

Marjolin Ulcer in the Hand

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A 72-year-old man presented to the dermatology department with a 2-year history of a slowly enlarging, pruritic, exophytic tumor on the dorsal surface of the left thumb. The lesion had initially developed as an ulcerated plaque within the center of a burn scar sustained approximately 30 years earlier. Despite empirical treatment with topical mupirocin for presumed scar ulceration at a local clinic, the lesion persisted and progressively enlarged, becoming a hyperkeratotic, crusted, exophytic mass. Physical examination showed a solitary firm, verrucous, and hyperkeratotic exophytic tumor with central ulceration and adherent brown crust on the dorsal aspect of the left thumb. The tumor, measuring approximately 3 cm × 3 cm, arose within the center of a long-standing burn scar measuring approximately 10 cm × 6 cm. No obvious tenderness, increased local warmth, or purulent discharge was present. The adjacent scar was atrophic and fibrotic, with xerosis and dyspigmentation (Figure 1). No regional lymphadenopathy was detected. He denied a family history of skin cancer or other malignancies. He also had no history of long-term immunosuppressive therapy, radiotherapy, arsenic exposure, or other relevant medication use. Histopathologic examination showed a well-differentiated invasive cutaneous squamous cell carcinoma (SCC), with irregular nests and cords of



Figure 1: A solitary verrucous plaque within the background of a longstanding burn scar, with marked hyperkeratosis, central ulceration covered by a brown crust, and surrounding dry skin with dyspigmentation on the dorsal aspect of the left thumb.

atypical squamous epithelial cells infiltrating the dermis and prominent keratin pearl formation (Figure 2). No perineural or lymphovascular invasion was identified,

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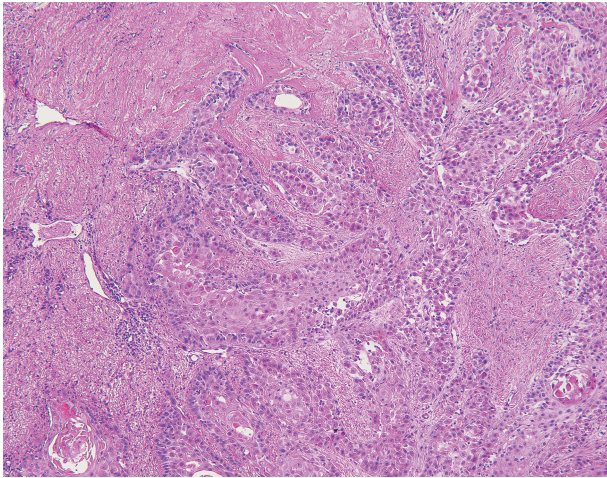


Figure 2: A skin biopsy sample from the edge of the mass showed the tumor exhibits a nested and sheet-like growth pattern, infiltrating diffusely within the dermis amidst densely disorganized collagen fibers, accompanied by keratin pearl formation (hematoxylin-eosin, original magnification 100×).

and no involvement of deeper adjacent structures was observed. Magnetic resonance imaging showed no involvement of muscle, fascia, or bone. A diagnosis of Marjolin ulcer was made. The patient underwent wide local excision with negative margins, followed by split-thickness skin grafting. No recurrence was observed during 1 year of follow-up.

Marjolin ulcer is an uncommon but aggressive cutaneous malignant neoplasm that typically arises in burn scars, chronic wounds, or sites of longstanding inflammation^[1]. Among its histologic subtypes, SCC is the most common and is typically associated with chronic scars. Basal cell carcinoma tends to occur after shorter latency periods and recent injury, whereas melanoma is rare and has been reported more often in settings of repeated trauma or immunocompromise^[2]. The latent period of burn scar SCC is about 30 years^[1]. Compared with conventional cutaneous carcinomas, it exhibits markedly more aggressive behavior, with local recurrence rates of 10%–37% and distant metastasis in up to 22%^[1]. Reported adverse prognostic factors include poor tumor differentiation, large tumor size, high-risk anatomical site, lymph node involvement, bone invasion, perineural or lymphovascular invasion, and positive surgical margins^[3,4]. Close follow-up is particularly important during the first 2 years after treatment.

Teaching points

- SCC arising in a burn scar may have a latency period of several decades and generally behaves more aggressively than conventional cutaneous SCC, with higher risks of local recurrence and metastasis.
- A low threshold for biopsy should be maintained for any new proliferative lesion, persistent ulceration, or nonhealing change arising within a longstanding burn scar or chronic wound.

Author contributions

Both authors have contributed to patient care. Jiang-Wei Cheng wrote the initial draft of the manuscript and revised it critically for important intellectual content. Xinghua Gao edited the final version. We ensure that all co-authors have seen and approved the revised version of the manuscript.

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Ethics statement

Ethical approval was not required for this single-case report per the institutional review board (IRB) guidelines of The First Hospital of China Medical University, as no experimental interventions were performed and only de-identified patient data were used. This study was conducted in accordance with the Declaration of Helsinki.

Patient consent statement

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Data availability statement

No datasets were generated or analyzed for this work.

AI statement

The authors declare that no generative artificial intelligence (AI) or AI-assisted technologies were used in the

preparation, analysis, or writing of this manuscript.

Conflicts of interest

Because Prof. Xinghua Gao, the Editor-in-Chief of *Skin*, is the corresponding author of this manuscript, he was excluded from all editorial handling of the submission. An independent editor without a conflict of interest oversaw the peer review and editorial decision-making process. Prof. Gao had no role in reviewer selection, peer review, or editorial decisions, and had no access to confidential information related to the evaluation of this manuscript. The manuscript was assessed under the journal's usual peer review procedures and received no preferential treatment.

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