammatory œdema, but there was no pus. The posterior position of the appendix and the induration of its mesentery made it necessary to pull the cæcum downwards and forwards in order to complete the operation. When this had been done in the usual way, bright blood was found to be welling up from the depths of the wound. No amount of swabbing through the widely retracted incision revealed the source of the bleeding, and it was necessary therefore to cut through the transverse muscles of the abdomen upwards parallel to the semilunar line.

It was found that the traction on the cæcum had torn a large hole in the root of the mesentery, and the ileocolic artery had been ruptured in its terminal part. The bleeding vessel was secured, the hole in the mesentery sewn up, and the wound closed, with drainage. Recovery was uneventful; the drain was removed four days later, and the patient left hospital in four weeks.

The explanation of this accident is readily given. The inflammatory induration, originating in the appendix, had extended to the root of the mesentery, rendering this so friable that it was readily torn by the traction upon the cæcum. It is probably wiser in a case of plastic appendicitis to open the abdomen freely by a simple oblique incision, rather than to employ the gridiron opening, which necessitates traction upon the cæcum for the exposure of a posteriorly situated appendix.