

SOME FUNCTIONAL AND HYGIENIC CONSIDERATIONS IN FACIAL RESTORATIONS

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It is possible to restore extensively damaged facial features and compensate partially for the loss of internal facial structures with custom prostheses having both adequate cosmesis and to a limited degree some function. Many technicians are satisfied to restore adequate cosmesis in cases of massive loss of facial features and to overlook the possibilities for restoring function. While it may not be possible to restore *active* function, for example, voluntary movement of the mandible, it may well be possible to restore certain highly valuable *passive* functions. A case in point is the patient shown in Figure 1. Due to shrapnel wounds, the patient suffered the loss of his mandible, tongue, entire upper lip, and all of his teeth.

After completion of numerous plastic surgical procedures, the patient was sent to the VA Restorations Service to have a prosthesis fabricated to replace the missing mandible. The prosthesis was fabricated of flexible polyvinyl chloride reinforced with nylon fabric for light weight, flexibility, and particularly for comfort.

A photograph taken of the patient before injury was obtained for use as a guide in sculpturing his missing facial anatomy. Utmost care was used in matching the restoration to the patient's skin coloring and in making the prosthesis as inconspicuous as possible. Because adhesives could not be used to attach the prosthesis to his face, a special fastening was designed for attachment solely to the patient's ears. The prosthesis was extended to fit over and be supported securely by the ears. A certain amount of function was restored in allowing the patient to receive liquids through the mouth without leakage, either through the prosthesis, or around its edges.

In addition to meeting obvious cosmetic requirements in making adequate facial restorations, the expert technician will exploit other possibilities for providing the patient with whatever passive functions can be integrated in the restoration. Overlooked sometimes are hygienic

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requirements stemming from postsurgical healing problems, glandular secretions, and sloughing of tissue. Good hygiene becomes essential in cases where patients have, after surgery, cavities lined with various types of tissue that heal at different rates and/or have functioning residual gland ducts. Simply to plug the orifice may result in the accumulation of harmful tissue particles and secreted body fluids. This is particularly true in cases of surgical exenteration of the entire eye and surrounding tissue.

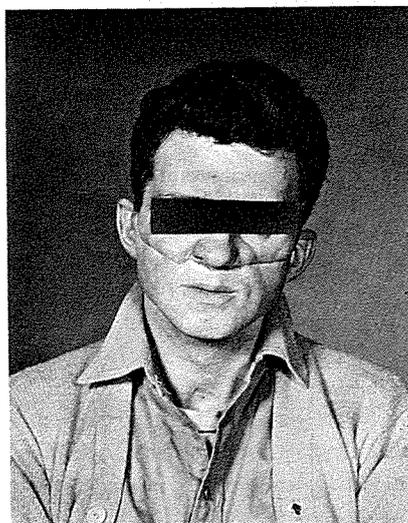
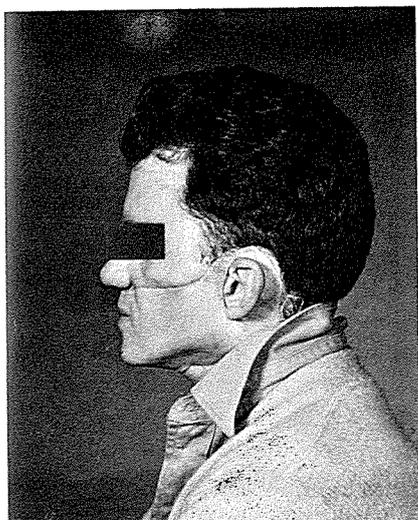
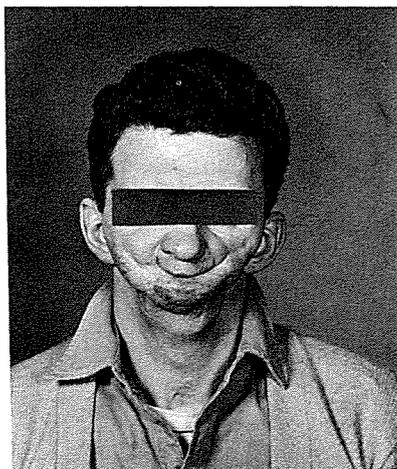
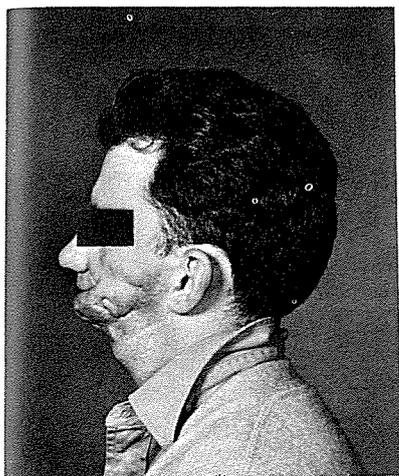


FIGURE 1.—Patient with loss of the mandible and surrounding tissue (top). Shown at bottom is completed facial restoration with over-the-ear attachment.

A typical case is shown in Figure 2, a patient suffering from carcinoma of the left orbital area necessitating removal of the eye, the socket, and the area of the eyebrow. An orifice leading to the nasal passage remained open within the socket. When seen in the clinic, the tissue within the cavity was wet with a chronic exudation. To avoid contact between these tissues and the material of the prosthesis, and to allow for adequate drainage from the orbital cavity, the prosthesis was fashioned as a plate rather than a plug. The complete prosthesis, shown in Figure 3, was produced from a model in clay for which the patient posed. It was fabricated of flexible polyvinyl chloride and reinforced with sheer nylon gauze to obtain a strong feather edge.

Apart from routine visits for retinting, the patient has had no problems in maintaining adequate personal hygiene.

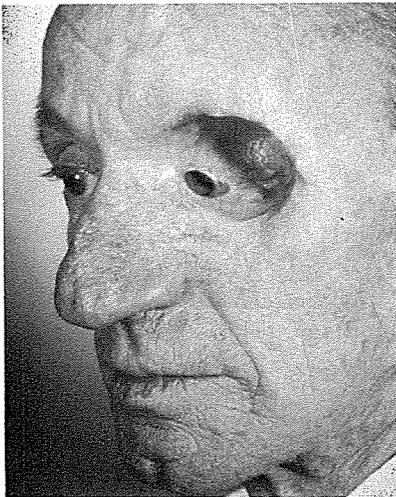


FIGURE 2.—Surgical exenteration of the eyeball and surrounding tissue with chronic drainage.

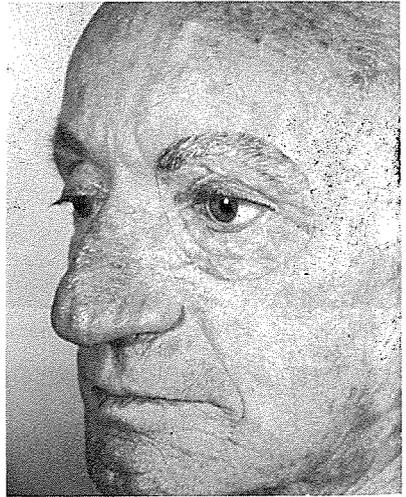


FIGURE 3.—Completed plate-type orbital prosthesis which does not interfere with drainage.