TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting held April 4, 1921

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

FRACTURE OF THE METATARSAL BONES

Dr. Emory G. Alexander read a paper with the above title, for which see page 214.

Dr. Arthur B. Gill remarked that it is essential after fractures of the metatarsals to support them on the plantar side by some form of arch support. For this purpose he used hard felt pads. It is rather remarkable what little disability patients have, who have suffered from more or less severe fractures of the bones of the foot, if care has been taken during the treatment to preserve the proper arch of the foot and to prevent pes valgus or pes varus. Accurate re-position of fragments of the tarsus and metatarsus seems to be unnecessary if the proper position of the foot is maintained with reference to weight-bearing.

From the operative procedures which are done upon paralytic feet surgeons have become familiar with the resistance of the foot to severe operative traumatism. In subastragalar arthrodesis and in horizontal transverse section of the foot a large amount of traumatism is inflicted upon the bones and even upon the soft parts without subsequent infection or necrosis and sloughing. The considerations in treatment of the foot are the preservation of the normal arch and the maintenance of the foot in such position that the weight-bearing line which comes down along the crest of the tibia should fall centrally in the foot.

When the fracture of the metatarsals is very close to the head so that a small fragment of bone is displaced laterally or to the plantar aspect, it is better to excise this fragment. This Dr. Alexander did in one of his cases. Such excision can probably best be done through a circular incision on the plantar surface of the foot just back of the toes.

RUPTURE OF UTERUS DURING ATTEMPTS AT VERSION

Dr. Astley P. C. Ashhurst reported the case of a woman, forty-one years of age, who was admitted to the Abington Hospital on December 28, 1920, with the diagnosis of ruptured uterus.

The woman had given birth to nine children, all at term. These births

were all normal with normal puerperal period. Her tenth labor began December 26, 1920. Having not been able to deliver herself by the following day she summoned her family physician, who finding a shoulder presentation, attempted a version, but without success. Another physician was called in consultation, and under nitrous oxide analgesia, version was twice again attempted. At the end of the second attempt the patient suddenly went into collapse.

One hour later Dr. Ashhurst saw the patient and noted the following: Expression anxious, air hunger with no abdominal breathing, skin moist and cool, pulse very rapid and thready, abdomen distended and tender to touch. There was a large irregular mass in the epigastrium which could be recognized as a fœtus. The uterus could be readily palpated, and found well contracted, with the fundus a hand's breadth above the symphysis.

Under nitrous oxide anæsthesia the abdomen was opened by a right paramedian incision 15 cm. in length. A large quantity of blood was evacuated. The uterus was delivered, and grasped just above the cervix to prevent further bleeding. A rupture 9 cm. long was found in its mid-line on the posterior wall. The fœtus and placenta were found free in the epigastrium and removed. Clamps were applied to the broad ligaments, and a subtotal hysterectomy was done. The stump was closed with continuous chromic gut sutures; uterine vessels ligated; edges of broad ligaments brought together by a continuous sero-serous suture of chromic gut; stump covered with peritoneum in same manner; abdominal cavity flushed with normal saline; cigarette drain carried down to stump of cervix; abdomen closed in layers.

With the maximum amount of stimulation, repeated hypodermoclysis, continuous enteroclysis, and with all due credit to her natural resistance, she began to improve after the first twenty-four hours. From this time on convalescence was uninterrupted, and she was discharged as cured thirty days after operation.

Histologic examination of the uterus showed an occasional ruptured muscle fibre with a mononuclear infiltration.

DOUBLE AMPUTATION OF THE THIGH FOR SENILE GANGRENE

Dr. Astley P. C. Ashhurst presented a man seventy-two years of age, who was admitted to the Episcopal Hospital October 3, 1920, with a diagnosis of gangrene of left foot.

Patient stated that two weeks ago he began to have a burning pain with tingling from toes to knee on left. A day or so later he noticed that his toes on that side were reddened. This color soon changed to a purple, and at the same time the pain disappeared. Examination showed the foot and toes cold and purple in color. Slight pitting on pressure. No pulsation could be felt over the popliteal, dorsalis pedis, or posterior tibial arteries. There was swelling, pain, and beginning redness of the toes of the right foot, with absence of arterial pulsation.

On October 8, 1920, the left thigh was amputated in the lower third. On

examining the stump it was found that the femoral artery was thrombosed. When the tourniquet was removed there was little or no bleeding from collaterals. The femoral artery was then dissected up to a point where pulsation was found, and the ligation made at this point. The smaller vessels were ligated, sciatic nerve drawn down and cut, rubber tube drainage instituted, and the skin flaps loosely brought together with interrupted silkworm sutures. Patient returned to bed with stump elevated and heat applied.

On October 22, 1920, Dr. Ashhurst amputated the right thigh in the lower third. Again femoral artery was found thrombosed, and only slight oozing from collaterals. Muscles closed over stump with mattress sutures of chromic gut. Skin closed transversely with interrupted silkworm sutures. Rubber tube drain at outer angle of wound.

For several weeks following the operation the patient was irrational. During this time he repeatedly removed his dressings which resulted in a superficial infection of both stumps. This cleared up, and he went on to a complete recovery.

Laboratory findings: Wassermann negative. Urine negative. Histologic examination of specimens showed marked arteriosclerosis.

AUTOTRANSFUSION

DR. FRANCIS C. GRANT presented a man forty-two years of age, who was admitted to the service of Dr. C. H. Frazier at the University Hospital, presenting a clear-cut picture of cerebellar tumor. A suboccipital exploration was determined upon. It had been their routine practice of late to transfuse postoperatively all cases upon whom a suboccipital exploration has been performed. The procedure is of necessity a prolonged one accompanied by considerable shock to vital centres, and they had found that immediate transfusion insured a prompt reaction and improved the postoperative course. The patient in question had no money to pay for a donor and was of type 3, the least frequent type. They had no donors of this type on their free list. However the patient was large, stout, and plethoric. His B.C.R. totalled, 6850,000 with 110 per cent. Hgb. confirmed by several counts. Robertson, Rous and Turner, and others had shown that whole blood could be kept citrated and cold for a considerable time. From observation upon six donors they knew that following the withdrawal of 500 c.c. of blood the cell count and hæmoglobin returned to normal in five to nine days.

The patient was definitely plethoric, his blood pressure was 155 systolic and 110 diastolic. In view of the fact that they could not obtain a suitable donor and that transfusion would be desirable following his operation, it was suggested that they bleed the patient, allow him twenty-four hours to recover from the transfusion, operate upon him, and transfuse him with his own blood. This was accordingly done. The blood was obtained, kept in .2 per cent. sodium citrate solution in a refrigerator and retransfused following operation. Three hours after operation the temperature, pulse, and respiration were 100, 118, and 18, the highest point reached. Clinically no reaction was

noted. The postoperative course was favorable. Four days after operation the R.B.C. were 4,919,000, Hgb. 90 per cent and blood pressure 135–100.

In conclusion, they suggest that although the plethora and high blood pressure seemed special indications in this case, autotransfusion might be considered in other conditions. In cases where a donor cannot be obtained for any reason and in which a patient with a high normal blood picture faces an operation known to be attended with shock and hemorrhage, if he be bled sufficiently far enough in advance of his operation to allow his blood picture to return to normal, this blood may be kept with safety and retransfused at a time when such a procedure may be life-saving.

AMŒBIC ABSCESS OF THE LIVER

DR. ADRIAN W. VOEGELIN read the history of a case of abscess of the liver to illustrate the importance of early recognition and operation of such cases.

C. G., a male, aged thirty-five, was admitted to the Episcopal Hospital on January 3, 1921, complaining of pain and swelling in the right upper abdomen. He remembered having been ill seventeen years ago with a persistent diarrhœa. No other history of dysentery could be obtained. One year before admission he had been in another hospital where an abscess of the liver was incised. Culture of the pus was negative and the nature of the abscess was not determined. Three months before the present admission he began to suffer pain in the region of the old scar, and developed a gradually increasing swelling. The patient was extremely emaciated. No jaundice was present. In the upper right abdomen, just below the ribs, was a rounded swelling quite tender and tense on palpation and evidently containing fluid. The skin was slightly reddened and a small scar about two inches long was to be seen. The edge of the liver could not be felt. Further examination of the abdomen was negative. Temperature, 98°; pulse, 92; respirations, 22. The blood examination showed: Hæmoglobin, 70 per cent.; erythrocytes, 3,870,000, and leucocytes, 20,200, of which 83 per cent. were polymorphonuclear, 8 per cent. mononuclear, 8 per cent. lymphocytic, and 1 per cent. transitional cells. No amœbæ could be found in the stools.

On the day after admission, the patient was operated upon under gas anæsthesia by Dr. E. G. Alexander. A right rectus incision about four inches long was made, opening the peritoneal cavity, which contained a little sterile serous fluid. A swelling about the size of a fist, projecting anteriorly, was found on the surface of the liver. As but few adhesions were present, the opening of the abscess was postponed, and, after walling off the peritoneal cavity with gauze packing, moist dressings were applied to the open wound. Forty-eight hours later, an abscess cavity, about five and one-half inches in diameter and occupying most of the right lobe of the liver, was opened with a cautery knife, and evacuated of over three pints of viscid brownish fluid which contained much fine granular detritus, a trace of bile and few pus cells, and gave no growth on several culture media. A large rubber-tube drain was inserted and gauze packing and dressings applied. The patient's

temperature rose to 103°, but gradually came down to normal within a week without any signs of peritonitis having developed. Curettings taken from the abscess wall two days after evacuation showed many motile amœbæ on the warm microscope stage. The pus which drained away gradually became thinner, and ceased shortly after the first week, when daily irrigation of the cavity with eusol solution was begun in order to stimulate granulations and destroy the amœbæ. Eusol is a watery chlorine preparation, the active principle of which is hypochlorous acid, which was first used for amœbic abscess by Love in 1918 among the British troops in Mesopotamia.

Under this treatment, combined with emetine, repeated scrapings from the walls of the abscess were negative for amœbæ, and the cavity rapidly contracted in size. The general condition of the patient slowly improved for about two weeks, but he then gradually succumbed to exhaustion and uræmia and died twenty-two days after operation. No post-mortem examination could be obtained. At no time had the fæces shown amœbæ. The abscess which this patient had was the result of a latent amœbiasis of apparently many years' duration.

PERFORATED GASTRIC AND DUODENAL ULCER WITHOUT PREVIOUS PAIN

Dr. George P. Muller read a paper with the above title, for which see page 223.

CORRESPONDENCE

DISLOCATIONS OF THE SEMILUNAR CARPAL BONE

Editor of Annals of Surgery:

Sir: In my article on Dislocations of the Semilunar Carpal Bone, published in the Annals of Surgery, May, 1921, pages 621–28, I note that an error is found on page 628. The sentence should read "Removal of the semilunar causes *no* interference with good function at the wrist." The sentence as it appears in the Journal reads as follows "Removal of the semilunar causes *an* interference with good function at the wrist.

You will readily see that the published statement is contrary to the impression that I was anxious to convey.

Respectfully yours,

Isidore Cohn.