ANKLE FRACTURES

DR. E. L. ELIASON reported the following cases:

I. *Fracture of the Tibia and Astragalus with Dislocation of the Latter.*—The patient, a young man, had his foot caught between an ascending construction elevator and the side of an open shaft, with a resulting twist that threw him over the side to the ground, 30 feet below. Fluoroscopic examination revealed a fracture of the lower end of the tibia passing obliquely across the shaft and entering the joint, a fracture of the neck of the astragalus and an internal postero-lateral dislocation of the head of the astragalus with a 90 degree rotation of the same. Open reduction was required at which the tibialis anticus tendon was found between the fragments of the tibia. The head of the astragalus was entirely separated from its attachment. Reduction and plating of the tibia. The patient is now fourteen weeks later, walking with a cane.

II. *Bilateral Fracture of the Astragalus, Tibia and Fibula.*—A young woman, while riding in the side car of a motor cycle was subjected to a head on collision. The neck of the left astragalus was broken, dislocated laterally, accompanied by a fracture of the external malleolus. The neck of the right astragalus was broken, the head was dislocated laterally and both malleoli were broken. The patient was walking without a cane six months later, her only complaint being weak arches for which she wears supports.

Stated Meeting Held May 5, 1924

The President DR. EDWARD B. HODGE in the Chair

PLASTIC SURGERY OF THE FACE

DR. ROBERT H. IVY presented a man, seventy-one years of age, who for the preceding five years had been the subject of a slowly advancing ulcerative lesion of the skin of his nose. The skin of the entire nose was involved, presenting red thickened areas, large scales and crusts, which when removed exposed ulcerations. The ulcerative process had destroyed most of the left ala through its entire thickness, the skin of the columella, part of the cartilaginous septum, and the skin of the right ala. (Figs. 1 and 2.) Very little pain was experienced. Wassermann reaction was negative. General physical examination revealed no other serious defects.

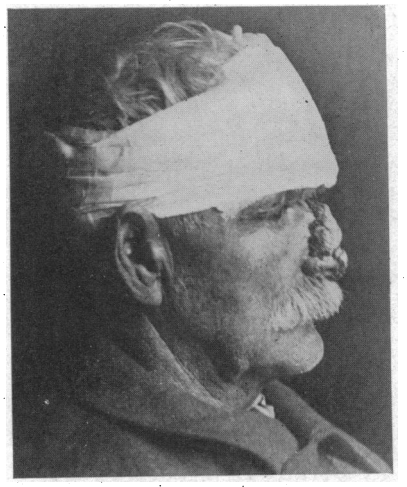

FIG. 1.—Side view of nose lesion.

A plaster-of-Paris impression of the face was taken and a cast made of the same material. From this measurements were accurately made of the nose, which had been reconstructed in wax on the model, from which a tin-foil pattern was reproduced giving the exact shape and size of a forehead flap to be used in reconstruction of the nose. At the first operation, December 21, 1923, under ether, the flap of skin and subcutaneous tissue the size and shape of the tin-foil pattern was raised from the forehead and sutured back in place for

delayed transfer to the nose (Blair, V. P., Surg., Gynec. & Obst., 1921, vol. xxxiii, p. 261). On January 15, 1924, under ether, all of the diseased portions of the nose were excised. These included the whole of both alæ, the tip, the columella, the cartilaginous septum and all of the skin of the dorsum up to the

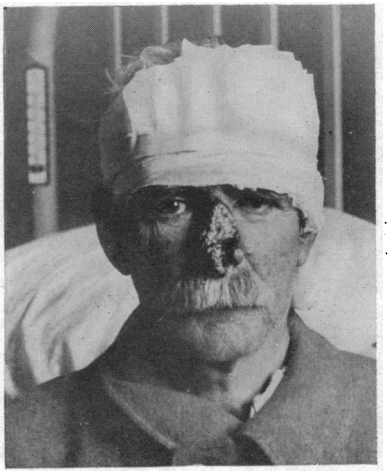

FIG. 2.—Front view of nose lesion.

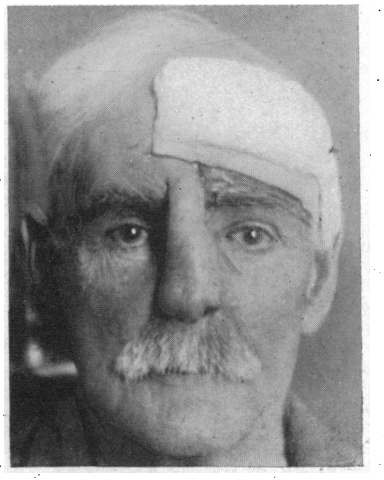

FIG. 3.—Defect of nose replaced by forehead flap.

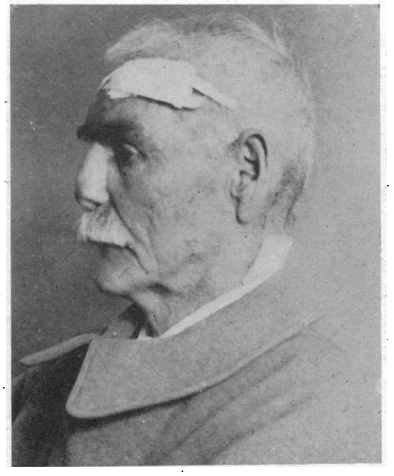

FIG. 4.—Side view after severing pedicle and returning it to forehead.

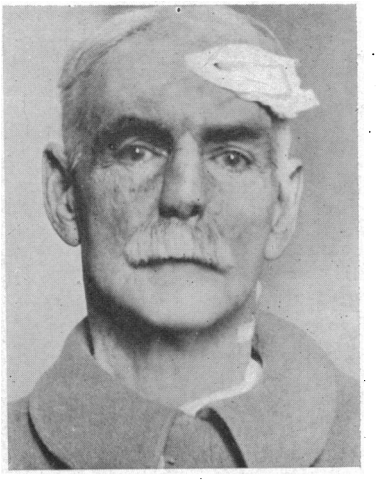

FIG. 5.—Front view after severing pedicle.

frontal bone. After control of hemorrhage, the forehead flap previously outlined was again raised, and sutured down into position so as to restore the missing parts (Fig. 3). The flap was so fashioned that its distal end could be turned in to form the lining of the nostrils and the columella, as well as supplying the external covering of the nose. This particular method of forming the flap made from an accurately measured pattern and furnishing in one piece, lining, columella and external covering, was devised by V. P. Blair, of St. Louis, by whose permission I am presenting it for the first time, as it has not yet been

published by him. Examination of the discarded tissue showed basal-cell epithelioma. On February 14, 1924, four weeks later, under ether, the pedicle was divided and its proximal end replaced in the forehead. The remaining raw surface on the forehead was allowed to granulate for a time and finally covered with a Thiersch graft under local anæsthesia. (Figs. 4, 5 and 6.)

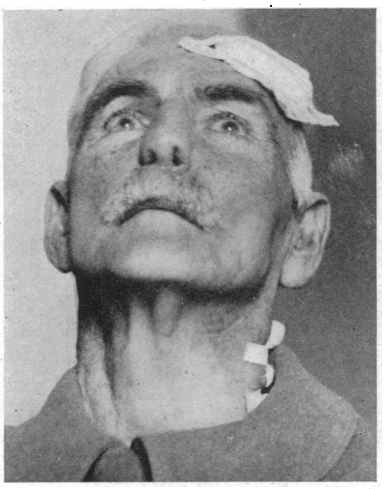

FIG. 6.—Showing well-formed nostrils with airway.

Owing to the fact that the nasal bones and bony septum were not involved in this case it was unnecessary to insert any new bone or cartilage. Healing occurred promptly, giving the patient a natural-looking nose, with well-formed alæ and nostrils through which he can breath and blow. Time alone will determine whether or not the original lesion is cured, but it is hoped that the patient, who had been condemned to a miserable life of hopeless isolation, will be given at least a few more years of happiness.

Details in the steps of procedure in this Indian method of rhinoplasty as designed by Blair are:

(1) Making of a plaster-of-Paris cast of the patient's face.

(2) Building up of the defective structures to the desired form on the cast in wax or clay.

(3) Measuring the dimensions of the nose on the cast and plotting these out on paper (see diagram Fig. 7), making allowances for columella and lining of nostrils.

(4) Reproducing the paper plan in heavy tin-foil (Fig. 7).

(5) Applying tin-foil pattern to forehead, the pedicled flap is outlined, raised, and sutured back into original bed for delayed transfer (Fig. 8).

(6) Two weeks later, all external surface of nose is removed together with diseased or deformed deeper tissues, the forehead flap is raised and its distal end is turned in and sutured with catgut to form columella and lining of nostrils (Fig. 9). The flap is then rotated on its pedicle and sutured to edges of nasal defect, particular care being taken to fix posterior end of columella securely to top of upper lip.

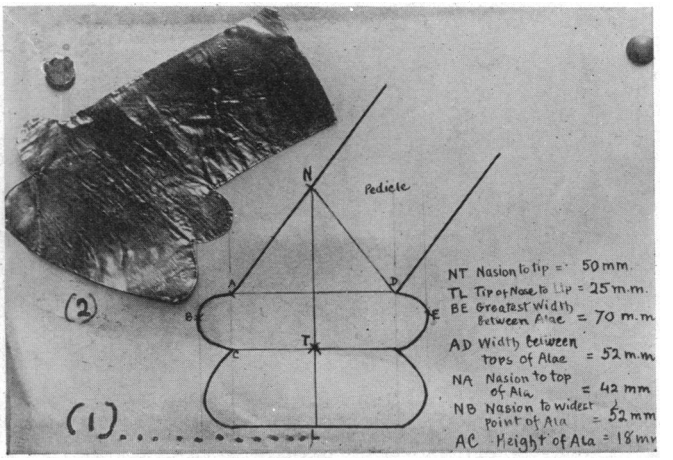

FIG. 7.—(1) Dimensions of flap for new nose plotted out on paper. (2) Paper plan reproduced in tin-foil.

(7) Three or four weeks later, pedicle is divided along line from top of one ala to nasion. Raw edge is sutured, and pedicle returned to forehead.

(8) Remaining defect in forehead can be immediately covered with full-thickness skin graft from abdomen, or later covered with Thiersch graft.

In most cases, even of total destruction of the nose, this soft tissue flap alone will restore the natural prominence of the nose without a bone or cartilage transplant. If more stability is desired, a piece of costal cartilage can be inserted later. Dr. Douglas Webster, of the Evans Institute, University of Pennsylvania, made the plaster casts.

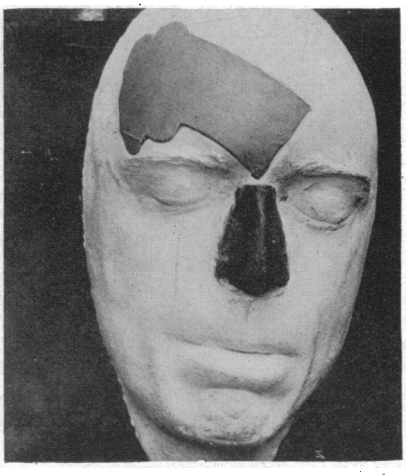

FIG. 8.—Plaster cast showing nose built out in wax and position of forehead flap.

DR. ROBERT H. IVY presented, also, a child eleven years of age, who had a large defect in the right side of the nose and cheek, exposing to view the interior of the nose and maxillary sinus. The defect communicated with the mouth through a small opening in the alveolar process on the right side. There was a loss of several teeth and surrounding bone in this region. The right ala was absent. From contraction of scar tissue the right corner of the mouth was drawn up at the expense of the upper lip. The remaining part of the nose was drawn toward the right. (Fig. 10.) This deformity is said to have resulted from noma following typhoid fever at the age of three years. On the right cheek are two parallel scars about an inch apart running downward and backward toward the neck, apparently due to a previous attempt at closure of the defect. The procedure for relief in this case was as follows: A plaster-of-Paris cast of the face was made and the defect built out to as nearly correct contour as possible in wax on the cast. From this a tin-foil pattern was made to give correct size and shape for a skin flap to cover the defect.

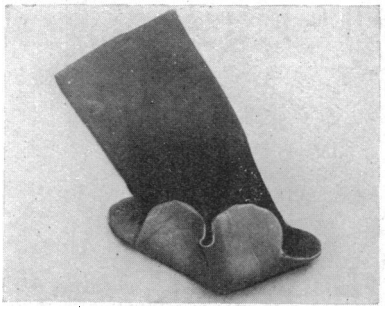

FIG. 9.—Under surface of flap, showing method of folding distal end to form columella and lining.

At the first operation, using the tin-foil pattern, a horizontal skin flap was outlined and raised from the forehead with its pedicle based at the right superficial temporal artery. This flap was sutured back into its original bed for delayed transfer to its new position. At the same operation a flap of skin was raised from the right infraorbital region, to be turned over like a hinge at the edge of the defect, to line the cavity with epithelium. This flap was also sutured back for delayed transfer.

Two weeks later, the nasal edges of the defect were freshened and the infraorbital flap raised, inverted, and sutured to the freshened nasal margin. The raw surface thus created on the cheek and the under surface of the hinge flap were covered by the horizontal flap from the forehead. (Fig. 11.)

Two weeks later, good union having occurred, the temporal pedicle was severed and returned to the forehead. The raw edge of the flap was sutured to the cheek. The opening into the nose was thus closed, but there remained

the drawn up right corner of the mouth. (Fig. 12.) This was corrected by dividing the scar tissue in the upper lip, bringing the corner of the mouth down, and filling the space thus created by interposing a thick tongue-shaped flap of skin and subcutaneous tissue from the lower lip. (Fig. 13.) Massage

FIG. 10.—Showing defect in side of nose.

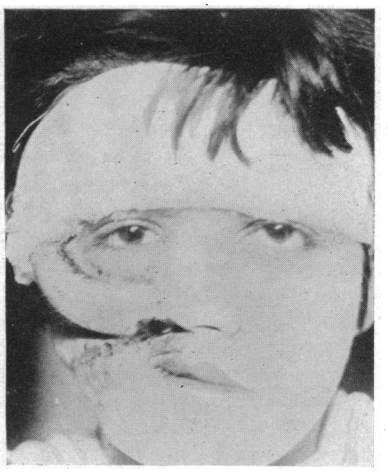

FIG. 11.—Temporal-pedicled forehead flap brought down to close defect.

FIG. 12.—Temporal pedicle severed and returned to forehead. Right corner of mouth still drawn up.

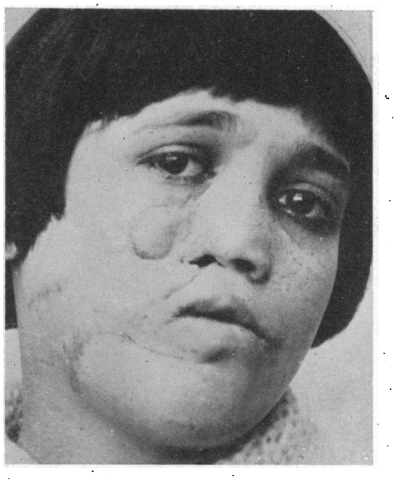

FIG. 13.—Present condition, after adjustment of corner of mouth with ascending flap from lower lip.

and time are expected to do much to obliterate the scars of these various operations. Further correction of the nasal deformity may be attempted later.

COMPOUND FRACTURE-DISLOCATION

DR. DRURY HINTON (by invitation), presented a man, forty-five years old, who was admitted December 24, 1922 with a *compound fracture-dislocation at the wrist.* The radius protruded from the flexor surface, connected with the semilunar. Vessels and nerves retracted and posterior. Four hours after admission, operation was performed, the semilunar being removed and the

wound closed without drainage after replacing the tendons and vessels. Put in splint; slight fixation, active motion in 3 days, drainage for 2 days. Left the hospital on the ninth day and was referred to surgical dispensary and at the end of three weeks was off splint and at the end of four weeks, was back at work. His work is that of a painter and he still has some slight difficulty. An interesting feature of this case was that the wound was filled with paint and turpentine.

CASE II.—*Compound Fracture-dislocation of the Elbow.*—Patient fell 20 feet and had a Colles' fracture of the right wrist and a compound fracture-dislocation of the left elbow. The humerus was pushed out one inch from the inner aspect of the arm. Fracture of the epicondyle and also fracture of the other condyle. Brought in 3½ hours after accident. Operation and placed in Jones position, small rubber tissue drain, removed at the end of 48 hours, active motion for 3 days, then motion every other day for three weeks, then all dressing removed and he returned to work in three months. Since then has had no trouble. Full flexion, supination and pronation.

TRAUMATIC PNEUMOTHORAX

DR. T. J. RYAN (by invitation) reported the case of a boy seven years of age who was admitted to the Misericordia Hospital on December 7, 1923, on Doctor Muller's service with the history that an auto truck had passed over the lower part of his right chest. Upon admission shortly afterwards he was found suffering from severe shock with a sub-normal temperature, a pulse rate of 120 and a respiratory rate of 48. He was coughing and vomiting blood. He was not totally unconscious. Examination revealed distention and rigidity of the right thorax, drum-like resonance, and evidence of injury to the ribs. There was marked distention and rigidity of the abdomen with considerable tenderness over the hepatic area.

Stimulants and an intravenous infusion of saline solution were administered within an hour after admission. Two days later, although the condition of the patient was poor and his heart sounds very feeble, an X-ray picture was taken of his right chest which disclosed fractures of the fourth, fifth, seventh, eighth and ninth ribs with a pneumothorax of the entire chest and a complete atelectasis. The right chest was aspirated and air escaped under considerable pressure. The patient was immediately benefited and an X-ray picture taken on December 17, 1923 revealed expansion of the right lung to about 60 per cent. of its normal size. The patient was discharged twenty days after admission having no symptoms except very slight pain over the chest wall. His respiratory rate was 24, his pulse 100 and his temperature 98.

This condition is not a frequent complication of civil injuries, having been the first one that occurred in this service at the above hospital in five years and but few have been described in the literature since 1917. It seems to be the consensus of opinion that these cases will recover without aspiration, but it would seem that the treatment which was instituted was instrumental in hastening recovery.

RESUSCITATION OF AN ARRESTED HEART BY DIRECT CARDIAC MASSAGE

DRS. WALTER ESTELL LEE, and T. MCKEAN DOWNS read a communication with the above title for which see page 555.

PHILADELPHIA ACADEMY OF SURGERY

SURGICAL TREATMENT OF BRONCHIECTATIC CAVITIES

Drs. Thomas A. Shallow and Louis H. Clerf read a paper with the above title.

LATE RESULTS OF SPLENECTOMY FOR TRAUMATIC RUPTURE OF THE SPLEEN

Drs. Damon B. Pfeiffer and Calvin M. Smyth, Jr., read a paper with the above title, for which see page 562.

BILIARY TRACT SURGERY

Drs. James H. Baldwin and William R. Gilmour read a paper on Biliary Tract Surgery, based upon a study of 130 consecutive surgical cases.