



A Case Report on Marjolin's Ulcer

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Abstract

Marjolin ulcer is a rare but aggressive malignant transformation of chronic wounds and scars first described by surgeon Jean Nicholas Marjolin. Most commonly associated malignancy is squamous cell carcinoma. A high recurrence and metastatic rate of this lesion warrants a strict vigilance for early diagnosis and management. We present a case report of one such case occurring in a 31-year-old male on a burn scar that occurred when he was 1 year old.

Introduction

Marjolin's ulcer is a rare and aggressive malignant transformation of pre-existing scars, mostly burns (1%-2% of burn scars) and also chronic inflammatory conditions of skin and within osteomyelitic fistulae. Other associations are venous insufficiency ulcer or pressure ulcers, scarring from lupus, amputation stumps, frostbite, skin graft donor sites and radiation.

Most commonly the lesion is a well-differentiated squamous cell carcinoma but can also be basal cell carcinoma or malignant melanoma.

Mostly diagnosed based on clinical history, physical and histopathological examination.

Case Report

A 31-year-old male patient presented with a non-healing ulcer on left foot for 12-14 months, there was a history of burn of the same foot when the patient was 1 year old which was treated by

dressing only, without any proper medical care according to the patient. This led to a deformed foot due to post burn contractures.

On examination the clinician suspected the lesion to be malignant and a wedge biopsy was done which on microscopic examination revealed well differentiated squamous cell carcinoma. CT/MRI was not performed due to financial constraints. A below knee amputation was performed and the specimen was sent to the pathology department.

Grossly an ulcer measuring 13x7cm² was identified on the amputated specimen. The ulcer had rolled out margins and necrotic base. The growth was not extending into the underlying bone. The foot was deformed due post burn contracture.

On histopathological examination a diagnosis of Well differentiated squamous cell carcinoma was given with underlying bone being free of tumor.



Fig: 1 Ulcer with rolled out margins and necrotic base



Fig: 2 Underlying bone is not involved by the ulcer.

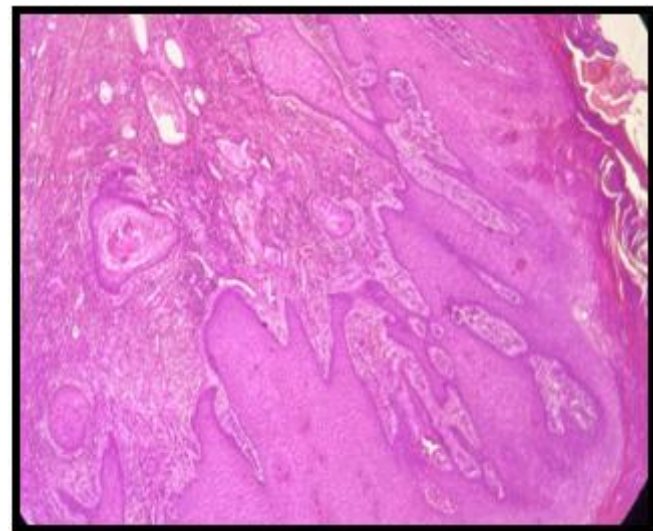
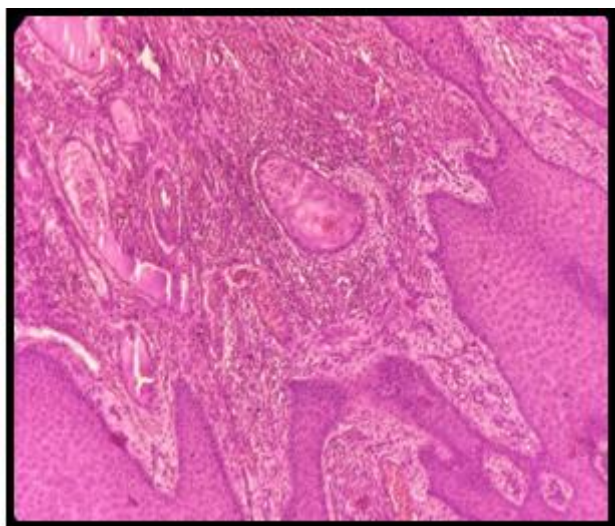


Fig: 3 & 4 High power view of sections from ulcer showing well differentiated squamous cell carcinoma with keratin pearl formation

Discussion

Jean Nicholas Marjolin was the first to describe these lesions as warty lesion occurring on post burn scars. However, he was not aware of the malignant nature of these lesions.

Presently the malignant nature of Marjolin’s ulcer is well established. They are mostly associated with burn scars (1% to 2% of burn scars) but association with other chronic inflammatory conditions of skin like in osteomyelitic fistulae, venous insufficiency ulcer or pressure ulcers, scarring from lupus, amputation stumps, frostbite, skin graft donor sites and radiation, has also been noted³⁻⁶.

Many theories have been suggested for the pathogenesis of marjolin ulcer like due to toxins released by damaged tissues, chronic irritation and repeated cycles of repair and damage, inheritance of HLA DL4 which is associated with cancer growth and anomalies of p53 etc⁴.

They are divided into acute and chronic based on the duration between the inciting event (e.g., burns) and development of Marjolin ulcer, if the latency period is < 1yr it is acute and if >1yr it is chronic^{5,6}. However, the average duration from time of injury to malignant transformation is >30 years (ranging from 4wks to 75 years)⁴.

Patients are frequently affected in 5th decade of life and men are three times more commonly

affected than females. Various studies have shown the highest probability of developing the lesion in lower extremities but no site is as such immune for Marjolin ulcer^{3,4}.

The most common pathological type is Squamous cell carcinoma but other types like Basal cell carcinoma and Malignant melanoma also occurs³⁻⁶.

The diagnosis is usually made in conjunction with clinical and histopathological examination. Radiological studies help in identifying the metastatic sites and to know if the tumor has involved the underlying tissue or bone, this can prevent the patient from undergoing an amputation and an extensive local resection of the tumor may suffice¹⁻⁸.

Marjolin ulcer associated squamous cell carcinoma are more aggressive and have a higher recurrence, metastatic and mortality rate in comparison to squamous cell carcinoma not associated with marjolin ulcer and hence, a strict vigilance for any non-healing ulcer and a regular follow-up for treated patients is advisable for early diagnosis and adequate treatment¹⁻⁸.

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