TRANSACTIONS

OF THE

PHILADELPHIA ACADEMY OF SURGERY

STATED MEETING HELD JANUARY 4, 1932

The President, DR. GEORGE P. MULLER, in the chair

CALVIN M. SMYTH, JR. M.D., Recorder

AVULSION SKIN OF HAND

DR. HUBLEY R. OWEN presented a man twenty-seven years of age who, July 20, 1931, as a result of an automobile accident, sustained a lacerated wound of the scalp, cerebral concussion and a severe laceration of his right hand with loss of skin and subcutaneous tissues from the dorsum exposing

FIG. 1. FIG. 2.

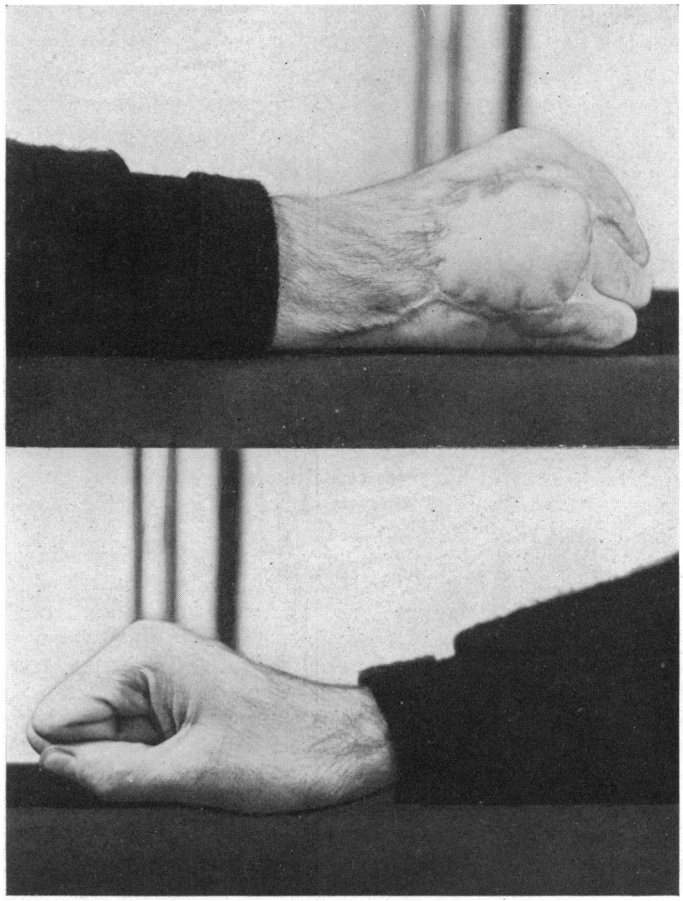
FIG. 1.—Avulsion skin of hand with exposure and sloughing of tendons.
FIG. 2.—Flap a few days after being freed from chest.

the tendons and deeper structures. The extensor tendons of the four fingers and thumb were badly lacerated. The trapezium was crushed and the joint between it and the first metacarpal was exposed. The wound was cleansed, débrided and part of the trapezium removed. He received appropriate treatment for his cerebral concussion. Cultures from the lacerated wound of the hand showed an organism resembling *B. welchii* as well as the tetanus bacillus. He was given perfringens antitoxin and tetanus antitoxin. The above treatment was rendered at the Atlantic City Hospital.

He was admitted to the Police and Fire Ward of the Philadelphia General Hospital July 24, 1931, at which time (Fig. 1) the dorsum of the right hand was denuded of skin and the tendons of the third, fourth and fifth fingers exposed. The wound was grossly infected. The wound of the

hand was treated with Dakin's solution by the Carrel method. On July 28 smear and culture from hand were negative for gas bacillus but there were present a few bacilli suggestive of tetanus.

A pedicle flap from the chest was sutured over the wound of the hand on August 21, the graft being freed from the chest wall August 27. (Fig. 2.) He was discharged from the hospital September 3. Massage was first



FIGS. 3 and 4.—End-results.

ordered on October 28. He has regained practically 100 per cent. function with the right hand. (Figs. 3 and 4.) Reconstruction of his tendons has been effected without a secondary operation and he is performing his regular duty as hoseman in the Bureau of Fire.

DR. DEFOREST P. WILLARD discussing whether the graft should be taken from the abdomen or the chest believes that the chest is better as there is not as much fat on the chest as in the abdominal wall. Some years ago he had a patient who had had a very massive burn on the back of the hand. A flap graft had been made when she was seventeen or eighteen years of age and excessively thin. After she had been married she became very stout after the birth of a child. The fat had simulated the fat of the abdominal wall.

DR. HUBLEY R. OWEN said that the flap in his case was taken from the axillary region rather than from the abdomen for two reasons: "First, because he thought the position with the hand in the axilla was more comfortable, and secondly because of his knowledge of a case of Doctor Willard's which developed adiposa dolorosa. Doctor Willard took the flap from the abdomen and when the patient developed increased thickness of the walls of the abdomen, the flap which had been transferred to the hand assumed the same thickness. The graft in his own case was attached to the chest wall for six days. The real interest of the case was the reconstruction of the tendons which were so frayed and sloughed that there appeared to be but little possibility of ever regaining function without operative procedure.

TRAUMATIC CHOLECYSTECTOMY

DR. HENRY P. BROWN, JR., reported the case of a man of eighteen years who was admitted in the service of Dr. Edward B. Hodge at the Presbyterian Hospital May 9, 1931, with the history that twelve hours previously he had been in an automobile accident, in which, while riding in the rumble seat, he was thrown violently against the front seat of the car. He was brought to the hospital in an unconscious condition. He recovered consciousness soon afterwards and was treated for abrasions of the face and allowed to go home. He returned to the hospital several hours later (twelve hours after the accident), complaining of vomiting and abdominal pain. At this time his temperature was 99°, pulse 92 and respiration 38, the blood-pressure being 138 systolic and 78 diastolic.

He was a well-developed male lying partly on the right side, with the right thigh and leg held in a flexed position. He complained of severe abdominal pain, which he characterized as being knife-like. He was also nauseated and tried ineffectively to vomit. Respirations were rapid and shallow, deep breathing causing abdominal pain. Aside from lacerations of the scalp and chin, examination of the head was negative, as was examination of the chest and its contents. The abdomen showed marked generalized rigidity and tenderness, being more marked under the right costal border. Peristalsis was not heard and there was no demonstrable free fluid in the abdomen. There were no masses present in the abdomen, nor was there evidence of local trauma to the abdominal wall. There was well-marked tenderness over the region of the right kidney, without evidence of a mass. The extremities were negative. The urine showed a specific gravity of 1.030, acid, trace of albumen, 150-200 red blood cells per high-power field. The blood showed 4,320,000 erythrocytes, 20,000 leucocytes, polymorphonuclears 95 per cent. and small lymphocytes 5 per cent. The hæmoglobin was 85 per cent. Fluoroscopic examination of the chest did not reveal anything abnormal, the diaphragm moving equally but slightly on both sides.

A diagnosis of abdominal trauma having been made, operation was performed within thirteen hours of the time of the accident. Spinal anæsthesia was employed. The abdomen was opened through a right paramedian incision, revealing a large amount of free blood in the abdominal cavity. Examination of the stomach was negative, as was that of the spleen and intestines. The liver showed a tear 3 centimetres in length on the dorsal surface above the bed of the gall-bladder. Exposure of the under surface of the liver revealed that the gall-bladder had been removed entirely from its bed and was floating free in a pool of blood; it had been severed

flush with the common duct. There was also a small tear on the under surface of the liver in the region of the gall-bladder bed. The cystic artery had been severed and was plugged with a clot. After ligating the cystic artery, the orifice of entrance of the cystic into the common duct was closed with one mattress suture of catgut. The torn edges of the liver were sutured with a few catgut sutures and the torn peritoneum was sutured over the ligated cystic artery and the entrance of cystic duct into the common.

About 400 cubic centimetres of free blood were removed from the abdomen, the rest being allowed to remain. A cigarette drain was placed against the bed of the gall-bladder and the abdomen was closed in layers.

Aside from being irrational at times for three or four days, the patient made a normal post-operative recovery. Within the first twenty-four hours post-operatively, he began to drain bile profusely, which continued for six days, at which time it stopped rather suddenly. On the second post-operative day there was a suggestion of icterus of the sclera which disappeared on the third day following. The cigarette drain was removed on the eleventh day, at which time the sutures were also removed, and on May 30, twenty-one days after the operation, the wound had entirely healed. His stool was normal in color; there was no jaundice; his appetite was excellent, and he was discharged as cured. His post-operative temperature ranged from 100 to 101° for five days, becoming normal and remaining so after this time. The urine showed red blood cells only on the first examination. The Wassermann and Kahn tests were negative. Microscopically, the gall-bladder showed complete desquamation of the lining epithelium.

This case was the first time that the reporter had ever encountered a traumatic amputation of the gall-bladder and he was unable to find reference to a similar conditions.

FRACTURE OF THE SURGICAL NECK OF THE HUMERUS

Dr. Henry P. Brown, Jr., reported the case of a boy nine years of age who was injured February 6, 1930, while wrestling with some other boys. He stated that he was thrown violently to the ground, striking his right shoulder. He had immediate disability of his right arm and was brought to the Pennsylvania Hospital and admitted to Dr. Charles F. Mitchell's service. Examination at this time was negative, aside from his right arm, which revealed a fracture of the surgical neck of the humerus, which was confirmed by X-ray examination. He was put to bed and an extension applied to the arm through a Thomas splint. It being impossible to keep this splint and traction in position, this method was discarded and the arm put up in a sling and shoulder cap. At this time the X-ray showed complete displacement with over-riding of the lower fragment. He was discharged from the hospital February 23. Attempt at reduction had been made first under nitrous oxide and again under ether anæsthesia without improving the position of the fragments. His condition progressed satisfactorily and in three months' time he had resumed his former occupation as a bootblack.

Examination of the arm in October, 1931, which was twenty months after the injury, showed complete restoration of the line of the humerus, there being scarcely any evidence of the former fracture. Function at this time was perfect.

ACUTE INTUSSUSCEPTION WITH SPECIAL REFERENCE TO TREATMENT BY RESECTION OF THE BOWEL

Dr. Frederick R. Robbins read a paper with the above title for which see page 830.

FRACTURE OF THE ODONTOID PROCESS OF THE AXIS

DR. ASTLEY P. C. ASHHURST reported the case of a man fifty-seven years of age, weighing 195 pounds, who was in an automobile accident March 6, 1931, in which the patient was thrown through the top of the car and fell about 15 feet away from its wreck. He did not lose consciousness, but managed to get up on his hands and knees. After having been placed in another automobile he was driven several miles to a dentist's office. He was taken on a stretcher to a hospital in Burlington, N. C., bleeding from his nose and his right ear. He remained in that hospital for three weeks. He was then taken to Asheville, N. C., and was under the care of Dr. Charles Norburn in the latter's hospital. Doctor Norburn applied a plaster-of-Paris dressing including the body and head; when this dressing was removed after being in place four weeks, the patient seemed comfortable without support, and it was not replaced. X-ray films taken soon after the accident (both antero-posterior and lateral views) showed a transverse fracture through the base of the odontoid process, without any displacement. The patient also had a fracture of the right clavicle, and probably also a fracture of the base of the skull on the right.

The patient was sent by Doctor Norburn to Doctor Ashhurst, at the Episcopal Hospital, Philadelphia, June 10, 1931, three months after the accident. He was a stocky, thick-set man, looking his given age. He walked about easily, but with his neck held a little stiffly. All motions of his neck were very limited; he had no pain, he said, unless motions were pushed beyond these limits. Doctor Ashhurst made no attempt at all to force the motions. There was no deformity palpable on the outside of the neck or in the pharynx. A spinal brace, with head extension, was ordered, to be worn constantly except in bed. The brace consisted of a pelvic band, to which were attached two uprights (one each side of the spinal column) which were continued forward over the shoulders; and a headpiece attached to the spinal support by a pivot joint allowing a little rotation of the neck, but no flexion, extension or side bending.

The patient was seen again October 7, 1931. He had been wearing the brace with comfort since June. Recent X-ray films made in Asheville, and by Dr. H. K. Pancoast in Philadelphia, showed the odontoid process in normal position, and with bony union of the fracture across its base. The patient was therefore allowed to discontinue the use of the brace except when in an automobile or railroad train on long trips. Doctor Norburn writes January 1, 1932, that the patient has gone to Florida for his general health (very high blood-pressure, having suffered an apoplectic stroke some time ago). However, the condition of his neck is quite satisfactory; he having about 75° rotation, and slight limitation in flexion and extension.

The patient himself writes from Florida December 30, 1931: "I feel little or no discomfort at all about my neck."

N.B.—Magnant (Rev. de Chir., vol. l, pp. 13–33, 1931) finds fracture of the odontoid process of the atlas occurs only in 3 to 4 per cent. of fractures of the vertebral column. As an isolated lesion it is still more rare, only ten cases being recorded.

An excellent article on the subject in German is by Dürck (Beitr. z. path. Anat. u. z. allg. Path., vol. lxxxiv, pp. 353–373, 1930).

DR. WALTER ESTELL LEE recalled three cases of fracture of the odontoid process; two of the patients recovered and the other died suddenly while being

given an enema by the orderly. He has at the present time under his care a man seventy-four years of age who was injured in an automobile accident and although he had a painful and rigid neck immediately after the accident, his other bruises seemed to attract more attention. The painful neck persisted and an X-ray picture was taken seven days after the accident. This picture demonstrated a very definite transverse fracture at the base of the odontoid. A brace was applied, which he wore in bed for about a month, but it is now discarded and although there is still considerable limitation of motion, the pain has entirely disappeared and the speaker believes that he can be considered as having recovered.

Dr. Addinell Hewson exhibited a specimen showing a fracture of the odontoid process. This is the second one of the kind he has come across, but this one shows roughened areas of the ventral and dorsal surfaces of the body. The other one he found in a dissecting room at Jefferson College, which showed the odontoid process was not united at all; that the area between the odontoid process and the body of the second vertebra was covered with cartilage and apparently the odontoid process had not been disturbed after the fracture had taken place. It is interesting from the standpoint that the callus is on the front part of the vertebra and the other on the dorsal portion. The opening for the large veins which go into the body of the vertebra in this instance is quite large. It is interesting from the position of the odontoid process and the spinal cord. The odontoid process would come very close to the position of a crossing of the fibres in the pyramids of the cord. The speaker had examined eight bodies within three hours after execution by hanging and in none of them did he find any trouble with the odontoid process.

Dr. Francis C. Grant said that he had seen the case of a man thrown through the top of an automobile who sustained a fracture of the odontoid process. The injury went ten days unrecognized and was then diagnosed by X-ray. The man wore a brace for six or eight months and made a complete recovery. As far as the speaker could remember there has been none on the neurosurgical service in the University Hospital for the last five years.

Doctor Ashhurst added, in reference to Doctor Hewson's experience with patients who had been hanged, that it was interesting to recall the controversy which was carried on years ago between the surgeons of Paris and the surgeons of Lyons, France. The former contended that the neck was never fractured by hanging, whereas the latter maintained that it was always fractured. Further investigation showed that the Lyons hangman, being anxious to assure himself of the death of his victims, after removal from the gallows, made a practice of sitting on their shoulders, and *twisting the neck around until he heard it crack*!

PSEUDOMYXOMA PERITONEI

Dr. John W. Jeffries, by invitation, read a paper with the above title.