SURGERY

RAILWAY, INDUSTRIAL, GYNECOLOGICAL, OBSTETRICAL AND UROLOGICAL

PLASTIC OPERATIONS FOR DEFECTS DUE TO NOMA*

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Noma, or cancrum oris, occurs almost exclusively in children. It is seen chiefly in insanitary conditions, and when the cleaning of the mouth and teeth has been greatly neglected. It also occurs after scarlet fever and typhoid. All three of the cases reported in this paper followed typhoid. The mucous membrane is most often affected and the disease may be limited to the mucosa. When extensive, it spreads rapidly and involves uniformly all the tissues with which it comes in contact—bone, muscle, fascia and skin. In this respect it resembles rodent ulcer.

There is usually but little pain in noma. Often the severe cases, in which the bone and the whole thickness of the cheek are extensively affected, result in death, but some patients recover.

The treatment for the acute cases is, first of all, preventive and general, in attending carefully to the toilet of the mouth in any child who has an acute infectious disease, and in keeping up nutrition after the disease has developed. In the active stage the affected area should be thoroughly cauterized with an electric cautery.

Severe cases that recover have a very distressing deformity. The defect involves the cheek and the corner of the mouth. The scar tissue makes firm contraction and may interfere with nutrition because of the impossibility of sufficiently masticating the food. The chief indication for operation, however, is the deformity, which is often very repulsive. The principles of the operation for this condition do not differ essentially from the principles of other plastic surgery of the face, except that there is always extensive scar tissue and that usu-

ally the bone as well as the soft tissue is involved.

I have operated upon three patients for deformity following noma. The report of these cases will show the type of operation done.

Case 1.—R. E. This little girl when six years of age had typhoid fever, which resulted in noma of the left side of the face. A considerable portion of the left cheek sloughed out, including part of the bone of the lower jaw. The saliva would constantly dribble from the mouth. The defect was repaired by turning down a flap from the upper cheek, after fully dissecting and freeing the tissues in the neighborhood of the deformity. A few weeks later that portion of the flap that bordered on the margin of the lip was covered with a flap of mucosa taken from the inner side of the lower lip. Several slight plastic operations were done subsequently, and her condition now, seventeen years after operation, shows almost no facial deformity.

Case 2.—Jesse P., aged 9, in June, 1919, had typhoid fever, which lasted about a month. During convalescence a gangrenous patch appeared at the left angle of the mouth. An area about the size of a half-dollar, which included the whole thickness of the cheek, sloughed out. When he recovered the jaw was almost ankylosed by the scar tissue. I operated upon him first on December 22, 1919, dissecting away the scar. A small abscess was found in the cheek and no further attempt at plastic operation was made at that time. On March 17, 1920, a flap was outlined from his neck, with the base of the pedicle just below the left border of the lower jaw, and the tip one inch below the left clavicle. The pedicle was dissected up to about 2 inches from the tip of the flap, and was "tubed".

Six days later, under local anesthesia, the flap was further dissected free, being left attached only at its tip. Eight days later the flap was dissected free at its tip and turned into the raw surface which was made by dissecting away the scar tissue in the cheek. The tissues of the cheek had been undermined and the raw surface at the tip of the flap was tucked under the upper edge of the wound in the cheek with the skin surface within and held in position by mattress sutures of linen. A few punctures were made in the pedicle of the flap to relieve venous tension. The raw surface in the upper part of the chest was covered by undermining and suturing the skin.

On April 21 the pedicle was partially divided. On May 10 the pedicle was completely severed and the flap was folded over so that the defect in the cheek was covered with a graft having an epithelial lining both internally and externally. The

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