

noting from this study. The digits of the hand present a variety and complexity of abnormal structure not manifested by the digits of the foot, although both present normally a similar homologous structure. The congenital deformities in the lower limb are chiefly confined to the varieties of talipes and the defective formation of a socket for the head of the femur by the ilium, pubis, and ischium—congenital dislocation of hip. In the upper limb the scapula is homologous to the ilium, but in only one case did this present any congenital abnormality. It would seem that variations in the limbs chiefly take place along their line of function—the lower limb as a locomotory instrument, and the upper limb as a grasping instrument.

I am greatly indebted to my colleagues, Drs. E. E. Bowden, H. Langdale, W. J. Peacocke, and C. Robinson, for help, and to the president of the board, Major G. R. Fitzgerald, R.A.M.C., and also to the late Mr. Warren, the chief clerk, for assisting in a tedious enumeration.

Warrington.

Clinical Notes :

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THREE CASES OF

TRAUMATIC RUPTURE OF THE SPLEEN.

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TRAUMATIC rupture of the spleen, unassociated with injury to any other abdominal viscus, is of sufficient interest to justify a brief account of three cases of this nature that occurred within a period of three months at this hospital. Two of the cases recovered satisfactorily after splenectomy; the third died two hours after operation. The patients, though Indians, were not the subjects of any marked chronic splenic enlargement, the organs on removal being about normal size and weighing respectively (1) 5 oz., (2) $7\frac{1}{2}$ oz., (3) 8 oz.

The following are brief notes of the cases :—

CASE 1.—Cleaner, N.B. Railways. Admitted on 21/6/19 at 11 P.M. His history was that he had received a blow with the fist at about 7.30 P.M. the preceding evening. He had been sick and in pain during the day. On admission patient was very collapsed, pulse 130. His lips, tongue, and conjunctivæ were very pale. On palpation no absolute rigidity, but general resistance and pain most marked in left hypochondrium were present. There was abdominal dullness on percussion. Operation under chloroform and ether at 11.30 P.M. The abdomen was opened through the mid-line; the peritoneal cavity was full of blood and a large tear could be felt on the diaphragmatic surface of the spleen. The pedicle was controlled, the organ was freed and brought out of the wound and removed. As much blood as possible was mopped out of the abdomen, and 2 pints of saline with an ounce of ether poured into the peritoneal cavity. The abdominal incision was closed in layers. The patient was very ill for several days and had a sharp attack of bronchitis. Subsequently convalescence was most satisfactory, and when seen some five months later the patient was very fit and had increased considerably in weight.

CASE 2.—Driver, N.M. Machine Gun Company. Admitted 25/8/19 at 10.30 A.M. He said he had been kicked on the left side of his back the same morning about 6.40 by a mule. He complained of abdominal pain and had been sick once. He was not markedly anæmic, pulse 110. The left hypochondrium was rigid; there

was dullness, which did not alter on turning the patient over, in the left flank, and general tenderness on abdominal palpation. Operation under chloroform and ether. The abdomen was opened through the left rectus and found to be full of blood. Two tears could be felt extending outwards from the hilum into the substance of the spleen, which was freed, brought out of the wound, and removed. The blood was mopped out of the abdomen and the wound closed. For four or five days there was an evening rise of temperature to 100°F. ; convalescence was then uninterrupted, and the patient was evacuated apparently quite fit a month later.

CASE 3.—Driver P., Army Troops Transport. Admitted 10/9/19 at 10 A.M. He said that about 7 A.M. that morning he fell off a loaded A.T. cart which passed over his chest and stomach. Patient was very collapsed, sweating and markedly pallid, with a feeble pulse of 120. He complained of thirst, was restless and anxious. The abdomen was distended, painful on palpation, and did not move on respiration; both flanks were dull. Operation 11 A.M. under spinal anæsthesia. The abdominal cavity was opened through the mid-line, and was full of blood. A tear could be felt extending almost a third of the way through the organ on the diaphragmatic surface of the spleen, which was brought out of the wound and removed. The abdominal cavity was mopped free of blood, hot saline poured in, and the wound closed. Patient gradually got worse, and despite resuscitative measures became unconscious and died about two hours after the operation.

Observations on the Cases.

Case 1 was rather unusual, in that the injury had been sustained 24 hours before admission to hospital; it is possible that this was an instance of subcapsular bleeding with late rupture and intra-peritoneal hæmorrhage. At the operation, a tear in the spleen, 2 inches long by 1 inch in depth was found.

All the patients exhibited the signs of severe intra-abdominal hæmorrhage, and operation was undertaken immediately in each case, saline being given during the operation. In two patients a mid-line incision was made; in the third the incision was made through the left rectus. It was found the spleen could be brought out sufficiently through either incision to ligature the pedicle without undue tension. No attempt was made to suture the spleen, the patient's condition and the damage to the organ, which in each case was very considerable, being taken to contra-indicate this line of treatment.

I wish to thank Lieutenant-Colonel M. Mackelvie, I.M.S., Officer Commanding the 61st Indian Stationary Hospital, for permission to report these cases, and Major P. Tarapore, I.M.S., and Lieutenant J. A. Ross, R.A.M.C., who very kindly acted as assistant and anæsthetist at the operations.

A CASE OF CONGENITAL MALFORMATION OF THE LARGE INTESTINE

IN A NEW-BORN INFANT.

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THE rarity of these cases justifies the publication of this one.

A full-term male child, born five days previously, was admitted to the wards of the Metropolitan Hospital on Feb. 13th with a slightly distended abdomen and a history of absolute constipation since birth. Delivered as a breech presentation, the child was cyanosed at birth. He appeared to be healthy and took feeds regularly by breast and bottle. Urine had been passed

as well as flatus, but no melæna or fæces had been evacuated. No vomiting, restlessness, or evidence of pain noted.

On examination the child, a somewhat poorly developed infant weighing just over 5 lb., presented no evidence of discomfort or distress. Temperature 96.4°F., pulse 142, respirations 36. The abdomen was moderately and uniformly distended, and its appearance suggested distension of the small intestine. No peristaltic movements were visible or palpable, and no tumour was felt through the abdominal wall. Rectal examination at first gave the impression of atresia of lower part of rectum, but on more careful palpation it was obvious that the lumen of the bowel was patent, though very markedly narrowed. There were no evidences of developmental abnormality present elsewhere. Ol. ric. and a glycerine enema were administered without result, except for a small amount of slime. Feeds of milk and barley-water were taken. After observation for several hours no vomiting and no action of the bowels occurred and the abdomen became more distended, and laparotomy was performed.

Operation.—After a preliminary bandaging of limbs a small paramedian incision was made below the umbilicus and the peritoneal cavity was opened. Free gas and clear fluid exuded under pressure. Coils of motionless, congested, distended, and hypertrophied small intestine were brought into view. Small petechiæ were present over the surface of the gut and also areas of lividity. In addition small flakes of lymph and fibrinous serous exudate showed evidence of the onset of diffuse peritonitis. It was only with the utmost difficulty (and by enlarging the original incision) that a small contracted cord, no larger than a thick piece of string, representing the transverse colon, was brought into view. The distended ileum was ultimately traced to the ileo-cæcal junction, and a very much attenuated cæcum identified. Diligent search revealed no trace of any mechanical block by bands, volvulus, intussusception, &c. As the patient was showing evidences of cardiac embarrassment it became necessary to bring up into the parietal wound a loop of ileum close to the ileo-cæcal valve and open it on the surface. A small Paul's tube was inserted with a purse-string suture, and the abdominal wall closed in one layer. The condition of the child improved somewhat overnight. Hyd. cum cret. in half-grain doses was administered by mouth, but no action of the bowels resulted and no flatus was passed. Subcutaneous saline was transfused. The child died the following day within 24 hours of admission.

Post-mortem.—At the autopsy the stomach, duodenum, and coils of small intestine were all very markedly distended and the muscular coats hypertrophied. Ecchymoses and fibrinous deposits were present. Immediately adjacent to the ileo-cæcal valve, the ileum was collapsed, and showed a distinct perforation of the wall in the shape of a small ragged tear. The ileo-cæcal valve was patent. The large intestine was represented by a pale contracted band which would only admit a moderate-sized probe. From the diminutive cæcum downwards the colon was markedly attenuated and poorly developed in a gradual decline, especially marked below the hepatic flexure. A minute appendix was present. The small intestine contained liquid faecal matter, and the contents of the ascending colon and cæcum consisted solely of bile-stained meconium. A thin plug of inspissated mucus was found blocking the lumen of the gut in the region of the splenic flexure. The large intestine was present in its entirety, and no atresia or occlusion (apart from the plug of mucus) was observed in any part of the colon. No other mechanical cause for obstruction was found. The condition of the large bowel was obviously due to malformation—microcolon—a developmental error in early foetal life, and did not represent a state of collapse below an obstruction giving rise to mechanical ileus. No other developmental abnormalities were found post mortem.

I have to thank Dr. Edmund Cautley, under whose care the child was admitted, and Mr. Robert A. Ramsay, who operated, for permission to publish this case

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

EXHIBITION OF CLINICAL CASES.

A MEETING of this section of the Royal Society of Medicine was held on April 16th, Sir ANTHONY BOWLBY, the President, being in the chair, when clinical cases were exhibited.

Mr. ARTHUR EVANS showed a case of

Actinomycosis of the Thoracic Wall.

The patient first noticed pain and swelling in his left side and back about ten weeks before admission to hospital. He thought the present swelling was due to having been hit by a pole in the ribs. His previous health had been good. His occupation was an indoor one. There was on the left side a swelling of the lower thoracic margin, involving apparently the seventh, eighth, ninth, and tenth ribs and extending from the middle line to the mid-axillary line. The left thoracic margin, grasped between the fingers, felt three times as thick as that on the right. There was tenderness on pressure over the tumour. X ray examination showed the presence of a shadow in its region. An incision was made through almost its entire thickness, but no inflammatory focus was found. As the case was regarded as one of sarcoma the tumour was excised widely, which necessitated the removal of portions of the eighth, ninth, and tenth ribs, and the muscles of the abdominal wall adjoining. When this mass was removed the exploratory incision which had been made into the tumour substance was deepened, immediately subjacent was found a narrow streak of pus containing yellow granules, suggestive of actinomycosis. The base of the large wound was composed of peritoneum and pleura, both of which were unopened. As a substitute for the abdominal muscles two large silver filigrees were sutured into position between the peritoneum and the skin, covering an area extending from the outer border of the left rectus to the mid-axillary line, and from the rib margin to the level of the iliac crest. About three months after the operation a nodule appeared posterior to the site of the original tumour. This broke down and a sinus formed discharging actinomyces. The patient was put on large doses of potassium iodide, and the swelling gradually disappeared.

In answer to a question by Mr. A. W. SHEEN, Mr. EVANS said that there was no evidence to show how the infection gained entrance. At the operation he was able to shell off the peritoneum and pleura with ease, and there was no sign whatever that any tract had communicated with the tumour.

Mr. EVANS also showed a case of

Acute Osteo-myelitis of a Lumbar Vertebra.

The patient was a boy, aged 16½ years, who had left off work in October, 1919, feeling unwell. He had previously had three boils over the sacral region. Two days later he complained of headache and pain in the lower part of his back and in his legs; he began to have great difficulty in micturition and suffered from "pain in his stomach." There was no history of vomiting or of a sore-throat. When first seen in November he complained of great pain in his lumbar and sacral regions and in both legs. For ten days previously he had been running a temperature which had daily risen to 100°, 101°, or 102°. The cranial nerves were normal. Abdominal reflexes were present, the knee-jerks were absent, Achilles jerk was present, and the plantar reflexes gave an extensor response. He could flex and extend the right knee and ankle, but the movements were all feeble; he could flex but not extend the left knee and ankle. Both limbs were wasted, and especially the left quadriceps extensor cruris muscle. There was no sensory loss. There was evident tenderness over the upper part of the sacrum, more on the right than on the left side, and great tenderness on pressure over both erectores spinæ. A tentative diagnosis of acute anterior poliomyelitis involving the third and fourth lumbar segments was made. As the condition showed no improvement an operation was performed. A median incision was made over the lumbar spines and the muscles retracted. The third lumbar spine was found to be necrosed and loose, and from this site an abscess extended into the right and left erectores spinæ. On exposing the vertebral canal it was found to contain thick, yellow, odourless pus.