Marjolin’s Ulcer - A Diagnostic Dilemma

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Abstract

Marjolin’s ulcer is malignant change in a long-standing ulcer and or scar tissue. Commonly these lesions are treated as chronic ulcers and suspicion of malignancy should be raised with crusting, increase in pain or size of the ulcer and bleeding. We report a case of Marjolin’s ulcer arising in a post-traumatic chronic ulcer of sole in a 60 year old female.

Introduction

Chronic cutaneous ulcers are common in the developing countries like India, especially in rural areas with poor living conditions. These ulcers often result from trauma, vascular insufficiency, neuropathy, leprosy, diabetes or hemoglobinopathies.1 If poorly managed these lesions may undergo malignant transformation.1,2 The suspicion of malignancy is raised with crusting, increase in pain or size of the ulcer and bleeding.3

This case is reported as this peculiar phenomenon of malignant transformation of chronic ulcer occurred in a 60 years female with low socioeconomic status.

Case Report

A 60 year old woman of a low socioeconomic strata was admitted to G.T. Hospital on 12th September 2008 with nonhealing ulcer of left foot since 4 years. She had a history of trauma 4 years ago and the ulcer was very small to begin with but has increased over a period of time to attain the present size. There was no history of diabetes, hypertension or tuberculosis. Local examination revealed a large, oval, ulcerative growth measuring 8 x 7 cm with elevated, irregular margin and necrotic floor, involving sole of left foot. The inguinal lymph nodes were not palpable.

Her gastrointestinal, cardiovascular, respiratory and central nervous system were normal. She was pale with an Hb of 9.0 gms% and TLC of 13,000 /cu mm with neutrophilic leucocytosis. Liver function, kidney function tests were normal.

Pathological Findings

Gross examination : The specimen of below knee amputation of left lower leg measured 20 cm in length. The left foot measured 18x6x6.5 cm with an oval ulcerative growth of 8x7 cm involving the sole, with elevated, indurated margins and necrotic floor (figure 1A). Cut surface revealed a grayish white, firm tumor infiltrating the soft tissue and bone for a depth of 1.8 cm (figure 1B).

Microscopic Examination

Tumor had histomorphology of well differentiated squamous cell carcinoma comprised of nests of malignant squamous cells infiltrating the fibrovascular stroma. The epithelial and keratin pearls were present with presence of chronic inflammatory infiltrate and eosinophils in the stroma (figure 2). This infiltrate formed a band like area just beneath the tumor. The vascular, lymphatic emboli and perineural invasion was absent, but bone invasion was present.

Fig. 1 : The left foot measuring 18 x 6 x 6.5 cm with an oval ulcerative growth of 8 x 7 cm involving the sole, with elevated indurated margins and necrotic floor (1A), cut section revealed a grayish white, firm tumor infiltrating the soft tissue and bone for a depth of 1.8 cm (1B).
**Discussion**

Marjolin's ulcer is defined as a tumor arising from a chronic wound, scar or chronic inflammation. 1-8 Jean Nicholas Marjolin originally described the malignant transformation of cutaneous scars in 1828. 2 The mechanism of malignant change is supposed to be a sequence of repeated ulceration and healing in the ulcers and osteomyelitic sinuses and repeated trauma in scars.8 The malignant transformation has no predilection for site and is more predominant in late 50s.4

There are two variants of this type of cancer, one is acute form, in which cancer occurs within 1 year from the date of injury, and a chronic form in which malignant change is seen after 1 year from the beginning, with a time range of 1 - 75 years.4,6 Our patient was 60 years and developed cancer after a period of 4 years (chronic form), due to trauma leading to chronic ulcer and presence of chronic inflammation of the wound. Marjolin's ulcer presents as flat ulcer with indurated, elevated margins or as exophytic growth (less frequent).4 The malignant transformation has no predilection for site and is more predominant in late 50s.4

The macroscopic appearance in our case was of flat ulcer with indurated, elevated margins and microscopic examination revealed well differentiated squamous cell carcinoma involving the joint space and bone.

Marjolin's ulcer is treated with wide local excision, with excision of muscle and fascia.

Amputation is considered where the lesion is large, deeply infiltrating, extending into joint cavities and bone. Adjuvant radiation and chemotherapy may be given if the patient refuses surgery or the lesion is unreachable.1,4,6

The patient was treated with below knee amputation because of the large lesion and deep invasion into joint space and bone.

Long term follow up is recommended in all cases of Marjolin's ulcer as there is high risk of metastasis to the brain, liver, kidney and lungs, mainly with lesions of the lower extremities.7 The patient is followed up regularly and there is no evidence of metastasis.

The survival rates are reported as 52% & 34% respectively at 5 and 10 years.4

This report suggests that the diagnosis of Marjolin's ulcer must be considered in a chronic ulcer of traumatic etiology with increase in size and persisting for over a long period.

**References**


**Announcement**

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