TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY

Stated Meeting Held January 8, 1923

The President, Dr. John H. Jopson, in the Chair

RUPTURE OF TENDON OF EXTENSOR LONGUS POLLICIS

Dr. Astley P. C. Ashhurst read a paper with the above title.

PLASTIC REPAIR OF CHEEK

Dr. George M. Dorrance presented a case to illustrate the pedicle method of closing the defect. The patient had had a carcinoma of the mucous membrane of the left cheek and left half of the inferior maxilla with swelling in the submaxillary region. Dr. Wm. L. Clarke had treated the malignancy with radium and X-ray, and requested him to remove the left half of the inferior maxilla. This was followed by fulguration of the entire malignant area, and more X-ray and radium. When next seen the wound was entirely healed and he had a defect of the left cheek measuring 1¾ by 2 inches. As all the cheek still showed the effect of the X-ray, it was impossible to use the surrounding tissue. A pedicle-tubed flap from the neck and chest was employed. The pedicle was raised and tubed. Ten days later a flap was outlined and the end of the flap was turned in to form the inner lining. Seven days later when the two surfaces of the flap had united, the turned-in end of the flap was divided where it turned over; the flap with the pedicle was raised. This flap had an inner lining that could be sutured to the mucous membrane on all sides and an outer lining that could be united on three sides to the skin edges. The edges of the defect in the cheek were freshened and the mucous membrane with a small amount of underlying tissue turned in. The skin edge was raised and turned outward. The flap was united both on the mucous membrane and skin edges. The pedicle was divided on the tenth day and returned to its former bed. The free skin edge of the flap was sutured to the surrounding skin. The main point in this operation was the formation of the inner lining that allowed it to be sutured to the surrounding mucous membrane in all parts.

Dr. A. P. C. Ashhurst had had two fatalities from secondary hemorrhage in operations of this nature. Both patients had carcinoma of the mucous surface of the cheek and he thought death occurred because he tried to do the whole operation in one sitting. Hotchkiss had devised an operation restoring the cheek by turning up a flap from the neck, which had proved satisfactory. Von Eiselsberg splits the tongue horizontally and turns it up to the upper alveolus, to form the inner wall of the cheek. Both of his fatal cases did well for a time; after ten days or so they had secondary

hemorrhage from the carotids. Doctor Dorrance stated that in his cases one year elapsed between the beginning of treatment and the final closure of the wound of the second operations. If his patients had not died their wounds would have been closed in a few weeks.

ANAPHYLAXIS FOLLOWING BLOOD TRANSFUSION

DR. GEORGE L. CARRINGTON read a paper with the above title, for which see page 1.

DOCTOR PFEIFFER had also had a disconcerting experience with transfusion several months ago which he had been unable to explain. The patient, a Jewish woman, aged thirty-eight, was admitted to the Abington Memorial Hospital, May 29, 1922, suffering from bichlorid poisoning with the usual accompanying nephritis and enteritis. The day after admission, both kidneys were decapsulated by Doctor Outerbridge on account of the scantiness of urine, almost amounting to suppression. She became progressively more anæmic and on the third of August, 1922, her blood count was 27 per cent. hæmoglobin; 2,050,000 red blood cells; 7600 white blood cells. Transfusion was done on the following day. The donor was her husband, a healthy, full-blooded man, who showed no abnormalities of any kind. Examination showed that both the donor and recipient belonged to group No. 4. Both agglutination and hæmolysis tests were negative. Accordingly, he proceeded to make the transfusion by the usual citrate method. There was no technical difficulty or delay or departure in any respect from the usual technic and procedure. The tube and supplies had been used a number of times before for the same purpose and the citrate solution was fresh and sterile.

After about 25 c.c. of blood had been transfused into the patient's vein, she complained of oppression. Transfusion was stopped at once, and she immediately developed what seemed to be a typical anaphylactic shock. The pulse became very small, rapid and weak; the breathing was labored; the face became a livid red. She complained of intense pain throughout her body, especially in the back. She retched but was unable to vomit because the stomach was empty.. She was given atropin, 1/100 gr.; 20 m. of adrenalin chlorid, 1–1000. Her feet were elevated and hot water bags placed around her. The temperature rose to 103.4, the pulse to 150. She gradually improved, and except for extreme weakness, was none the worse on the following day.

Whether or not this reaction was in any way beneficial, may not be known, but her blood picture began to improve gradually. Four months later the hæmoglobin was 70 per cent.; red blood cells 3,730,000. She felt perfectly well. The urine, quantitatively and qualitatively, was practically normal. In the attempt to explain this reaction, her husband's blood and her own were again compared with the same result as before. This case therefore showed a typical anaphylactic shock, the possibility of which could not be determined by the usual examinations upon which we rely to determine compatibility.

NEURITIS AND PERINEURITIS OF ARM

DR. J. STEWART RODMAN presented a patient, male, thirty-seven years of age. Admitted to Dr. J. H. Jopson's Service, Medico-chirurgical Hospital, April 25, 1922, complaining of pain in right arm. Previous medical history.—Appendectomy twelve years ago. Twenty-four years ago left leg severely crushed in railroad accident requiring amputation at middle third. Denies venereal infection. Present Illness.—On November 1, 1920, patient's right hand just above the thumb was burned with hot lead and zinc chloride. This burn was treated for the next eight days by usual applications. On the eighth day, tincture of iodine was used and a bandage applied. That night hand became markedly swollen, after which he applied hot magnesium sulphate. It was again treated locally for two weeks, at the end of which time an incision was made over the dorsum of the hand and pus was evacuated. Three weeks later, two incisions were made in the forearm near the elbow, pus being evacuated. One month later, an incision was made in the arm above the biceps and also over the shoulder-blade on the right side. From the start, pain in the right arm has been continuous. He has full motion but pain is severe.

Physical examination shows that left leg has been amputated, middle third; no scars other than operative ones on right arm and over right scapula. Teeth in poor condition, many missing, those present decayed, marked pyorrhœa. General examination otherwise negative. Examination of right arm shows marked inability to use arm or hand which, however, seems to be due to pain, which is greatly intensified on efforts at passive motion. There is tenderness in the arm and hand, but is not greater over the nerve trunks than elsewhere. No muscular atrophy, biceps jerk present. Tactile sense good. Pain sense is great in most places but in some smaller areas does not apparently feel prick of a pin, but these spots have no relation to the nerve supply. In the upper arm urticarial wheals appeared where stuck with pin, also hyperæmia about these areas. Skin is not smoothed out or shiny as one would expect from a neuritis.

Operation May 10, 1922, Dr. J. H. Jopson. Sympathectomy on right brachial artery. As no improvement followed this procedure, I was asked to see the case three weeks later. Suggested that a posterior rhizotomy might be considered. At the suggestion of Doctor Jopson, Doctor Spiller was also asked to see the patient, and he suggested that, instead of performing a rhizotomy, alcohol should be injected directly into the nerves responsible for the pain from which he suffered. In order to relieve his pain, it was necessary that the median, musculospiral, ulnar, and musculocutaneous nerves be injected. This matter was fully discussed with the patient, it being explained to him that a paralysis would result which would probably be temporary but might be permanent. The patient, however, was suffering from such extreme pain and had been for so long, that he eagerly welcomed anything that offered him relief. Accordingly on June 7, 1922, the median, musculospiral, ulnar and cutaneous nerves were exposed and 80 per cent. alcohol injected. This caused an immediate relief of pain and, of course,

complete paralysis of the forearm, wrist and hand. This relief of pain lasted for six weeks and returned with a return of function at that time. He was then admitted to the Presbyterian Hospital and on July 17, 1922, the median, ulnar, and musculospiral nerves were again injected with 80 per cent. alcohol after direct exposure. This time there was also an immediate relief of pain with paralysis of the forearm and wrist which has lasted to the present time.

DR. WM. J. TAYLOR remarked that in England in June of 1918, he had seen a good deal of this work which had been done at the nerve hospitals by Colonel Sanford and Colonel Buzzard. They used the method particularly in the treatment of causalgia; they cut down on the nerve to expose it and injected into the normal nerve above the wound whenever injury had been done to the nerve. They injected first 80 per cent.; other cases 70 per cent., and finally 60 per cent. alcohol, producing temporary paralysis almost without exception and some little disability. He had only had experience with two cases himself. One was a man in France who was shot by a rifle in the posterior tibia. The wound healed up and the man was apparently well, but suffered great pain. He had heard of the work of Buzzard, so he cut down on the nerve, and on exposing it found that the bullet had taken a piece out of the side of the nerve and a neuroma had grown over it. Being with the British, he would not have the right to do any nerve resection, so he injected him with 60 per cent. alcohol in the normal nerve about one inch above the neuroma. He had instant relief of his pain and discomfort, and went back to England, so he lost sight of him.

The second case was that of a young woman here in Philadelphia who got her wrist caught in a broken windshield, and was treated by a doctor who ligated the radial artery. Some time later she had a secondary hemorrhage which was stopped with pressure. She came to Dr. Francis Sinkler complaining of pain which finally extended up the arm, involving the posterior nerve roots. Doctor Taylor was extremely anxious about this patient, and on cutting down found the ulnar nerve and stump of the artery bound down in adhesions. The nerve was swollen and painful. The adhesions were loosened and 60 per cent. alcohol injected into the nerve itself. Paralysis of the ulnar nerve resulted with complete relief of all pain in the arm. She made a good recovery with complete return of all movement. It is nearly three years now and she is still well.

There are certain points in the question of technic. The nerve should be exposed absolutely. One should use the finest kind of a needle, and you must inject directly into the nerve itself, being careful in moving the needle about that it is fixed in the nerve and not between the nerve fibres. Inject slowly until you have distention. The nerve will look almost as if it were preserved in alcohol. The treatment has a limited application; you may have permanent paralysis; but where pain has been present for a year or two, and the pain and suffering is something indescribable, it seems to be worthy of application.

DOCTOR RODMAN stated, in closing, that it would have been much easier to have exposed the brachial plexus in the axilla and to inject that, but this was not done because a paralysis as high as that level was not desired. The pain was greatest in the forearm and in the wrist joint. This method was suggested by Doctor Spiller and while thought a drastic procedure, it seemed entirely justifiable in this case. The arm was held rigidly in a semiflexed position and the patient could not use it at all because of the extreme pain caused by motion. He did not want to give the impression that he believed this to be the first case in which alcohol injection had been done to relieve the pain of a neuritis, but rather that so far as he knew it is the first. The case is interesting because an entire group of nerves responsible for motion of a part of a limb have been deliberately injected with alcohol (80 per cent.) in order to relieve the pain of an ascending neuritis involving these nerves. A posterior rhizotomy was considered because it was thought by cutting the posterior roots of the cervicals, the 4th, 5th, 6th and 7th and the first dorsal, pain would be relieved but motion preserved. This was discarded because Doctor Spiller thought the fact that after such a rhizotomy the patient would lose all muscle sense and that this would make his arm useless and, of course, this would be permanent, whereas the effect of alcohol injection, although causing a complete paralysis for the time being, should be temporary. Posterior rhizotomy for various causes has been performed before in the cervical region by Abbey, C. H. Mayo and others so that there was ample precedent for considering this procedure. This patient can flex the elbow on the injected side and, of course, move the arm on the shoulder. He, however, has complete loss of sensation below the elbow joint and a wrist drop. On neurological examination made to-day, it was found that stimulation of the musculospiral, median and ulnar nerves, at and above the points of injection, does not result in any motor response with either current. There is the same result of stimulation of the nerves below the lesion. A stimulation of the motor points of the muscles of the respective nerves injected with the faradic current results in no response; with the galvanic current there is a sluggish hypo-excitable response with negative closing of conduction almost equal to positive closing.

This patient still shows, therefore, complete paralysis below the level of injection of the nerves in question, that he has had a complete surcease from the intolerable pain and is well satisfied with the result. Neurological opinion is that while six months approximately have elapsed since these nerves were injected, he is still well within the average time for reëstablishment of sensation and, therefore, has a reasonable prospect of regaining the use of the forearm and hand.

PERFORATION IN UTERO OF A GASTRIC ULCER

DR. WALTER ESTELL LEE and DR. J. RALSTON WELLS read a paper with the above title, for which see page 36.

ACUTE INTESTINAL OBSTRUCTION CAUSED BY MECKEL'S DIVERTICULUM

DR. J. STEWART RODMAN related the case of E. T., male, twenty-six, chauffeur, admitted to Dr. F. O. Allen's service at the Presbyterian Hospital, June 10, 1922, complaining of obstipation and pain in the abdomen. Present illness began with sudden severe pain in epigastrium about thirty hours prior to admission, having been perfectly well prior to this time. This pain has been constant and exaggerated periodically. At the time of admission it radiated from umbilicus to pubis and thence outward to each flank. Has vomited frequently since the onset of the pain. Seidlitz powder and magnesium citrate ineffectual as well as enemas for two and one-half days. Bowels usually regular. Examination negative, except for abdomen, which was tympanitic in upper portion. Dull below.

Peristalsis active throughout. Tenderness in hypogastrium and lower umbilical area. Pressure in iliac fossæ causes pain in hypogastrium. No masses. Rectal examination negative. Diagnosis: Acute intestinal obstruction.

Operation.—Ether anæsthesia. An incision was made in the median line between umbilicus and symphysis. On opening the peritoneal cavity a small amount of clear straw-colored fluid escaped. The small intestines were dark in color and distended proximal to a point in the right side of the abdomen where a large mass adherent to the posterior parietal peritoneum was felt. The bowel below this point was collapsed. On separating adhesions binding the mass to the posterior parietal peritoneum it was seen that a loop of small bowel had wrapped itself around and become firmly adherent to what proved to be a large Meckel's diverticulum. After freeing the bowel this diverticulum was found to be about 4½ cm. in length and about 2 cm. in width with two small diverticula at the distal end. The fluid contents were milked out of the lumen of the diverticulum into the bowel. It was then clamped across its base and removed with the cautery. The stump was closed with a through-and-through suture of No. 1 chromic catgut and covered over with a continuous Lembert stitch of linen. The abdomen was closed in layers without drainage. Recovery was uneventful.

Meckel's diverticulum while not a common operative finding is still not sufficiently uncommon to be considered any longer a surgical curiosity. Realizing that this condition was not so rare therefore as to warrant an exhaustive search through the literature, it was thought that it might be of interest to go over the Transactions of the Academy in order to find out how frequently Meckel's diverticulum has been reported as an operative finding before this body. This was done with the following result: In 1903, Dr. W. J. Taylor reported the first instance of this condition which appears in the transactions. His patient, a young woman of twenty, gave symptoms of acute intestinal obstruction and at operation a band was found constricting the small intestine about thirty-two inches from the cæcum. This band proved to be a remnant of Meckel's diverticulum. In 1907, Dr. J. B. Roberts reported three cases, one upon which he had operated, finding a Meckel's diverticulum causing

constriction of the small bowel and thus intestinal obstruction in a boy four and one-half years old. This case recovered. Of the two other cases a Meckel's diverticulum was seen during the course of an operation for another condition and one was found at autopsy. In discussing this paper, Doctor Gibbon cited three cases, one of which was causing intestinal obstruction, and Dr. W. J. Taylor referred to the case already cited, and mentioned one other upon which he had operated. No other instance occurs until 1914, when A. B. Gill reported a case of perforated Meckel's diverticulum with recovery. Seven years elapse until the next instance is recorded in January, 1921, by E. J. Klopp, his case being one of acute inflammation of Meckel's diverticulum. At the next meeting, February, 1921, E. T. Crossan and Don Lew, the latter by invitation, reported a case of acute intestinal obstruction from Meckel's diverticulum complicating acute appendicitis. At the last meeting, December, 1922, Dr. Damon Pfeiffer reported a case of perforated Meckel's diverticulum requiring resection of the intestine. In all, therefore, including my own case, there have been thirteen instances of Meckel's diverticulum reported to the Academy of which five caused acute intestinal obstruction.

DR. WM. J. TAYLOR stated that he had had one case of obstruction in relation to Meckel's diverticulum, which he reported at Johns Hopkins Medical Society meeting. He operated on a child four years of age for what he thought was acute appendicitis. On opening the abdomen a large mass was found, which he opened up, and found to be a Meckel's diverticulum twisted on itself three times, and strangulated. It was black and gangrenous and contained a number of grains of corn. It was cut off and the child made a good recovery.

PLEURAL EPILEPSY

DR. HUBLEY R. OWEN and DR. A. GONZALEZ (by invitation) read a paper with the above title, for which see page 6.

Stated Meeting Held February 5, 1923

The President, DR. JOHN H. JOPSON, in the Chair

BULLET WOUND OF PREGNANT UTERUS

DR. J. W. BRANSFIELD reported the case of Mrs. L. T., age eighteen years, who twenty minutes before admission to St. Agnes' Hospital, April 28, 1922, accidentally discharged a revolver, the bullet striking her in the abdomen. She complained of a burning sensation with occasional cramp-like pains in her abdomen; no other discomfort. She stated she was about eight and a half months pregnant.

Examination showed bullet wound of entrance in abdomen 2 cm. below the umbilicus in midline. Uterus could be palpated and the fundus extended about 1 cm. above the umbilicus. The size of the uterus led me to believe that the patient was about at term and further questioning brought forth the information that she had been suffering from severe