

Challenges in cutaneous squamous cell carcinoma at the face level

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Abstract:

Cutaneous squamous cell carcinoma is one of the most common skin cancer with an increasing incidence. Often, it appears on sun exposure areas. At the face level, it is a challenging disease due to its aggressiveness and requirement of large excisions and also of reconstructions, taking into account the aesthetic units of the face and the psychological impact which could affect the patient.

This paper highlights a retrospective study of 25 patients who underwent surgical excision of squamous cell carcinoma at the face level, diagnosed through histological exam. Multiple techniques for face reconstruction were performed based on aesthetic unit, defect size, patient age and tumor features.

Keywords:

cutaneous squamous cell carcinoma, aesthetic unit, face reconstruction

Introduction

Cutaneous squamous cell carcinoma is one of the most common skin cancer, with an incidence of 2.5 million cases estimated every year, which is expected to increase. It is more often encountered in fair-skinned, elderly men and it is associated with significant sun exposure.

As risk factors, precancerous lesions with burn history could generate a malignant transformation in which the inflammation has an important role; also smoking and immunosuppression are discussed.

American Joint Committee on Cancer describes as high risk factors the tumor size over 2 cm, the thickness over 6 mm, perineural invasion and beyond subcutis invasion, poor differentiation, immunosuppression, anatomical site, lymphovascular invasion, recurrent nature and growth pattern.

Face reconstruction is a challenging surgery due to the fact that face is the most visible part of the body and it has a special topography. For a successful surgery, it is necessary good knowledge of the face anatomy and of available reconstructive options, based on form restoration and function preservation.

Materials and methods

A retrospective study, during one year, at Emergency University Hospital of Bucharest, at Plastic Surgery Department, evaluated 25 patients diagnosed with cutaneous squamous cell carcinoma at the face level, based on histological exam.

Surgical excision was performed in all cases and the closure was chosen depending on the defect size and aesthetic unit. In some cases, primary closure was enough. In other cases, local flaps or skin grafts were required.

Every patient signed informed consent before surgery.

Results

Among 25 patients diagnosed with cutaneous squamous cell carcinoma through histological exam, 6(24%) were on the cheek level, 3 (12%) were periorbital, 5 (20%) were on lip level, 4 (16%) were at the temporal level, 3 (12%) at forehead and 4 (16%) were on the nose level.

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Regarding the repartition of the genders, 44% were males and 56% were females.

In 48% of cases, primary closure was performed, 40% required local flaps (figure 1, figure 2) and 12% were covered with skin grafts (figure 3, figure 4). There were 6 tumors under 2 cm and 19 tumors over 2 cm.



Figure 1. Cheek tumor on a male patient and the defect size over 5cm



Figure 2. Immediately postoperative picture. The defect was covered using a Mustarde local flap

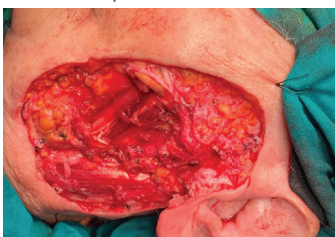


Figure 3. Intraoperative picture after the resection of a cheek tumor over 10cm diameter at a 96 years old female.



Figure 4. Reconstruction using primary suture and skin graft minimizing the surgery time and possible complications due to the patient age of 96 years old.

Discussions

Facial reconstruction is a common procedure among Plastic Surgery field. There are a variety of options starting from primary closure, skin graft, loco-regional flaps, ending with free flaps. Every technique has advantages and disadvantages and every case needs a customised approach based on the defect size, the aesthetic unit and the excised structures, preserving the function, contour, texture and the colour of the region. Another important aspect is about the impact of the facial reconstruction could have on the patient. Even if we preserve the site function and the surgery has a good result from the surgical point, the aesthetic result isn't the same from the patient view who remains with a scar.

This study highlights one of the skin properties: elasticity. Even if local flaps are recommended for small to moderate sized defects in face reconstruction, only 40% required local flaps. In the majority of cases, primary suture was performed with good results. Only 3 patients required skin grafts. The decision was based on large defect size which would have required a complex reconstruction, the invasive features of the tumor and the patient age - to minimize the surgery time and possible complications.

Conclusions

The facial reconstruction is a complex process where it is very important to preserve the region function and have an aesthetic result.

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There are multiple techniques which can be used but the decision should be based on the experience of the surgeon, the defect size, the aesthetic unit involved, tumor features, age and comorbidities of the patients. Also, the interaction between patient and doctor is very important. Being the most visible part of the body, it has also a great impact on the patient. The doctor should explain all the advantages and disadvantages of the surgery and possible complications to the patient.

Biography

Anamaria Grigore is a plastic surgeon resident and also PhD student from "Carol Davila" University of Medicine and Pharmacy.

Ana-Maria Oproiu is the Head of Plastic Surgery Department at Emergency University Hospital of Bucharest, the biggest hospital of Romania, and also Assoc. Prof. At "Carol Davila" University of Medicine and Pharmacy. Every year, she brings her medical contribution to multiple conferences and journals. She is a plastic surgeon specialized in aesthetic surgery with a rich experience including a wide range of surgical interventions and non-surgical reconstructions. It has a high level of training in non-surgical anti-aging techniques, toxin, mesotherapy, hyaluronic acid, calcium hydroxapatite. She has training sessions in Dubai, Malta, Italy, France. She is consulting expert for several leading companies training physicians in injectables.