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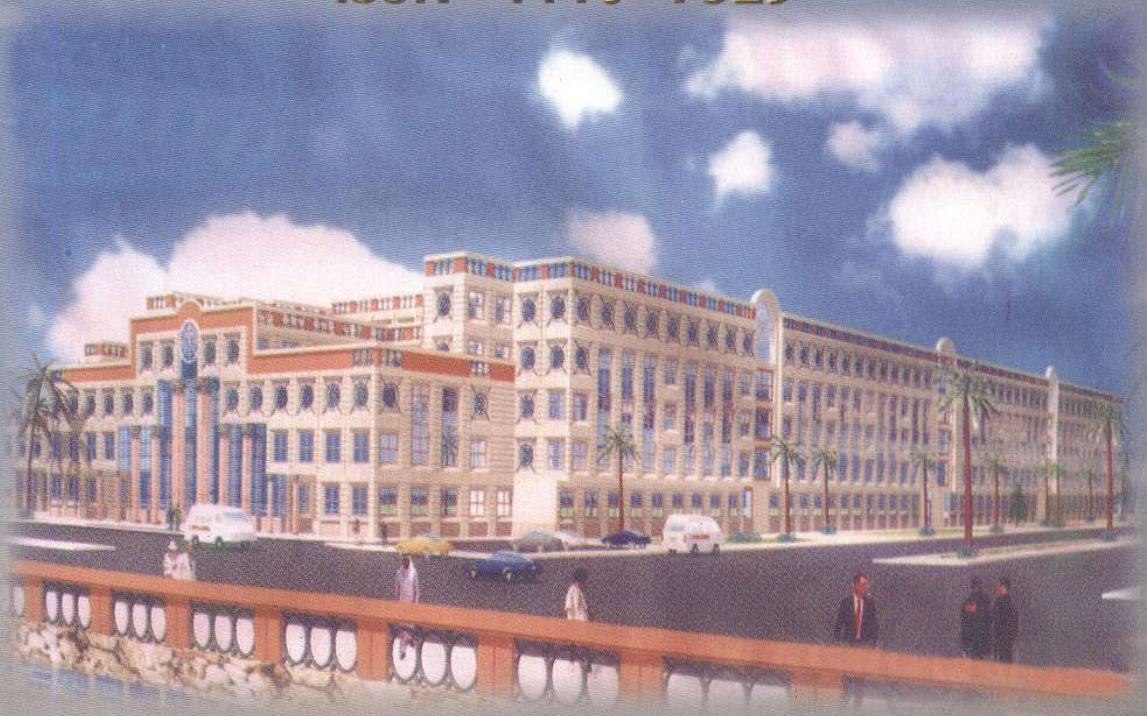

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Orofacial Tumours; Complexity and Outcome

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Abstract

The anatomic, physiologic and aesthetic complexity of the head and neck poses significant challenges to the management of all neoplasm arising in this compact region.

The oral cavity is the most common site for malignancies of the head and neck region (about 30%) with the tongue and floor of mouth, are the most frequent primary site. The primary objective of a reconstructive effort is an aesthetic result that approaches a normal appearance. Functional consideration, including oral competence, articulation, speech, and the role of the lip in mastication, must be kept in mind during reconstruction of the large lip defects.

The aim of this work is to study the different available surgical techniques for reconstruction of orofacial area after tumour excision and to address the outcome of surgery, aesthetic result and recurrence after surgery.

This prospective study included 75 patients with different orofacial tumours, who were admitted at both Plastic and General Surgery Departments, Sohag University Hospital, Egypt, in the period from Mars 2004 to October 2006. The age of the patients ranged from 7 months to 83 years, 40 patients (53.33%) were females and 35 patients (46.66%) were males.

The aesthetic and functional results were evaluated by patients questionnaires, photographing and physical examination.

The overall aesthetic and functional results were excellent in 65.41%, very good in 14.66%, good in 17.33% and fair in 2.6% of the cases respectively.

Conclusion:

The local and regional flaps are ideal methods for reconstruction of facial defects because they give excellent color and texture match. Distant flaps have a great role in reconstruction of large facial defect. Although split or full thickness grafts proved to be an easy, simple and fast technique of reconstruction, however the aesthetic results are usually unsatisfactory.

Introduction

Head and neck defects created after tumour extirpation present surgeons with some of the greatest challenges in reconstructive surgery. The intricate interaction between form, function, and appearance is greater in this anatomical subsite than any other. The importance of the face in social interactions cannot be underestimated. All of these variables and more must be taken into consideration when deciding upon the ideal reconstruction[1].

The oral cavity and its surrounding maxillofacial and skeletal encasement not only are situated at the central point of the head and neck but also offer the main portal of entry into this region[2].

Orofacial soft tissue masses include: epithelial tumours, fibrous, fibrohistiocytic and fibrovascular tumours, granuloma-like mucosal lesions with giant cells, vascular tumour, neural tumours, muscle tumours, soft tissue lesions with bone or cartilage, non-calcified soft tissue tumours with mixed or ectopic tissues, soft tissue cysts, also there are orofacial bony tumours include maxillary tumours and mandibular tumours[3].

The oral cavity is the most common site for malignancies of the head and neck region (about 30%) with the tongue and floor of mouth, are the most frequent primary site[4]. In 2002, the American Association of Oral and Maxillofacial Surgeons stated that oral cancer accounts for about 3% of all cancers diagnosed annually in the U.S. It is diagnosed each year in about 30,000 Americans and responsible for about 8,000 deaths annually[14].

The most common faciodermal malignancy is basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and malignant melanoma in that order[5].

Aim of the work

The aim of this work is to study the different available surgical techniques for reconstruction of orofacial tumours and to address the outcome of surgery, aesthetic result and if there is recurrence after surgery.

Patients and Methods

This prospective study included all patients with different orofacial tumours, who were admitted at both Plastic and General Surgery Departments, Sohag University Hospital, Egypt in the period from Mars 2004 to October 2006.

Full history taking (particularly age of the patient, their social circumstances and tumour biology) and thorough clinical examination were done for all patients on admission, and all laboratory and radiological investigations needed were also done.

Thorough clinical examinations included also regional lymph nodes. After full assessment of the patients including physiological age and general condition, the excision of the tumour and tumour bearing area were mapped according to the suspected pathology putting in mind the safety margin, and flap design.

The patients were divided into five groups according to the different regions of the tumour in relation to the aesthetic units of the face. Group I included patients with oral and perioral tumours, group II included patients with cheek tumours, group III included patients with tumours in the forehead region, group IV included patients with tumours in the nasal region, and group

V included patients with tumours in the periorbital region.

After an informed written consent were obtained, patients underwent surgical excision of their lesions under general or local anaesthesia. Appropriate reconstructive procedures was planned for every case. Procedures ranging from simple primary closure, partial or full-thickness skin grafting, to local and distant flaps were used to cover the resultant defects.

The aesthetic result was formulated by eyewitness score using 5 different persons (doctor, paramedical staff, medical student, patient and patient's relative). The score consisted of five degrees ranging from excellent, very good, good, fair and bad.

The functional outcome depended on both objective and subjective effects of the reconstructive part on the function of the affected area.

Patients were followed up till the end of the study period to detect locoregional relapse of the tumour and to ensure that the patient was being successfully rehabilitated.

Results

Seventy five patients with different orofacial tumours were included in this prospective study over 20 months period from Mars 2004 to October 2006. The age of the patients ranged from 7 months to 83 years, 40 patients (53.33%) were females and 35 patients (46.66%) were males.

Patients were divided into five groups according to the sites of the defect in relation to the aesthetic units of the face. These groups were namely: oral and perioral region (group I) and included 34 cases (45.33%), cheek region (group II) and included 14 cases (18.66%), forehead region (group III) and included 12 cases (16%), nasal region (group IV) and included 12 cases (16%), and periorbital region (group V) and included 3 cases (4%) (Figure 1).

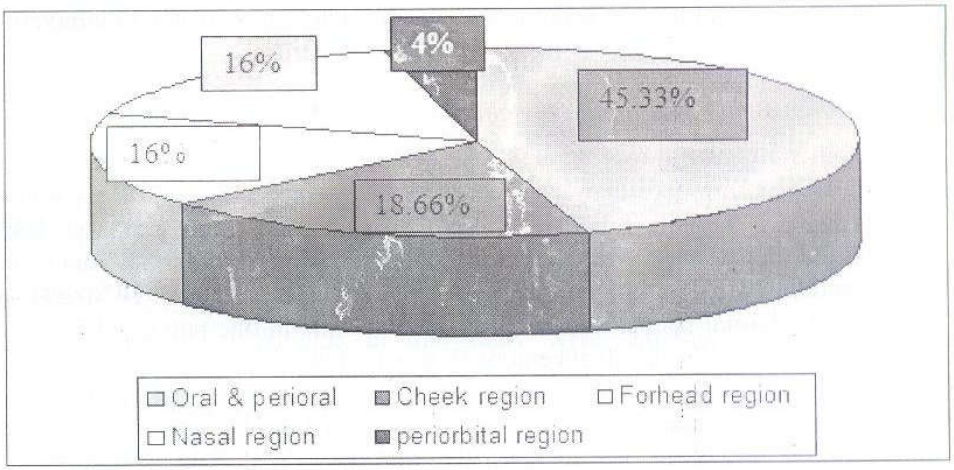

Fig. 1: Schematic presentation of incidence of orofacial tumours in different regions.

Group 1: Patients with oral and perioral tumours (34 cases):

Different surgical and reconstructive procedures were done for the patients of this group depending on the nature and extent of the lesions. Excision and primary closure was the commonest maneuver. It was done in 12 cases (16%): 3 of them were mucocele of the lower lip. Other indications were haemangioma, Schwanoma, and BCC of the of the upper lip on top of xeroderma pigmentosa (one case each), cavernous haemangioma and mucocele of the tongue (one case each), angiomyxoma and lipoma of the buccal submucosa (one case each), pyogenic granuloma of the gum and lower lip (one case each). Wedge excision and primary reconstruction of the lower lip was the next maneuver. It was done in 10 cases (13.3%): 4 of them were SCC measured less than one-third of the lower lip, 3 were haemangioma, 2 were sebaceous horn and one was pyogenic granuloma. Abbé flap was done in 3 cases (4%): two were SCC of the lower lip involving two-thirds of the lip and the other was BCC of the upper lip and nose where Abbé flap was used for reconstruction of the lip and mid-forehead flap was used for reconstruction of the nose. Excision and healing by secondary intention was done in another 3 patients (4%): 2 with pyogenic granuloma of the hard palate and gum (one case each) and one with SCC of the palate. Vermilionectomy and mucosal advancement was done in two patients (2.6%): one with carcinoma in situ of the lower lip and the other with diffuse haemangioma of the upper lip. Radical excision and tongue flap reconstruction was done in one case (1.3%) with minor salivary gland adenocarcinoma of the palate. In this patient right supraomohyoid selective neck dissection (levels I-III) was also done, and the patient was sent for adjuvant radiotherapy. Right hemimandibulectomy and iliac bone graft reconstruction with supraomohyoid selective neck dissection was done in another patient (1.3%) with SCC of the right gingiva. Transposition flap was done in another patient (1.3%) with pseudoepithelioma of the right angle of the mouth for reconstruction of the angle. Split thickness graft was done in another patient (1.3%) with multiple basal cell carcinomas of the face and lower lip on top of xeroderma pigmentosa. The commonest affected sites and the commonest histopathology were presented in table 1.

Group II: Patients with tumours in the cheek region (14 cases):

Different surgical and reconstructive procedures were also done for the patients of this group. The commonest surgical maneuvers were excision and primary closure and rotational flaps (equally 5 patients (6.6%) each). Excision and primary closure was done in 2 cases with SCC and 3 cases with hamartoma, intradermal naevus and BCC (one patient each). Rotational flap was done in 4 patients with BCC and one patient with intradermal naevus. Rhomboid flap was done in one patient (1.3%) with basal cell carcinoma. Cheek advancement flap was done in another patient (1.3%) with BCC ulcer at the lateral side of the nose. Left maxillectomy and deltopectoral flap reconstruction was done in one case (1.3%) with SCC of the left maxilla. In this patient, excision of the left half of the palate and the orbital floor were also done through Weber-Ferguson incision and adjuvant radiotherapy was considered. Serial excision for left cheek haemangioma (after its involution) was done in the last patient (1.3%). The commonest affected sites and the commonest histopathology were presented in table 2.