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Reconstruction methods of the middle facial region after skin tumor removal

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ABSTRACT

The purpose of this paper is highlighting the treatment used for patients with skin tumours in the middle third of the face. Fear of a malign skin disease have been rising public awareness of the danger of exposure to sunlight. The probability of developing a skin tumours increases with age. Non melanocytic skin cancers are currently the most common types of cancers in Caucasians; their incidence has steadily increased worldwide in recent decades in the context of actinic aggression and increased exposure to other carcinogens, with geographic variations depending on climate, sun exposure and skin phototype. Knowing the most common forms of benign and malignant skin tumours is crucial for a proper evaluation and therapeutic management. To restore the defects resulting from excision of different types of skin tumour, were used various surgical procedures. The choice of reconstruction method was done according to the need of each patient, considering the location, size and defect results as well as medical history and level of cooperation with each patient.

Keywords: skin tumours, basal cell carcinoma, middle facial defects, tumour incidence.

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Introduction

Surgical reconstruction of the head and neck has been and continues to be a great challenge for the plastic surgeon. The head (and particularly facial region) is the most exposed in society and the possibilities for concealment of deformities at this level are reduced [1].

Defects in this region, in addition to the psychological effect on the patient can have a negative impacts in terms of function (speech, nutrition, breathing, seeing) which can have a negative influence on the quality of life. Each patient should be seen and treated individually [1,2].

In recent years, in this area we have made significant progress on reconstruction techniques. In this study were considered principal reconstruction methods used to treat secondary defects after excision of skin tumours [3]. It should be noted that to treat such a condition is very important a multidisciplinary collaboration: plastic surgeon, dermatology, pathologist and oncologist [4].

The purpose of this paper is highlighting the treatment used for patients with skin tumours in the middle third of the face. For these cases we studied personal cases over a period of nearly two years (2013-2015) following the frequency with tumour histology, and reconstruction methods.

Material and method

This work follows a number of 29 patients, during September 2013 -July 2015 in which 15 women and 14 men with ages from 23 to 87 years.

Results

Figure 1 – Sex distribution.

The distribution by age decades is represented below

Figure 2 - Age distribution

Most patients in the study group were

diagnosed in dermatology services (55.2%), by plastic surgery (17.25%), the rest being diagnosed by other specialties, including services Otolaryngology - OMF - 10.3 % (Figure 3).

Figure 3 – Number of cases by speciality

Of the 29 patients, approximately 17 patients (58.6%) are known with other illnesses. The remaining 12 patients (41.4%) are not known at the moment of tumour diagnosis with any other condition. Since many collateral problems were fixed the same patient were identified as 19 illnesses in 29 patients.

The most common were cardiovascular diseases - 10 cases (52.6%), followed by diabetes 3 cases (15.79%), coagulation disorders (2 cases- 10.52%) and 3 cases of respiratory illnesses - 15.79 %. Other conditions were less than 6%.

Figure 4 – Distribution by other comorbidities

Patients with skin tumour in the middle third facial region included in this study, presented different locations within the aesthetic subunits that form this region. Thus, the table below is synthesized on the basis of the distribution of affected patients.

Table I – Number of cases for each aesthetic unit

Facial esthetic unit	Number of patients	Percent
Orbital	5 cases	17,2%
Infraorbital	2 cases	6,9%
Nasal	20 cases	69%
Zygomatic	2 cases	6,9%

Fig. 5 – Distribution by facial sub-region involved

As histopathological type frequency is clearly in favor of basal cell epithelioma - 23 cases, while scuamo-cellular carcinoma was identified in only 5 patients. One patient developed malignant melanoma in the nasal pyramid.

Fig. 6 – Distribution by histopathologic tumour type

In the table below is represented distribution of patients by histopathological type of tumor and its location.

Table II – Different histopathological types and facial unit involved

Facial aesthetic unit	Baso-cellular carcinoma	Scuamo-cellular carcinoma	Malign melanoma	Other types	total
Orbital	4	0	1	0	5 cases
Infraorbital	1	1	0	0	2 cases
Nasal	17	3	0	0	20 cases
Zygomatic	1	1	0	0	2 cases
	23	5	1	0	

To restore the defects resulting from excision of different types of skin tumour, were used various surgical procedures. The choice of reconstruction method was done according to the need of each patient, considering the location, size and defect results as well as medical history and level of cooperation with each patient.[5, 6]

In the chart below we plotted the distribution of the methods used in this study. I mention that there was no case of reconstruction using a skin free flap.

Fig. 7 – Distribution by reconstruction method

In the table below it can be seen the number of surgical cases, depending on the method used and the location of the tumour.

Table III – Different reconstruction methods according with facial aesthetic unit

	Primary suture	Skin transplantation	Local flaps
Orbital	1	2	2
Infraorbital	1	1	0
Nasal	5	4	11
Zygomatic	1	0	1
	8	7	14

Conclusions

Non melanocytic skin cancers are currently the most common types of cancers in Caucasians; their incidence has steadily increased worldwide in recent decades in the context of actinic aggression and increased exposure to other carcinogens, with geographic variations depending on climate, sun exposure and skin phototype. The incidence of this disease is slightly increased in males. The group with most cases diagnosed was 60-79 years, which can explain the theory of skin senescence, but it is important to note and that it has noted an increase frequency in the young population [7, 8].

Reconstruction of postoperative defects of the face is a challenge for head and neck surgeon, due to the difficulties caused by the restoration of three-dimensional structures. Another important aspect is choosing the optimal method of reconstruction for each patient to obtain the best results [4].

Complex postoperative facial defects is a major handicap in terms of social and functional for the patient, which is why they need to be rebuilt immediately in order to improve quality of life [9]. Having such a varied arsenal of reconstructive methods, choosing a correct strategy is based on patient assessment and postoperative defect. Local flaps has several advantages: similar texture and colour; technically easy to perform; loco-regional anesthesia; primary suture of secondary defect; rapid healing; not cause morbidity in donor region.[10, 11]

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