8. RECONSTRUCTIVE SURGERY OF THE ORAL CAVITY

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1. INTRODUCTION

The oral cavity has, anatomically speaking, two separate compartments, namely, the vestibule and the oral cavity proper. This division is provided by the dental arches of the upper and lower jaws. The vestibule is the space that lies between the dental arcade, on the one hand, and the lips, on the other, and communicates with the oral cavity proper in the presence of full dentition through the retromolar fossa [1]. The oral cavity proper consists of the floor of the mouth and the mobile anterior two-thirds of the tongue below and the hard and soft palate above. The palatoglossal arches behind form the boundary between the oral cavity and the oropharynx. It functions as a receptor organ for food and plays a vital role in mastication and articulation. Through the tongue and the palate it subserves the function of taste. Movements of the lips and the cheeks also participate in facial expression. In complete nasal obstruction and in case of air hunger, the oral cavity serves also as a pathway for respiration.

Each component of the oral cavity has a special structure to suit its function, and in attempting to reconstruct one or more areas of this anatomy, one must endeavour to provide not only the structure and appearance but also a return to function as far as possible. Eventually, this will depend upon the degree of surgical trauma and the proportionate defect before reconstruction is begun.
Although this chapter attempts to bring forward a general outline with regard to reconstruction of the different components of the oral cavity as separate groups, the clinician charged with reconstruction may have to undertake restoration of a defect involving more than one part simultaneously, using techniques most suitable to a particular case. The close relationship of the tongue and the floor of the mouth to the hyoid influences the function of swallowing. Following ablative surgery of these areas, steps at reconstruction must take this factor into account to avoid the problem of aspiration.

The planning for reconstruction should be discussed and preparations made before ablative surgery is begun [2]. Immediate reconstruction is the generally accepted policy today [3]. Histopathological control of the margins by frozen section examination is a sound policy in all doubtful cases.

Reconstruction in previously irradiated or operated tissues poses special problems [4]. These tissues have poor vascularity, and the process of healing in these subjects is slow [5].

Many notable advances have been made in the field of reconstructive surgery in the last decade, and the reconstructive surgeon today has a wide variety of methods available in his armamentarium [6,7,8]. On the other hand, the older established techniques are still available. In the final choice of method and technique, the clinician must take into account the age, general condition, and sociopsychological make-up of the patient as well as the site and extent of the primary lesion and the resulting defect. Every case has to be judged on its own merits. In this chapter an attempt has been made to include the salient features of each technique. The reader is referred to the appropriate literature for details of individual techniques.

2. PREOPERATIVE PREPARATION

The essential preoperative steps that bear on the final results in any surgical procedure in the oral cavity should be borne in mind. These are as follows:

1. Attention to oral hygiene.
2. Nutritional state of the patient.
3. Attention to any systemic conditions, such as diabetes, cardiac and/or pulmonary state.
4. Consultation with the prosthodontist.

3. THE LIPS

3.1. Surgical anatomy

Not only do the lips form the entrance to the oral cavity but they serve the extremely important function of keeping the oral cavity closed, thus allowing mastication and swallowing and preventing drooling. This function is due to the sphincter around the mouth formed by the orbicularis oris muscle. Its deep layer is formed by the fibers of the buccinator, reinforced by bundles of the incisive muscles, which give it an attachment to the nasal septum and maxilla.