

Pathological Fracture Complicating Squamous Cell Carcinoma: A Case Report.

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We report the case of a 65 year old female presenting with a 5 year history of a chronic ulcer with episodes of resolution and recurrence on the right leg. The radiograph of this patient showed a pathological fracture of the right tibia. The biopsy showed a differentiated squamous cell carcinoma. Malignant transformation of an ulcer is rare but changes in character of an ulcer should arouse suspicion of neoplastic transformation.

Case Report

A 65 years old female presented with a 5-years history of chronic right leg ulcer with episodes of resolution and recurrence and a 2-weeks history of pain and bleeding associated with increase in the size of the ulcer. She was unable to work due the pain. She did not have a history of varicosities, trauma or claudication. She stopped taking alcohol 10 years earlier. She denied any history of ever smoking cigarettes in her lifetime. There was no history or symptoms suggestive of diabetes or hypertension.

On examination she was in fair general condition, had no pallor, jaundice, wasting or lymphadenopathy. There were no positive findings on systemic examination. Locally, a malignant right leg ulcer was found (figure 1). An X-ray of the tibia is illustrated below in Figure 2. Chest X Ray was normal. Abdominal ultrasound was normal.

Biopsy Histology Showed differentiated squamous cell carcinoma



Figure 1. A photograph of the leg ulcer.



Figure 2. Xray showing Pathological Fracture of Tibia.

Discussion

Although attributed to Marjolin, malignant transformation of an ulcer was first described by Dupuytren¹. Squamous cell carcinoma of the skin is rarely reported as a cause of metastatic bone tumours. There have been some case report in literature, but little has been done in terms of studies partly because the condition is rare². In most cases reported the cause of the ulcer was known e.g. chronic osteomyelitis that has turned out to be malignant^{3,3}, where they reported ulcer due to osteomyelitis with a malignant transformation of a sinus. Burrows and Lyall² reported malignant transformation of a venous ulcer.

Kubler⁵ gives a rare report of malignant transformation of chronic changes in the skin that lead to squamous cell carcinoma. The cause of this ulcer was not known in this case due to the fact that the patient presented late by which time the ulcer had become malignant. Late presentation of patients is a common in Kenya both to primary, secondary and tertiary health facilities.

Squamous cell cancers do have a small but definite risk of metastasis. The reported risk for metastasis in squamous cell carcinomas (SCCs) ranges from 0.5% to 16%, a wide spread that can probably be explained by differences in patient⁽⁶⁾. In a series 36 patients with squamous cell carcinoma in the limb, 10 percent of them had metastasis⁷. However Marjolin's ulcers have a more aggressive clinical course than the usual non melanoma skin cancer⁸.

The relatively short history preceding presentation following a chronic history of an ulcer in our patient attest to this.

The radiograph of this patient shows a destructive osteolytic lesion that had involved the anterior cortex, medulla and posterior cortex. The soft tissue margin of the ulcer was also visible. Metastatic carcinoma is the most common radiolucent lesion seen in patients above the age of 40 years⁹. Metastatic carcinoma has a propensity to be located at the junction of the metaphysis and the diaphysis. In our case the metastasis was due to a direct invasion of the bone and hence its position at the diaphysis.

Management of this condition was an above knee amputation. Fitzgerald⁷ recommends that ablative surgery be done for a malignant tumour that invades the bone. Inadequate management of a patient may lead to death of the patient. Gary et al⁽¹⁰⁾ acknowledge that although they originate in chronic wounds, these neoplasms metastasize rapidly and mandate radical excision.

This case does illustrate two important points. The first is that any patient with a chronic ulcer of whatever cause should have a regular assessment of the same. The second is that due to the potential risk of an ulcer to transform into a malignant one ulcer should be managed early.

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