TRANSACTIONS
OF THE
PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting held January 3, 1921

The President, Dr. G. G. Ross, in the Chair

INTUSSUSCEPTION

Dr. T. Turner Thomas presented two infants: the first, a boy, when aged seven months, October 8, 1919, at about 8.30 A.M., was seized with severe pain in the abdomen. Began to vomit soon afterward and continued to do so. No bowel movements after pain began. At 9 P.M. Dr. M. V. Leoff was called and he in turn called in Dr. James H. McKee who diagnosed intussusception and advised immediate operation. This was begun about 2 A.M. at a private hospital, Doctor Leoff assisting. Right rectus incision with its centre about opposite the umbilicus exposed a mass which was found to be an intussusception. There was no evidence of adhesive inflammation, and by gentle traction on the entering portion of the small intestine and pressure on the distal end of the mass the intussusception was slowly reduced and proved to be of the ileocecal variety. The cæcum was considerably thickened and indurated from œdema. The abdominal wound was closed and dressed and supported by adhesive-plaster strips across the abdomen. Recovery was without incident and the patient sent home in a week.

The second, a girl, when four months old, was perfectly well until the evening of October 29, 1919. She suddenly and without any apparent cause began to cry. This continued all night, and the following day Dr. Israel Myers was called. During this day and the next no relief was afforded. Two stools had occurred so that there was not complete intestinal obstruction, and this made the diagnosis more difficult. No abdominal tumor could be felt even by digital examination of the rectum. Doctor Myers called in Dr. James H. McKee on Saturday and intussusception was diagnosed. Operation was begun about 8 P.M. on the same evening at St. Agnes Hospital. A right rectus incision opposite the umbilicus exposed distended small intestine. The large bowel was found above and to the left side of the abdomen and soon seen to be the site of an indurated mass which proved to be an intussusception. The proximal end of it was exposed with considerable difficulty near the midline at the level of the transverse colon. The entering portion of the small intestine (intussusceptum) was held firmly and closely to the posterior abdominal wall and was exposed with much traction on the surrounding viscera. The distal end of the intussusceptum was felt and seen to extend more than

halfway through the sigmoid loop and to move backward and forward within the intussuscipiens, showing that it was not adherent. After prolonged but gentle traction on the small intestine and pressure from below on the end of the intussusceptum it was gradually and completely reduced.

There were no adhesions and no lymph-masses indicating inflammation. It was observed in this case that as the final steps of the reduction were taking place the ileocecal junction appeared first, then the base of the appendix, followed by the whole appendix, and finally the end of the cæcum successively. This would seem to indicate that the last part to appear was the first to go in in the formation of the intussusception, *i.e.,* that the first part to invaginate was the end of the cæcum and not the ileocecal junction as commonly supposed. Healing was uneventful and the patient was taken home at the end of a week.

EXCISION OF PORTION OF HUMERAL HEAD FOR RECURRENT DISLOCATION OF THE SHOULDER

DR. T. TURNER THOMAS said that he had referred briefly to the case he was now reporting in a communication now awaiting publication and would like here to develop from later occurrences and findings at operation in this case a very definite cause for some failures following the capsule operation. Of forty-eight shoulders on which operation has been done for recurrent dislocation, about twenty were epileptics. There were two distinct failures in the non-epileptic group and three in the epileptic. The particular cause of the failure was not discovered, except possibly in two epileptics in which the convulsions were very violent. The case here reported was shown at the operation to have recurred after each of two capsule operations, because the wearing away of the two bones forming the shoulder-joint where they come into violent contact in each dislocation had gone so far that their ability to retain the normal joint relations had disappeared. In practically every operation performed by the writer he had found the evidence of this wearing effect always in the same parts, *i.e.,* the posterior portion of the cartilage-covered part of the humeral head and the anterior glenoid margin. It has never seemed possible to determine when it has gone too far to permit a cure by the capsule operation. In one case, operated on eleven years ago, the dislocations had been occurring for between twenty-five and thirty years before operation and have never occurred since, although he had as many as one dislocation a day for one week and three in one day, and at operation a considerable defect was found at the usual site on the humerus and some defect of the anterior glenoid margin. The following case proves that the wearing effect can progress so far that a capsule operation will not be sufficient to cure.

Male, forty years old, an epileptic in the insane department of the Philadelphia General Hospital. First capsule operation done June 19,

1919, the second October 11, 1919. About December 1, 1920, he sustained the second dislocation following the second operation. After the first the shoulder had been immobilized about three months in an effort to add to the cicatricial tissue at the site of the original capsule tear and thus prevent further dislocations. A few days after this last dislocation an interne attempted reduction of the dislocation, and although he was confident he accomplished reduction, could not keep the head in the socket. A few days later still the writer had a similar experience. On December 13, 1920, with much difficulty and care the capsule was exposed through a posterior axillary incision. On opening the joint nothing more than the wearing away of the two bones at the usual sites was discovered, but while the humeral head could be placed in the glenoid cavity it could not be kept there because the glenoid would not retain it, but permitted it to slip over the anterior margin into the subcoracoid position. As the capsule operation had been a complete failure he did a partial excision of the humeral head as described and illustrated in the ANNALS OF SURGERY, April 2, 1917, p. 493. Both wounds were closed completely except for a small rubber drainage tube opening in the axillary wound. The tube was removed on the following day and the healing was uneventful.

With regard to the underlying pathology of shoulder dislocations, nearly twenty years ago Dr. G. G. Davis began to produce these dislocations on the cadaver, and he produced by hyperabduction apparently exactly the kind of dislocation that one usually gets in life. They could produce as many as they pleased and study them as much as they wanted. One thing he observed early was what Doctor Allis expressed forcibly, that it was difficult to prevent spontaneous reduction. After the head goes out of the socket in hyperabduction and the arm drops to the side there is a great strain on the head in the direction of the socket. But in many instances the anterior glenoid margin by its pressure against the posterior cartilaginous portion of the head offers an insuperable obstruction. In the cadaver dislocation, as Allis pointed out, the head slips over this obstruction easily and probably often does in life. When the locking occurs the pressure is so great that there soon develops a more or less deep groove in the humerus and a flattening of the anterior glenoid margin. In the excision he removed only the part of the head that offered resistance to the anterior glenoid margin and this constituted only a small portion and the only part that projects out of the socket in the dislocation. It is difficult to conceive of a dislocation occurring afterward. It may be possible, but he felt certain that if any part of the head leaves the socket in hyperabduction it can not stay out when the arm comes down to the side. One patient had three capsule operations done on his right shoulder preceding the excision, but all were failures. But there have been no dislocations complained of since the excision in the right shoulder about four years ago, and in the left one and a half years ago.

STRANGULATION OF AN INGUINAL HERNIA FOLLOWING A HALSTED OPERATION

DR. T. TURNER THOMAS presented a young man who, soon after rising from bed, on December 11, 1920, and while he was wearing a truss, was seized with severe pain in the region of his left inguinal hernia and throughout his abdomen, such as he had never experienced before. He was admitted to the Northeastern Hospital about 8 A.M. the same day and operated on about 9 A.M. Examination just preceding operation revealed a small, firm tumor at the site of the external inguinal ring about the size of a walnut which the interne had tried to reduce without success. He had no bowel movement for twenty-four hours preceding admission. The hernial tumor was very tender to pressure which caused a nauseating pain in the abdomen. There was marked abdominal rigidity.

About twenty-five years ago he says he was operated on for a left inguinal hernia. March 22, 1919, he was operated on for a double inguinal hernia, but in the following June had a recurrence on the left side and a third operation was done for it on August 6, 1919. When fully etherized for the fourth operation on December 11, 1920, light pressure reduced the hernia fully. Upon exposure by incision the hernial sac was found protruding from the external ring only, and there was no bulging in any other part of the canal. The vas deferens was seen coursing upward and outward lying on the external oblique aponeurosis, and it was traced to the site of the internal ring where the finger could be pushed easily through a considerable opening in the external oblique. There was no protrusion here at the time of the operation, and none was found on examination just preceding operation, but the patient says that the only hernia he knew anything about preceding this acute attack was at the internal ring where he said the pressure of the truss pad was exerted. A few veins were found passing upward with the vas and disappearing through the internal ring.

The external oblique was divided as in a Bassini operation, the hernial sac was opened and the index finger passed through the neck of it into the abdominal cavity. The patient at this time coming partly out of the ether and straining the muscle gripped the finger very tightly, indicating that the strangulation was probably due to this muscle contraction. The internal oblique and transversalis muscles were found separated from the shelving edge of Poupart's ligament and this separation continued for an inch or more to the outer side of the internal ring. The operation was completed as in a Bassini, the remains of the cord being left between the internal oblique below and the external above.

DR. HUBLEY R. OWEN said that they had quite a number of cases of hernia in the Police and Fire Departments. Many of these cases have been operated upon with excellent results. There had not been many recurrences. It was his opinion that of these recurrences the majority are due to lack of after-care of the patient, and not to the technic em-

ployed at the time of the operation. During his own absence, without meaning to say anything derogatory to anyone who may have substituted for him, the number of cases of recurrent hernia increased three times the number they had usually had. When he investigated he found men on active duty in the Police and Fire Departments one month after their discharge from the hospital. The rule had been to order a man on light duty one month after his discharge from the hospital, and no heavy duty for three months after the operation. He believed this to be a very important point. Of two cases of recurrent hernia operated on recently, he found that they had returned to laborious work in less than a month after the primary operation. It is the usual thing in a hospital that after the stitches have been removed the resident discharges the case in about two or three weeks, and no advice is given to the patient, and he returns to laborious work too early.

He had had two unusual cases recently. Both were bilateral inguinal herniæ. They returned to him six weeks after operation and each had a femoral hernia on the side on which he had transplanted the rectus muscle.

SLIDING HERNIA OF THE URETER

Dr. George G. Ross read a paper with the above title, for which see page 613.

AMNIOTIC HERNIA

Dr. E. J. Klopp reported the case of a female child delivered at full term July 22, 1920, by Dr. George A. Ulrich. It was the mother's first pregnancy. The head and shoulders were born spontaneously, the body stuck and required extraction. The membrane over a large abdominal protrusion was torn, and there was bleeding from the vessels of the cord. A clamp was applied to control the bleeding, the cord was ligated and cut. A large pad of cotton was placed over the abdomen and the child was taken to the Jefferson Maternity Hospital, where it was operated upon fifty minutes after birth.

Occupying the greater part of the abdominal wall was a hernial protrusion, the covering was almost transparent and composed of amnion and peritoneum. A considerable portion of the small and large intestines had escaped through a two and one-half inch opening in the sac which occurred during birth. The liver was rotated, adherent and part of it contained in the protrusion.

The intestines were returned to the abdominal cavity, which was poorly developed. No attempt was made to free the liver. After ligation of the vessels the excess amnion was excised and the opening closed by mattress sutures of catgut, making considerable pressure on the abdominal contents. No attempt was made to bring the muscles together. The skin was incised around the margin of the hernia and extensively undermined in all directions, then sutured vertically over the amnion.

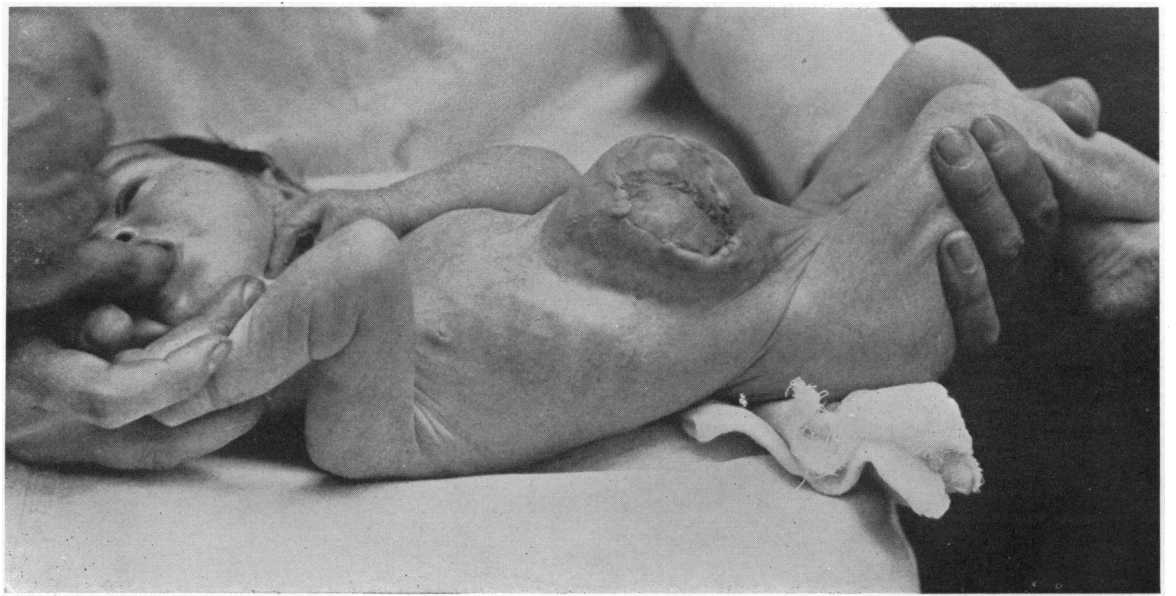

FIG. 1.—Amniotic hernia.

Seven days later some of the skin sutures pulled out, there was a little infection and finally retraction of part of the skin. The inner layer remained intact.

At first the child was fed modified milk with a dropper, later it took the bottle. Weight at birth, four pounds twelve ounces; weight September 6, 1920, five pounds three ounces; weight December 1, 1920, eight pounds three ounces. Accurate measurements of the hernia were not obtained before the operation. The child digested well, it cried as healthy children cry and was otherwise normal. The condition five weeks after birth is shown in the photograph (Fig. 1).

About December 1, 1920, it contracted pneumonia, and apparently recovered. Several days later there were symptoms of otitis media. The pediatrist in attendance incised both tympanic membranes. There was a copious discharge of pus from both ears. Notwithstanding free drainage, the temperature continued to rise and death occurred December 17, 1920.

The reporter's opinion was that the opportune time to operate upon cases of amniotic hernia is within a few hours after birth, before the stomach and intestines become somewhat distended with fluid, making closure more difficult, and before the amnion has begun to dry. It is questionable whether one should attempt, at this time, to bring the muscles together when there is a large defect in the abdominal wall.

PATENT URACHUS WITH SARCOMA DEVELOPING IN THE WALL

Doctor Klopp reported the history of a man, aged fifty years, who was admitted to Doctor Stewart's service, Jefferson Hospital, January 26, 1920, whose general health was good until two weeks ago, when he complained of abdominal pain, particularly about the umbilical region. When he applied at the dispensary for treatment, a small amount of thin, yellowish fluid was discharging from the umbilical region. The umbilicus and skin near by were inflamed. There were no urinary symptoms. Physical conditions otherwise were normal.

January 28, 1920, under general anæsthesia, at the suggestion of Doctor Stewart, a curved incision was made above the umbilicus. A small cavity was entered beneath the skin which contained but a few drops of yellowish fluid. A gauze drain was inserted. He was discharged from the hospital February 2, 1920. On March 2, 1920, he was readmitted to the hospital, in the service of Doctor Gibbon, to whom I am indebted for the privilege of operating upon and reporting the case. There was an intermittent sero-purulent dscharge from the umbilicus.

Operation (March 3, 1920).—Under general anæsthesia. A ureteral catheter was inserted for five inches. An elliptical incision was made around the umbilicus and then continued down toward the pubes. The umbilicus and tissue surrounding the catheter were excised. The catheter extended to within two inches of the bladder, from there on a cord-like

mass connected with the bladder. The omentum was adherent to the tract about an inch below the umbilicus. The abdomen was closed without drainage. The specimen was incised to demonstrate to students and a small section became detached and probably did not accompany the larger part to the laboratory.

Pathological Report by Dr. W. M. L. Coplin, March 10, 1920.

" Specimen consists of an irregular mass weighing 19 grams. One surface is covered by skin measuring 5 centimetres by 1.3 centimetres. Near the centre of the skin is the umbilicus, which is funnel-shaped and very deep, admitting the little finger to the first joint. As far as one can see, the funnel is lined by skin. A probe 2 millimetres in diameter inserted into this depression enters a canal which terminates 9 centimetres from the skin surface. At one area 4.5 centimetres from the skin, the canal has been opened, disclosing a rich red lining membrane. Fixation in 10 per cent. formalin; usual laboratory stains.

Histology.—The centre of the section is occupied by a canal 0.3 centimetre in diameter, small arc of which is lined by squamous epithelium, and probably represents the original tract. The remainder of the wall of the sinus is inflammatory tissue. Outside of this is considerable loose areolar tissue and some more compact and fibrous structure. Near one margin and extending into the tissue is a mass of mononuclear cells also containing a few giant-cells; it is believed that this area is sarcomatous. The structure believed to be new growth extends close, if not actually, to the periphery of the specimen, and it seems unlikely that all the diseased tissue has been removed.

This description is based on a transverse section of the specimen about one centimetre internal to the external opening.

Diagnosis.—Umbilical fistula, obviously the remains of a fetal structure, possibly urachus or omphalomesenteric canal. In the thickened inflamed wall sarcoma is believed to be developing."

He received four X-ray treatments at three week intervals after the operation.

The Wassermann was plus 2 prior to the operation and plus 1 December 31, 1920. There has been no history of lues nor has he ever had treatment for it. The wound is healed and symptomatically he is well.

ACUTE INFLAMMATION OF MECKEL'S DIVERTICULUM

Doctor Klopp presented a man, aged forty-seven years, who was referred by Dr. C. D. Smith to the Jefferson Hospital, November 19, 1920. He had complained of indigestion and gaseous eructations for many years. Frequently he was compelled to fast for several days. There often was nausea but he seldom vomited. Two years ago he was supposed to have had an attack of appendicitis. He was confined to bed for three days at that time.

On November 17, 1920, he had nausea and vomiting which was followed by generalized abdominal pain. He took cathartics, but his bowels did not move. The pain became more intense, and two days after the onset he called Doctor Smith.

On admission his temperature was 100.6°; pulse, 100; respiration 20. His facial expression indicated pain. The abdomen was distended, there was tenderness throughout, most marked, however, over the right lower

quadrant where a mass could be detected. On November 19, 1920, under general anæsthesia the abdomen was opened over McBurney's point. Several ounces of turbid fluid were wiped away. The mass was walled off by a gauze pack. A structure two inches long and three-fourths inch in diameter, having a mesentery and springing from the ileum approximately eighteen inches from the cæcum, dark red in color and in several places gangrenous, was removed by the technic one removes the appendix; in fact, this structure resembled an appendix very closely. From its location and appearance we called it an acutely inflamed Meckel's diverticulum. To the right of a hard, omental mass, and attached to it, was the appendix. It also showed evidence of inflammation and therefore was removed. Two gauze drains were inserted with the usual closure in such cases. The man made an uninterrupted recovery.

Cases of inflammation of Meckel's diverticulum are not common. It is said that there may be recurrent attacks, or that there may be perforation and peritonitis. One could not say whether the attack of so-called appendicitis two years ago actually was appendicitis. If the appendix had been encountered first in this operation the diverticulum might have been overlooked.

PYONEPHROSIS WITH LATE SECONDARY HEMORRHAGE

Dr. Arthur E. Billings reported the history of a colored man, aged twenty-five years, who was admitted to the Bryn Mawr Hospital October 20, 1920, complaining of pain and tenderness in the region of the left kidney, with fever and sweats. He said he had had bladder trouble since early childhood. In 1918 he had a large stone removed from his bladder at Camp Sherman, Ohio. Later in 1918 he had a fourth attack of pneumonia in Camp Humphreys. He stated that all of the pneumonic attacks had been on his left side. Had not had any other serious illness and denied all venereal infection.

About August 1, 1920, while chauffeuring in France, he began to have pains in region of left kidney, with increased frequency of urination, but at this time was not disturbed at night by either pain or frequency. He was given some medicine by a French physician which gave him much relief. Several weeks later his symptoms became aggravated and he observed " blood, pus and gravel " in his urine. This, he said, increased until his urine was about half sediment. About this time he returned home and consulted Doctor Ferries, who referred him to Doctor Pancoast for X-ray; the skiagraph showing a rather long, conical stone in the left renal pelvis, apparently engaged in the ureter. He was then referred to me by Doctor Ferries on October 20, 1920, with a temperature ranging from 100° to 103°; pulse, 90 to 100, with sweats and a large, palpable, tender mass in left kidney region. Leucocyte count was 19,200, and his urine was loaded with pus, but was negative otherwise, except for a heavy trace of albumin. Kidney function (indigo carmine) showed a total

elimination of about 45 per cent. in two hours, all of which was from the right kidney. Physical examination, aside from that already noted, was negative. Blood, Wassermann was negative.

On October 22, 1920, under N_2O and O-ether anæsthesia the left kidney was exposed through the usual curved incision in the back. A nephrectomy was done with some difficulty, as the kidney was very adherent, particularly to the descending colon. The kidney was very much enlarged and was merely a shell with a large abscess cavity within, as the renal tissue seemed to have been almost entirely destroyed. Urine output for first twenty-four hours after operation was 875 c.c., and by the fifth day it had increased to 1975 c.c. His convalescence in the hospital was satisfactory and his wound cleaned up rapidly under the influence of Dakin's solution. Culture from pus showed bacillus coli communis and pathological diagnosis was tuberculosis of kidney with pyonephrosis. He left the hospital (November 18, 1920) twenty-six days after operation, with a small sinus from which there was a very slight sero-purulent discharge. Cicatrization seemed to have been satisfactory, and he gained about twelve pounds in the following two weeks. On the 4th of December he had pain in region of wound and back, with bloody discharge from sinus. On December 6th he had a great deal of pain in back and left upper abdomen, with increased bloody drainage from sinus. (Admitted to Pennsylvania Hospital.) Temperature, 101°; pulse, 120. Tenderness in left upper abdomen with indefinite mass formation. Wound opened; considerable blood-clot evacuated. No active bleeding point found, except from excessive granulation which gauze packing controlled. Temperature ranged from 101° to 103°. Leucocyte count, 27,200. Blood culture, negative. Blood, Wassermann weakly positive. On December 16th had rather profuse hemorrhage, at least twenty-five ounces. Wound tightly packed with gauze. Patient profoundly septic. A donor was obtained for transfusion, but their bloods were incompatible, and another was not secured. An intravenous infusion of salt solution caused temporary improvement, but patient died on December 17, 1920. Permission for autopsy was not granted, but exploration through wound revealed that hemorrhage had probably occurred from ulceration and sloughing of the ligated renal vessels, as they were necrotic with a large quantity of recent blood-clot about them.

Attention is called to this case because of the elapse of fifty-five days between operation and occurrence of secondary hemorrhage, and the fact that he was looked upon as a certain operative recovery when discharged from Bryn Mawr Hospital.