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Acral nodular melanoma at a site of trauma

Sandra Jaroonwanichkul*; Emily Fan; Stephanie Matthews; Bao Vincent Ho; John C Hall

***Corresponding Author: Sandra Jaroonwanichkul**
University of Missouri-Kansas City School of Medicine, 2411 Holmes Street, Kansas City, MO 64108, USA.
Tel: 417-598-7721;
Email: ssj4kr@umsystem.edu

Abstract

Melanoma is a malignant cutaneous tumor accounting for approximately 2% of cancer deaths worldwide. Acral nodular melanomas are found on the hands and feet while nodular melanomas are characterized by prominent vertical invasion. Although the role that trauma plays in the pathophysiology of tumor progression remains controversial, a number of post-traumatic acral melanomas have been reported. We describe a case of a 54-year-old male who developed Acral Nodular Melanoma (ANM) at a site where there was a history of repetitive local trauma from building outdoor fencing over the course of thirty years. There is often a delay in diagnosis of acral melanomas because patients mistakenly attribute their lesions to benign conditions which was observed in our patient case. Our patient's situation was complicated by a lack of healthcare insurance, further delaying treatment. We are presenting this case in order to highlight the importance of prioritizing screening for melanoma in uninsured patients. Despite having detected and diagnosed melanoma in uninsured patients, lack of insurance continues to remain a significant barrier to receiving treatment.

Keywords

Melanoma; Trauma; Tumor.

Introduction

Melanoma is a malignant cutaneous tumor that accounts for nearly 2% of cancer deaths worldwide. Acral melanoma is a rare melanoma subtype occurring on the palms, soles, and nail units, and nodular melanomas are characterized by prominent vertical invasion [1,2]. Although the role that trauma plays in the pathogenesis of melanoma is controversial, studies have demonstrated an association between acral melanomas with mechanical or physical stress [3,4]. We present a case of a patient who developed Acral Nodular Melanoma (ANM) on his palm at a site where a history of local trauma directly preceded lesion

formation. The situation was complicated by a lack of healthcare insurance which was a significant barrier to receiving treatment.

Case Presentation

A 54-year-old male presented to the dermatology clinic with a darkly pigmented nodular growth on his right palm (Figure 1). The patient had built outdoor fencing for over thirty years and would use his right palm as a mallet to attach metal fence panels at their connective latches. Bruising was noticed in the area of trauma ten years prior to presentation, which began to increase in size and cause significant pain. He was uninsured and thus presented to a Federally Qualified Health Center (FQHC) which provides healthcare services to medically underserved communities regardless of insurance status. He had no family history of melanoma or other skin cancers. A shave biopsy was performed with gross findings displaying a crusted red-brown lesion measuring 1.2 x 0.8 x 0.4 cm. Histopathologic findings were consistent with malignant melanoma, acral, nodular type with areas of tissue necrosis and overlying ulceration. Neoplasm thickness was at least Clark's level III, at least Breslow's thickness 3.70 mm, and pTNM staging of at least pT3b. However, the melanoma involved all the biopsy margins so an accurate Clark, Breslow, and pTNM staging could not be obtained. S-100, SOX10, and HMB-45 immunohistochemical stains performed were all positive, confirming the diagnosis.

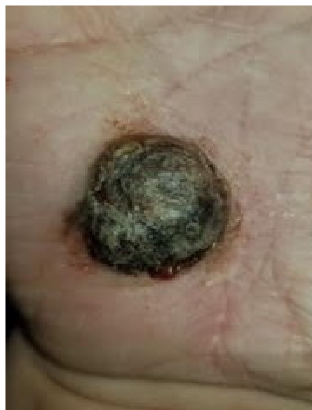

Figure 1: A darkly pigmented nodular growth on the patient's right palm.

Discussion

The outcomes for patients with melanoma are largely dependent on the disease stage at diagnosis [5]. The diagnosis of acral melanoma tends to be delayed because patients often attribute their lesions to benign conditions such as infections and vascular lesions [1]. Initially this patient did not consider his lesion to be serious, mistakenly characterizing it as a bruise. Only when the lesion began to grow and become increasingly painful did he seek medical attention. In addition to the delay in diagnosis that our patient experienced, our patient was uninsured which further impacts the ability to receive timely treatment. Uninsured patients are more likely to experience a delay in treatment, which was observed in our case [6,7].

One previously reported case of a patient who developed advanced acral melanoma at a site of trauma exists, and he declined oncology consultation due to a lack of insurance. The patient thus succumbed to metastatic disease [8]. Our patient presented with ANM and is currently experiencing a delay in treatment.

Since the FQHC he presented to does not provide comprehensive cancer care services, our patient has been waiting three months for Medicaid approval in order to be seen at an oncology clinic elsewhere. Over this time, he began to develop systemic symptoms such as neurogenic pain, weight loss, poor sleep, numbness, and poor balance.

Considering that our patient had a delay in diagnosis, it is crucial to highlight the importance of prioritizing screening for melanoma in uninsured patients. Early detection and diagnosis are necessary to achieve optimal treatment outcomes and avoid progression to metastatic disease [9]. Treatment for melanoma involves surgical excision with reconstruction, and adjuvant chemotherapy and radiation if advanced [10]. However, despite the established diagnosis of melanoma, lack of insurance remains a significant barrier to receiving treatment.

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Authors Information: Sandra Jaroonwanichkul[1]*; Emily Fan[2]; Stephanie Matthews[2]; Bao Vincent Ho[2]; John C Hall[3]
[1]University of Missouri – Kansas City School of Medicine, Kansas City, MO, USA
[2]University of Kansas School of Medicine, Kansas City, KS, USA
[3]St. Luke's Hospital of Kansas City, Dermatology, Kansas City, MO, USA

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