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Advanced Malignant Skin Tumors of the Face: Surgical Management and Outcomes in 30 Cases

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Abstract: Case Report

Advanced malignant skin tumors of the face represent a significant clinical and public health challenge due to their high prevalence, potential for disfigurement, and life-threatening complications. This retrospective study analyzed 30 cases treated surgically over two years at a tertiary care center in Morocco. The mean patient age was 63 years, with a male predominance (sex ratio 2:1). Delayed consultation (average 15 months) was attributed to rural healthcare barriers and use of traditional medicine. Histopathological analysis revealed basal cell carcinoma (60%), squamous cell carcinoma (37%), and melanoma (3%). Surgical management included wide local excision (73% curative intent), lymphadenectomy (33% for squamous cell carcinoma), and reconstruction with grafts (20%) or locoregional flaps (80%). The discussion highlights the epidemiological and therapeutic challenges unique to phototypes IV–V populations and underscores the need for early diagnosis and multidisciplinary care.

Keywords: Facial skin cancer, advanced tumors, surgical management, epidemiology, reconstruction.

INTRODUCTION

Cutaneous malignancies of the face are among the most frequently encountered pathologies in dermatologic and plastic surgery practice, particularly in regions with high ultraviolet (UV) radiation exposure [1]. In Morocco, skin cancers rank as the eighth and tenth most common malignancies in men and women, respectively, with basal cell carcinoma (BCC) constituting 61% of cases [19]. Advanced-stage tumors, defined by deep invasion, nodal metastasis, or destruction of critical facial structures, present formidable therapeutic challenges due to their aesthetic, functional, and prognostic implications [1].

The management of advanced facial skin tumors necessitates a balance between oncologic radicality and functional reconstruction. Surgical resection remains the cornerstone of treatment, yet the anatomical complexity of the face often complicates margin assessment and reconstruction planning [7]. In Morocco, delayed diagnosis—driven by socioeconomic barriers and reliance on traditional medicine—further exacerbates the prevalence of advanced cases [33]. This study aims to analyze the clinical characteristics, histopathological findings, and surgical outcomes of advanced facial skin tumors in a Moroccan cohort, providing insights into region-specific challenges and therapeutic strategies.

Materials and Methods

Study Design and Population

A retrospective analysis was conducted on 30 patients treated at Mohammed VI

University Hospital between 2019 and 2021. The study was approved by the institutional ethics committee, and data were anonymized to ensure patient confidentiality.

Inclusion and Exclusion Criteria

Patients were included if they had histologically confirmed malignant tumors (BCC, squamous cell carcinoma [SCC], or mucinous carcinoma) with advanced local invasion (e.g., bone, orbital involvement, or nodal metastasis). Exclusion criteria comprised benign lesions, early-stage tumors, and malignancies confined to the scalp.

Surgical Protocol

1. **Oncologic Resection**: Wide local excision was performed with safety margins tailored to tumor type (5 mm for BCC, 10 mm for SCC) [29]. Margins were marked preoperatively and confirmed via intraoperative frozen sections when feasible.
2. **Reconstruction**: Immediate reconstruction (20% of cases) utilized full-thickness skin grafts for small defects. Larger defects required delayed reconstruction (80%) with locoregional flaps (e.g., Mustardé flap for periorbital defects, deltopectoral flap for cervicofacial involvement).
3. **Lymphadenectomy**: Indicated for SCC with clinically positive nodes (33% of SCC cases).

Data Collection

Demographic (age, gender), clinical (consultation delay, macroscopic features), and histopathological data were extracted from medical records. Therapeutic outcomes, including margin status and recurrence, were analyzed.

RESULTS

Demographics

The mean patient age was 63 years (range: 7–89), with 67% of cases occurring in patients aged 60–80. A male predominance was observed (67%, sex ratio 2:1).

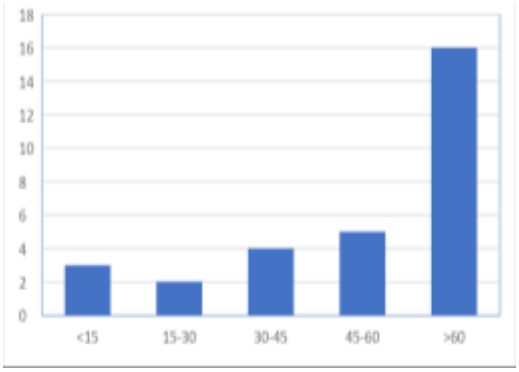

Figure 1: Age of patients

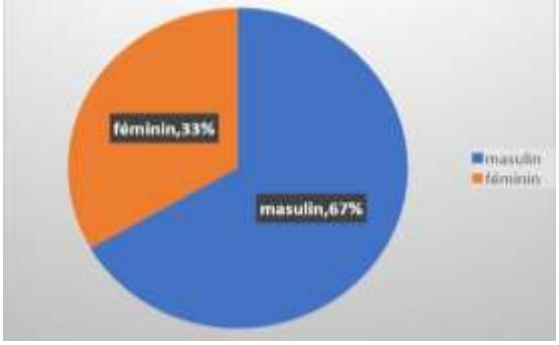

Figure 2: Gender of patients

Clinical Presentation

The average delay to consultation was 15 months (range: 6–24 months). Rural residence (87%) and prior use of traditional medicine (20%) were significant contributors to delayed presentation. Macroscopically, tumors were ulcero-proliferative (56%), nodular (20%), ulcerated (14%), or proliferative (8%).

Histopathological Findings

BCC accounted for 60% of cases, followed by SCC (37%) and melanoma (3%).

Therapeutic Outcomes

- **Surgical Resection**: Clear margins were achieved in 77% of cases; 23% required re-excision.
- **Reconstruction**: Immediate reconstruction was performed in 20% of cases, while 80% underwent delayed procedures using locoregional flaps.
- **Adjuvant Therapy**: Radiotherapy was administered to 60% of patients with high-risk features (perineural invasion, close margins).

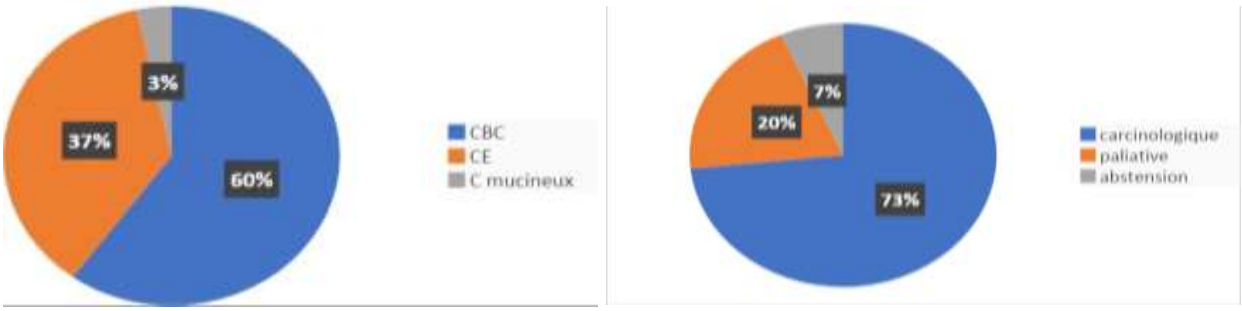

Figure 3: Histological type and therapeutic

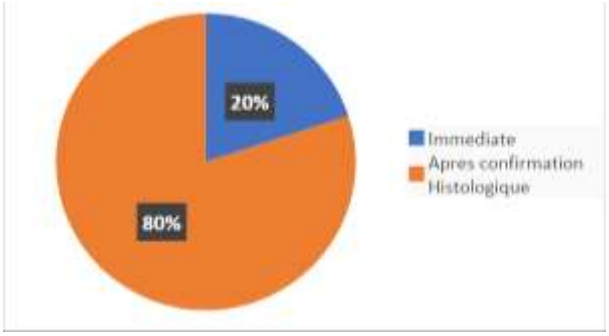

Figure 4: Delay before reconstruction

DISCUSSION

Epidemiological and Clinical Insights

The male predominance (2:1 ratio) aligns with global trends in UV-exposed populations, where occupational sun exposure is more common among men [33]. The high prevalence of phototypes IV–V (88%) in our cohort contrasts with Caucasian-majority studies, underscoring the need for region-specific prevention strategies [34].

Risk Factors and Diagnostic Delays

Chronic UV exposure and smoking (linked to BCC in women [31]) were key risk factors. The protracted consultation delay (15 months) reflects systemic barriers, including rural healthcare inaccessibility and cultural reliance on traditional medicine [33].

Surgical Challenges

The face's anatomical complexity necessitates meticulous resection and reconstruction. The 23% re-excision rate highlights the difficulty of achieving clear margins in advanced tumors [29]. Locoregional flaps, such as the deltopectoral flap, provided reliable coverage for large defects, though aesthetic outcomes require further long-term evaluation.

Comparative Analysis

The predominance of BCC (60%) mirrors global data, while the higher SCC incidence (37% vs. 20% in Western cohorts) may reflect differences in photoprotective behaviors [19, 34].

RECOMMENDATIONS

1. **Early Detection Programs**: Community-based screening to reduce advanced-stage presentations.
2. **Multidisciplinary Care**: Collaboration between dermatologists, oncologists, and reconstructive surgeons.
3. **Public Health Initiatives**: Education on sun protection and healthcare access in rural areas.

Figure 5: An 85-year-old patient presented with a C, Epidermoid of the right palpebral jugal region who benefited from a Mustarde flap. Therapeutic

Figure 6: Patient aged 43, smoker who consulted for cervico-jugal infiltrating CBC and benefited from a Deltopectoral Flap

Figure 7: Abstention in a 15-year-old patient with a large ulcerative budding tumor of the right hemiface and limitation of oral opening

CONCLUSION

This study underscores surgery as the gold standard for advanced facial skin tumors, with reconstruction playing a pivotal role in functional and aesthetic recovery. The high prevalence of delayed diagnosis in rural populations calls for targeted public health interventions. Future research should explore long-term oncologic and quality-of-life outcomes in phototype IV–V populations.

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