

ing a good blood-supply to the flap. The bleeding from the leech-bite continued for twenty-four hours after the worm had been removed. It is my belief that this expedient will often save flaps which would otherwise be lost from a lack of blood-supply, for in this case immediately after the application of the leech the flap became warm and of good color and remained so.

The molding and shaping of the flap into the nose as you see it has required several minor operations. There is an opening for nasal breathing, the appearance of the patient is greatly improved and she is well satisfied with the result. Much to my surprise she has sensation in her nose and she says that this is rapidly becoming more acute.

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RHINOPLASTY WITH FINGER

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The following procedures cover practically all conditions of external nasal deformities requiring the building up of the nose by the addition not only of bony structures but also of skin. The case reported represents the severest type, in which not only the soft parts, but also the bony structures are wanting and must be supplied. In such a case there are three measures which may be used:

1. A flap consisting of soft parts, periosteum and outer table of skull reflected down from the forehead. The resulting scarring of the forehead as well as the problematic, natural, final shape of the nose are the objections to this method.

2. The use of a finger to supply the deficiency of the nose. This an excellent method and has given splendid results. The only objection is the loss of the finger.

3. A rib may be transplanted into the forehead (Morestin) or into the arm (Carter), and when this has healed in place, then the soft parts containing the rib may be reflected as a flap and sutured in place. In such a procedure it would seem wisest to transplant a rib removed with periosteum covering half its surface. This rib is then split transversely and grafted into place in contact with the living frontal bone after separating its periosteum.

These measures would assure the life of the graft. The removal of half its periosteum would not militate against the reformation of the removed rib, since half its periosteum is left *in situ*.

That the rib will not be absorbed, the following conclusion by Murphy¹ indicates:

Bone with or without periosteum transplanted in the same individual and contacted with other living osteogenetic bone at one or both of the ends of the transplanted fragment always becomes united to the living fragments and acts as a scaffolding for the reproduction of new bone of the same size and shape as the transplanted fragment, if asepsis is attained.

REPORT OF CASE

The patient, a man of 45, was admitted to the hospital Sept. 5, 1912. Two years prior he had been a stationary engine oiler. His right arm was caught in the belt and his face was

drawn in so that the spokes of the wheel struck his face, annihilating his nose. He was then in a Long Island City Hospital for twelve months, where he said he had eleven operations. On admission to the Presbyterian Hospital, his face was entirely healed, but terribly disfigured, as the pictures show (Figs. 1 and 2). The face was marred by numerous scars, as was also the forehead, the skin of the forehead being attached to the bone by the scars. The projection of the nose was completely gone and the nasal and cartilaginous portions entirely missing, as was also the projection of the frontal bone forward. There was one small opening into the nasal cavity, admitting a probe. The left nostril was entirely gone, and its edge was attached to the bone beneath, while half of the right nostril remained and projected forward in a teat-like process. The defect in soft parts went up to within an inch of the frontal bone, and was 1 inch in transverse diameter and an inch and a half vertically. Any operation to reproduce the nose in such a case must introduce not only some bony support, but also a considerable amount of soft parts. Morestin has carried out a procedure of grafting a rib into the soft parts of the fore-



Fig. 1.—Patient before operation.

head and then turning down a flap, containing the implanted rib, to form the nose. This did not seem advisable because of the scars on the forehead, and the wish not to increase the patient's disfigurement by additional scars. It was considered best to graft a finger into the defect, because the man's condition was pitiable. He could get no position because of the deformity and went around with a handkerchief tied about his face to hide his disfigurement.

The procedure followed was a combination of the methods described by Finney and McGraw. The head and shoulders were immobilized in a plaster-of-Paris splint, the evening before the operation, and this splint was cut down on one side so that it could be quickly removed in the case of any accident during anesthesia. This splint was of great assistance in immobilizing the attached hand and arm immediately after the operation. A knife inserted in the defect separated the soft parts from the bone beneath, extending up to the frontal

1. Murphy, John B.: THE JOURNAL A. M. A., April 6, 1912, p. 989.



Fig. 2.—Profile of patient before operation.



Fig. 3.—First stage of operation; finger joined to frontal bone; plaster-of-Paris splint about head, arm and chest.

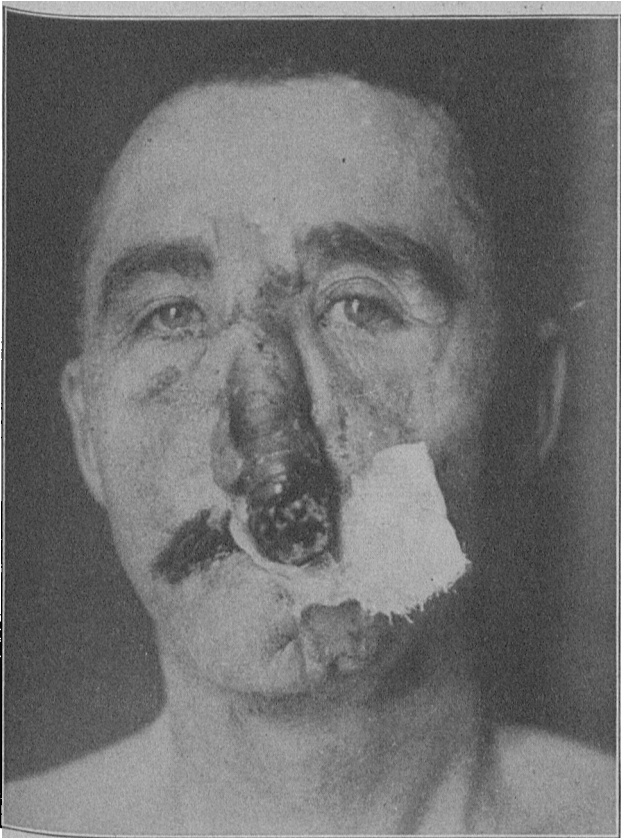


Fig. 4.—Second stage of operation, twenty-one days later; finger has been amputated.

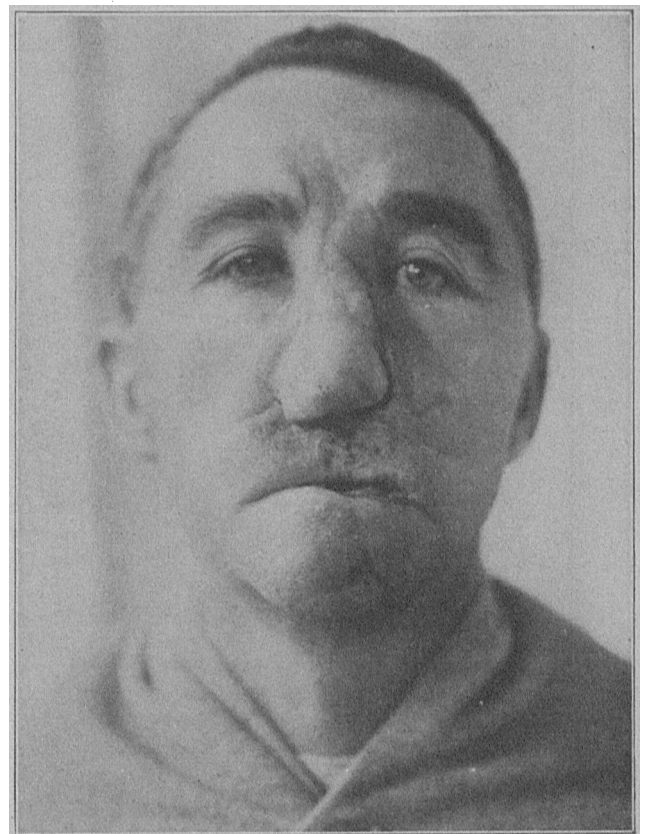


Fig. 5.—Appearance of patient two months after operation.

bone, and the edges of the defect were pared all about the margins. The left ring-finger was chosen.

Esmarch about arm. Nail removed and scraped, exposing bone beneath. Metacarpophalangeal articulation opened by a posterior longitudinal incision. Posterior extensor tendon divided by transverse incision. Joint opened. Head of metacarpal bone removed. Division of anterior tendons, also lateral ligaments of joint. Finger was then free but united by soft parts and nourished by uninjured digital vessels. Skin removed from whole circumference of last phalanx, and tip of phalanx nipped off with rongeur. Finger then slipped into place, the extremity of the last phalanx going up to the frontal bone under a bridge of undivided soft parts.

No suture was used to attach the phalanx to the frontal bone. A longitudinal denudation was made on each side of the second phalanx, about one-fourth inch wide, to which the edge of the cheek on one side was sutured, and on the other that of the nostril, the defect between the cheek and nostril being filled in by the skin of back of finger. The first phalanx was

it were also turned backward and sewed to the freshened lower border of the nasal defect. Sixteen days later it was necessary to remove most of the first phalanx because of necrosis.

After this operation there was some infection of the finger, the pus from which escaped through several places in the line of the scars. This infection, however, soon ceased. The tendons of the transplanted finger were not disturbed at any time during the various procedures, and are still in place.

The man is not yet handsome, but his appearance is vastly improved. There is no sign now, after three months, of any regrowth of the nail. There is a small opening into the nasal cavity, but not sufficient for respi-



Fig. 6.—Profile of patient two months after operation.

left unattached, as it was later to be turned backward. Interrupted silkworm gut sutures were used.

A plaster-of-Paris splint was then applied about head and about arm and chest (Fig. 3) For a couple of days after the operation the pain in the arm was severe, but after that, the arm went asleep, so to speak, and there was comparatively little discomfort.

On the fifteenth day after this operation, one of the digital vessels on one side of the finger was tied under novocain 4 per cent. anesthesia; on the twenty-first day, the finger was amputated through the metacarpophalangeal articulation, using novocain locally. No attempt was made to close the proximal end of finger at this time (Fig. 4). Heat in the shape of hot cloths was applied to the finger for twenty-four hours. Subsequently there was some necrosis of the soft parts on the end of the first phalanx, but not to any great extent.

Eight days later the first phalanx was flexed to a right angle relative to the second phalanx and its tip was sutured in this position to the bone behind, while the soft parts covering

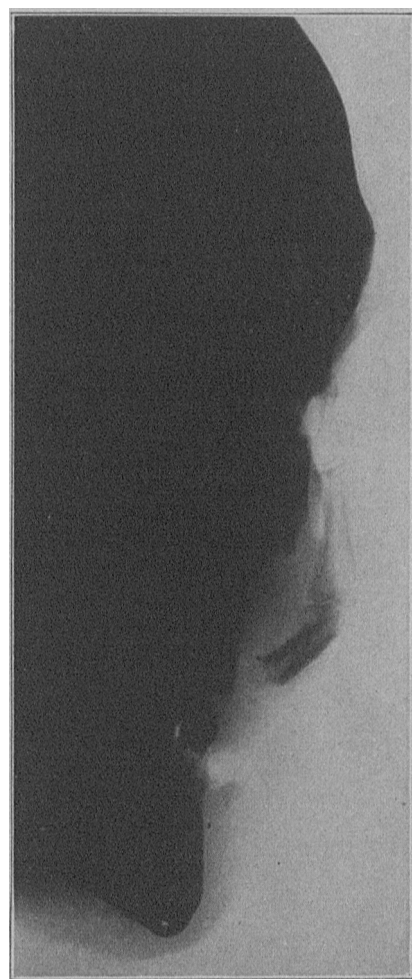


Fig. 7.—Skilagram indicating the position of the phalanges.

ration. The patient has very little sense of smell. The wound caused by amputating the finger healed by primary union. The tip of the last phalanx seems to be solidly united to the frontal bone. Figures 5 and 6 represent the result after two months. Figure 7 is a skilagram indicating the position of the phalanges.

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The Correct Rule of Medical Freedom.—The limit of "medical freedom" is a very plain and natural one. Let the patient take whatever kind of treatment he may wish, but let no treatment be administered by persons who have no knowledge of the fundamental facts of medical science. If the requirement of technical knowledge is fatal to any school of therapeutics, it is time that that particular form of robbery should be done away with. Taking chances with the lives of others for the money there is in it is not a profession to be encouraged.—David Starr Jordan, *Science*.