

## DISCUSSION

*Dr. Provosty.*—Emphasizing the necessity of having such pictures taken correctly, I would recite a case occurring some years ago in my service at the Charity Hospital. A young woman had come in with an enormous tumor of the upper jaw. On inspection I made a diagnosis of sarcoma, and the x-ray taken at the Charity Hospital confirmed the diagnosis. I was unwilling to do a disfiguring operation without better evidence of the existing condition. I had a picture taken again outside of the hospital, and the new picture showed an enormous tooth in the antrum, which was removed, and the patient recovered rapidly without disfigurement.

*Dr. Gessner.*—I should like Dr. Friedrichs to explain why the impacted tooth did not show in the skiagraph he had taken. Further, I should like to know whether impaction is more common in the upper than in the lower jaw. Some twenty years ago I removed an upper-jaw osteoma in which was embedded a cuspid tooth; the gap made was filled with an obturator made by a student of the New Orleans College of Dentistry.

*Dr. Guthrie.*—The question is not put to me to answer. However, I will undertake to tell Dr. Gessner the reason why the radiograph did not show the unerupted tooth. The reason is that the radiograph was not taken at the proper angle. There is no reason why the picture should not show an unerupted tooth. If the radiograph is taken at the right angle it will show very well the shadow of an unerupted tooth.

*Dr. Friedrichs* (closing).—In answer to Dr. Guthrie, I would say that possibly the angle in which the picture was taken may explain why it did not show the two impacted teeth.

In reference to Dr. Provosty's case, he need not have feared the resulting deformity, as any deformity occasioned by the removal of any of the fixed part of the face can readily be corrected.

In reference to the frequency of impacted or unerupted teeth in the lower and upper jaw, the relative frequency, I would suppose the lower wisdom tooth represents the most frequent tooth in which this condition occurs; with this exception, the lower jaw seems to be free from complications of this kind. In the upper jaw all the teeth, centrals, laterals, cuspids, bicuspid, and molars, are all at times involved, the cuspid leading in frequency. I do think the dental plate would not have shown the bicuspid tooth in my case, as it was above the alveolar process and in the maxillary bone. The dental film did show the cuspid.

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## FISTULA OF THE PAROTID IN WAR WOUNDS OF THE FACE AND JAWS\*

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WITH A NOTE ON RADIATION TREATMENT BY ROBERT KNOX, M.D.

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**F**ISTULA of the parotid gland or its duct is a relatively rare complication of facial wounds. Throughout a period of nearly four years, during which time wounds of every grade of severity have come under my care, only some 16 cases have been noted. These fistulæ may be conveniently classified thus:

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Fistulæ of the duct	.....	} Incomplete.
“ “ gland.	.....	

The differentiation of incomplete fistula of the duct from fistula of the gland is difficult, and the diagnosis is sometimes a mere probability based on the position of the fistula. Operative verification has not been available, for both have a tendency to heal. Should healing be delayed, the application of radium or x-ray is indicated. Gland fistulæ and incomplete fistulæ of the duct have never failed to respond to radiations.

Complete fistula of the duct is incurable except by operative methods. These methods may be grouped into three classes: 1. Seton operations. 2. Atrophy operations. 3. Reparative operations.

Seton operations are mentioned only to be condemned. They usually fail and render more difficult any subsequent reparative procedure. Atrophy operations aim at inhibiting secretion by cutting off the secretory nerve impulses to the gland. These secretory fibers run in the auriculotemporal nerve, and are destroyed either by resection or avulsion. This procedure is precisely analogous to that of the plumber who would remedy a leak in a pipe by cutting off the water supply to the house. The method has been advocated by some American and French surgeons on the grounds that the operation is easy, that absence of secretion causes no discomfort, and that reparative operations leave an ugly scar. Unless other things are equal, the plea of facility can lay no claim to serious consideration, for at the present time these cases should only be entrusted to surgeons who can confidently carry out any procedure that will give the best result.

Other things in this instance are not equal, for in the two cases that I have encountered dryness of the mouth on the side affected was a cause for complaint, and in both cases an opportunity was afforded at the operation of excising scar tissue which had formed as a result of the original injury.

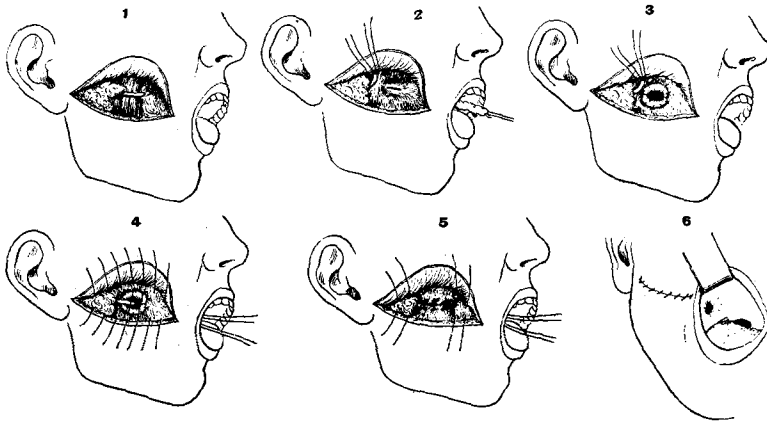
In both cases several previous attempts had been made to reestablish communication with the mouth by seton methods, the only result being to diminish plasticity by the increase of scar tissue, and so add new difficulties to those already existing.

#### DESCRIPTION OF OPERATION

It is proposed to describe briefly the steps of the operation undertaken in these two cases. The general principle adopted was that if the duct will not reach the mouth cavity the mouth cavity must be made to reach the duct. A curved incision was made with convexity down and a small flap reflected upwards (Fig. 1). This displayed the duct, the distal end of which was ill-defined and buried in scar tissue. A small lateral hole in the duct marked the limit of patency. The duct was then freed, its terminal portion resected, and two very fine catgut traction sutures were passed through its walls. The mucous membrane covered by buccinator was then made prominent immediately in front of the masseter by means of a small swab pressed against it from inside the mouth, and a small longitudinal incision was made through it into the mouth (Fig. 2). The masseter was nicked at its anterior border and the margins of

mucous membrane stitched to the deeper margins of the wound, as shown in Fig. 3.

Through the aperture thus created the stay sutures were passed and the duct was gently pulled into the funnel-shaped extension of the oral cavity. The duct was buried in the extension and the extension cut off from communication with the exterior by catgut sutures passed as illustrated in Figs. 4 and 5. The skin wound was then sewed up, drainage being established through a small stab incision. Each stay suture through the duct was then made to take a good hold of mucous membrane inside the mouth, so that when tied the duct was secured in place (Fig. 6). In both cases slight suppuration with a discharge of saliva occurred about the tenth day. Communication with the mouth had, however, been well and visibly established and firm healing occurred in a few days. Both cases were kept under observation for three weeks and were then discharged as cured. No branches of the facial nerve were identified and no facial paralysis occurred.



Figs. 1-6.

#### TECHNIC OF RADIUM EXPOSURES FOR PAROTID FISTULA

The treatment in all the cases dealt with was the same; namely, exposures to a penetrating radiation from 200 mg. of radium contained in platinum tubes of a thickness of about  $\frac{1}{2}$  mm.; in addition 3 mm. of lead were exposed to cut off all or nearly all of the hard beta radiation and allow of the gamma radiation being used. The radium tubes were enclosed in rubber tubing and in addition several layers of lint were used on the skin to cut off any secondary radiations from the metal filters. An exposure of three to four hours was given to each skin area. In one case each area received six hours' exposure. The variation in the time factor was estimated on the condition of the tissue in each case, those with considerable induration of tissue receiving longer exposures than the others.

No marked reaction was obtained in any of the cases treated. In a number of patients x-rays were combined with the radium treatment, small doses being given at short intervals; the x-rays were filtered through 2 mm. of aluminum.