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Case Report

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Non-surgical Management of Ulcerative Facial Basal Cell Carcinoma Using Cryotherapy and Topical Imiquimod: A Case Report

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Abstract

Background and clinical significance: Basal Cell Carcinoma (BCC) is the most common malignant tumor of the skin and represents the majority of non-melanoma skin cancers, particularly affecting sun-exposed facial areas. Surgical excision remains the gold standard due to high cure rates, especially for high-risk facial lesions. However, patient refusal of biopsy or surgery may create therapeutic challenges. This case highlights a non-surgical alternative approach and emphasizes its clinical implications.

Case presentation: A 60-year-old Egyptian man with uncontrolled hypertension and type 2 diabetes mellitus presented with an ulcerative lesion located between the left nasal wall and lower eyelid. Clinical examination revealed raised pearly borders and central necrosis, highly suggestive of nodulo-ulcerative basal cell carcinoma. The patient refused biopsy and surgical intervention despite counseling and referral for Mohs micrographic surgery. A non-surgical regimen was initiated consisting of cryotherapy every two weeks using two freeze–thaw cycles of four seconds each with a 2-mm margin, combined with topical imiquimod 5% cream applied three times weekly. Episodic local inflammatory reactions occurred and were managed conservatively with temporary interruption and emollient therapy. Fusidic acid ointment was applied post-cryotherapy. Complete clinical resolution was achieved after five months with residual scarring and no recurrence during one year of follow-up.

Conclusion: Combined cryotherapy and topical imiquimod may represent a viable therapeutic alternative in carefully selected patients refusing surgical management. Close monitoring and long-term follow-up remain essential.

Keywords: Basal cell carcinoma; Cryotherapy; Imiquimod; Facial carcinoma; Non-surgical treatment

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Introduction and Clinical Significance

Basal cell carcinoma is the most common cutaneous malignancy worldwide [1]. Surgical excision provides the highest cure rates and remains the preferred treatment modality, particularly for facial lesions requiring margin control and tissue preservation [2]. Nevertheless, a subset of patients may refuse surgical procedures due to comorbidities, fear or cosmetic concerns. Non-surgical treatment modalities, including cryotherapy and topical immunomodulatory agents, have been utilized in selected cases [3]. Imiquimod stimulates local immune-mediated tumor destruction, while cryotherapy induces direct cellular necrosis [4,5].

Clinical significance

This case demonstrates that combined non-surgical therapy may achieve complete clinical resolution in a high-risk facial lesion when surgery is declined, highlighting the importance of individualized management and careful surveillance.

Case Presentation

A 60-year-old male presented with a progressive ulcerative lesion at the junction between the left nasal wall

and lower eyelid **(Figure 1)**. The lesion demonstrated raised pearly margins and central necrosis, features strongly suggestive of nodulo-ulcerative basal cell carcinoma [1].

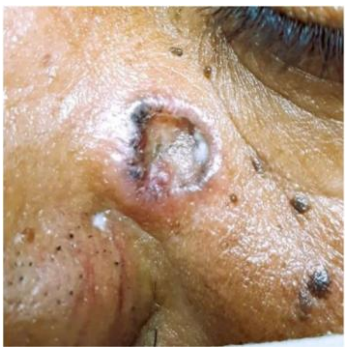

Figure 1: Ulcerative basal cell carcinoma at the junction between the left nasal wall and lower eyelid before treatment.

The patient had uncontrolled hypertension and type 2 diabetes mellitus. He declined biopsy and all surgical interventions despite repeated counseling.

Treatment protocol

Cryotherapy was administered every two weeks using two freeze-thaw cycles of four seconds each, including a 2-mm clinical margin [4]. Imiquimod 5% cream was applied three times per week between sessions [5].

Local inflammatory reactions such as burning, itching and crusting were observed, consistent with known imiquimod adverse effects [6]. These were managed with temporary interruption and emollient therapy. Fusidic acid ointment was applied for five days post-cryotherapy to reduce infection risk.

Outcome

Significant improvement was observed by the second month **(Figure 2)**. Complete healing occurred after five months with residual scar formation **(Figure 3)**. No recurrence was detected during one year of follow-up.

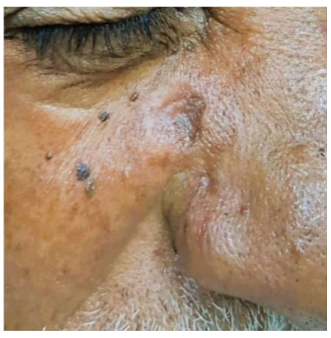

Figure 2: Partial healing with reduction of ulceration after two months of combined therapy.

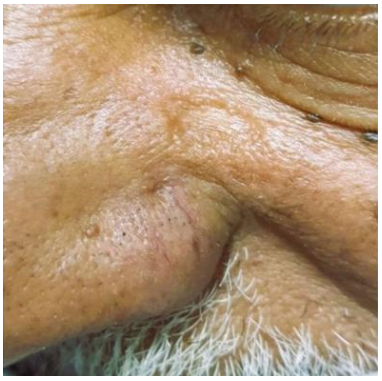

Figure 3: Complete healing with residual scarring after five months of treatment and no recurrence at one-year follow-up.

Ethical review and approval were waived for this study due to its single-patient case-report nature. Written informed consent was obtained from the patient for publication.

Discussion

Basal cell carcinoma remains the most common skin malignancy worldwide [1]. Surgical excision, particularly Mohs surgery, provides optimal cure rates for facial lesions [2]. However, non-surgical management may be considered when surgery is refused.

Although histologic confirmation was not obtained, the classical clinical presentation strongly supported the diagnosis [3]. The combination of cryotherapy and imiquimod may enhance tumor clearance by combining direct cellular destruction with immune-mediated mechanisms [4,5].

Recurrence patterns vary according to tumor characteristics and treatment modality [7]. Therefore, long-term follow-up remains critical, particularly in high-risk facial lesions.

Conclusions

This case supports the potential role of combined cryotherapy and topical imiquimod as an alternative treatment in carefully selected patients refusing surgery. While surgical excision remains the gold standard, individualized treatment strategies may be appropriate in selected scenarios. Continuous surveillance is mandatory to detect possible recurrence.

Author Contributions

Conceptualization, N.E.S.E.F.; investigation, N.E.S.E.F.; writing original draft preparation, N.E.S.E.F.; writing review and editing, N.E.S.E.F. The author has read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

Ethical review and approval were waived due to the case-report nature of this study.

Informed Consent Statement

Written informed consent was obtained from the patient to publish this paper.

Data Availability Statement

No new datasets were generated or analyzed during this study.

Conflicts of Interest

The author declares no conflicts of interest.

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