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CASE REPORT

Malignant Change in Chronic Irritation: A Case series

Changement Malfaisant dans l'Irritation Chronique : série de Cas

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ABSTRACT

BACKGROUND: **Chronic irritation is a known cause of malignant change in humans. It is believed that at least a minimum of five years is needed for the evolution of the illness.**

OBJECTIVE: **To present cases of consecutive squamous cell malignant change in patients with various irritations, and to highlight that these cases are not too uncommon in our environment.**

METHODS: **Case reports of patients with definitive treatments offered. Patients had amputation done after incisional biopsies were done to determine the mitotic status of the lesions.**

RESULTS: **The three patients presented late. All had lower limb affectation. Conservatism was difficult, all of them ending up with amputation of the affected limbs. One of them had inguinal lymph node metastasis after the amputation, signifying advanced disease, but unfortunately had to leave hospital because she could not cope with the financial demands of treatment.**

CONCLUSION: **Malignant change from chronic irritations can occur under five years. Education might help early presentation and improved outcome. Our hospitals should provide for the treatment of these group of patients despite their financial status. WAJM 2010; 29(1): 38–40.**

Key words: **Chronic irritation; malignant change; squamous cells cancer; amputation; conservatism.**

RÉSUMÉ

CONTEXTE : *l'irritation chronique est une cause connue de changement malfaisant dans les humains. On y croit qu'au moins un minimum de cinq ans est nécessaire pour l'évolution de la maladie.*

OBJECTIF : *Pour présenter des cas de cellule squamous consécutive le changement malfaisant dans les patients avec les irritations différentes et l'accentuer ces cas ne sont pas trop rares dans notre environnement.*

MÉTHODES : *les rapports de Cas de patients avec les traitements définitifs offerts. Les patients ont fait faire l'amputation après qu'incisional les biopsies ont été faits pour déterminer le statut mitotic des lésions.*

RÉSULTATS : *les trois patients ont présenté en retard. Tous avaient l'affectation de membre plus basse. Le conservatisme était difficile, tous se retrouvant avec l'amputation des membres affectés. Un d'entre eux avait la métastase de noeud de lymphe inguinale après l'amputation, en signifiant la maladie avancée, mais a malheureusement dû quitter l'hôpital parce qu'elle ne pouvait pas s'occuper des demandes financières de traitement.*

CONCLUSION : *le changement malfaisant des irritations chroniques peut se produire moins de cinq ans. L'éducation pourrait aider la première présentation et a amélioré le résultat. Nos hôpitaux devraient prévoir le traitement d'entre ceux-ci se groupent des patients malgré leur statut financier.* ***WAJM 2010; 29 (1): 38–40.***

Mots clé : *irritation chronique; changement malfaisant; cancer de cellules de squamous; amputation; conservatisme.*

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INTRODUCTION

Previously traumatised and chronically inflamed skin constitutes known causes of malignant transformations.[1] Chronic ulcers, unstable scars, corrosive implants, and metal fragments from explosives are some of the irritants suspected.[2,3] There is usually a long latent period after trauma before the malignant change[3]. Some series report predominance of basal cell types, while others see mostly squamous cell types.[1,4] There are reports of sarcomas mostly in animal models.[5]

The aim of this report is to report a war veteran that had a high energy tibial fracture, Zimmer plated and a wound that never healed, and underwent malignant change after thirty four years. Two other malignant changes in females with latent periods of eleven and three years, the older with long standing extensive scar tissues from healed multiple ulcers, and the younger with repeated traumatic wound around the knee region.

The aim of this communication is to report three patients whose chronic irritations resulted in malignant transformation.

Case Reports

Case 1

A 63-year-old war veteran of the Nigerian civil war presented to our facility in severe painful distress and inability to use the left leg. He had a close range high energy gunshot injury to his left leg resulting in diaphyseal tibial fracture thirty-nine years to presentation. He had a Zimmer plating after wound stabilization, unfortunately the wound never completely healed. In an attempt to get the wound to heal he had two failed attempts at split skin grafting.

The wound started expanding five years to presentation, exposing the stainless steel implant and he refractured a week to presentation.

The wound covered the anteromedial aspect of the lower two thirds of the left tibia, with a dirty sloughy floor exposing the implant with loosening screws, firm base and everted edges albeit the draining nodes were not palpably enlarged. He was hypertensive, with a pressure of 190/120 mmHg, a packed cell volume of 36%, seronegative for HIV 1 and 2 and urea and creatinine levels within normal limits. The radiograph revealed a pathological fracture with osteolysis of the proximal fragment. Incisional biopsy revealed papillomatosis with a well differentiated squamous cell carcinoma. (Figure 1).

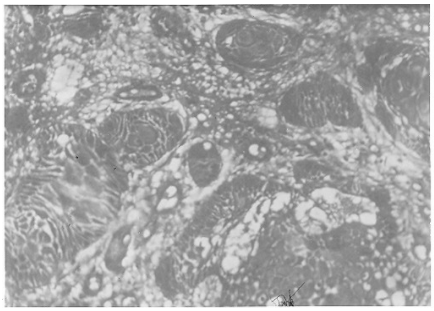

Fig. 1: Photomicrograph (Histograph) of the first case. Note the well differentiated squamous cancer cells.

Fig. 2: Fungating Marjolin Lesion in patient 2, a 30-year-old woman .

The lesion was severe, with extensive affectation of the tibia, so the patient was offered an above knee amputation which he accepted. He did well and was eventually discharged from hospital..

Case 2

A 30-year-old woman presented with a right foot ulcer of three years duration. This started as a blister that bursted spontaneously with watery discharge. It progressively increased in size and depth with the discharge turning yellowish. She had no history of trauma, neither was she a diabetic nor sickle cell patient.

At presentation she was pale with an enlarged right inguinal lymph node measuring six cm in the longest diameter, fixed and non tender. The ulcer, irregular in shape, 16 cm by 12 cm in dimensions, covered the distal two-thirds of the dorsum of the right foot. The floor had necrotic sloughs with serosanguinous discharge, base was firm and tender, edges were raised. The entire lesion was fungating. (Figure 2).

She had similar lesions 11 years previously affecting the right foot, left knee and left hand. The resulting ulcers were treated with herbs, hot water fomentation and gentian violet application. The ulcers took 18 months to heal with multiple scarred areas including the left hand, contracture of the left knee, and auto amputation of the right big toe.

She was a Jehovah's witness member; she neither smoke nor take alcohol. Her packed cell volume was 28%,white blood count, ESR and electrolytes urea and creatinine level were within normal limits. She was seronegative for HIV 1 and 2, non reactive to VDRL. Incisional biopsy revealed a squamous cell carcinoma of the skin.

The nearest conservative technique we could offer was a modified Symes amputation and she healed by secondary intention. The lymph node developed into a discharging lesion. Continued treatment became an unbearable financial burden to her, she opted out of hospital, unfortunately into a frightening future.

Case 3

An 18-year-old female presented with a four-month old ulcer on the right knee. She was accidentally stabbed by a falling sister holding a knife. She was managed in a chemist with hydrogen peroxide and methylated spirit dressings, but the wound kept expanding, emitting foul odour and occasionally bleeding.

There was a three-year preceding trauma to the same knee when she fell at the river bank and hit that knee on a canoe. She was treated in a clinic, where the knee was incised to remove "black blood" and dressing done till healing occurred.

She was the fifth child of six, she did not smoke or take alcohol ,neither was she a sickler.

She was in severe pain from the affected knee, pale but anicteric and

afebrile. The ulcer was an ovoid exophytic right lateral knee lesion,10 cm in its widest diameter, offensive with sloughy and necrotic floor. The edges were everted with desquamated and hyperpigmented surrounding skin. The knee was in fixed flexion deformity.

The haemogram revealed a packed cell volume of 28%; HIV 1 and 2 seronegative. The incision biopsy result revealed a well differentiated squamous cell carcinoma.

Due to the nature and extent of the lesion, and the threatening repeated bleeding episodes, the patient had an above knee amputation which broke down and had to be refashioned. Her recovery was uneventful until she was discharged from hospital and had been seen on follow up in apparent good health and spirit. (Figure 3).

Fig. 3: Third case, an 18-year-old woman mobilizing on crutches, after a right below knee amputations.

DISCUSSION

Chronic irritation,an established cause of this pathology, is usually seen in previously traumatised,chronically inflamed or scarred skin.[1] The causes of chronic wounds include burns injuries,venous ulcers,ulcers from osteomyelitis and post radiotherapy scars. The resultant lesion is usually a well differentiated squamous cell carcinoma,aggressive in nature,spreads locally and is associated with poor prognosis.[6]

In the first patient there was a conspiracy between high energy injury scar, chronic ulcer and a badly applied Zimmers plate. The plate was a narrow plate with 3.5mm cortical screws, mostly loose at presentation, a wonderful menu for instability in a pathologically fractured big long bone. At presentation, the bone appearance did not classically appear osteomyelitic, a known cause of the pathology,[3] but there was severe osteolysis of the proximal fragment, probably a secondary malignant cells effect. This could be direct tumour spread as the entire anterior medial tissues over the tibia were affected.

The latency period here was as long as 34 years, a regular observation in these lesions. The longest latent period reported in literature is sixty-one years in a World War 11 veteran with grenade fragments.[1] Our third patient had a very short latency period of three years. The literature gives a minimum of five years for the evolution of these lesions.[5] So as far as we know this patient happens to have the shortest latency period in literature. The histology is varied, ours were squamous cell transformations, others reported basal cell change, and even sarcomas in animal models.[1,4,5] All our patients were retroviral negative, a suspected trigger for the transformation in chronic scars.[4]

A surprising feature in our patients was the resilience and tolerance exhibited before seeking proper medical attention. All the patients presented late. Despite the chronicity of the ulcer in the first case, he never sought tertiary care which was available in the city he resided, but waited until he was forced to seek help by a pathological fracture. The second case had such extensive lesions all over her body with grotesque deformities, and was just satisfied receiving home formentations for years. This patient also had a lymphatic affectation even at presentation which is claimed to be uncommon in this lesions. This is a common occurrence in our environment, where relatively salvageable problems present very late when only little or nothing can be done.[7] The third case was forced to present earlier because of the frightful breakthrough bleeds.

These patients had an amputation because either the bones were severely compromised or the lesion was far advanced. Even if we attempted conservation, ancillary treatment like radiotherapy and even antimitotic drugs can be a challenge in our peculiar environment. Generally aggressive treatment is recommended because Marjolins squamous cancers are known to be more aggressive than other squamous cell cancers.[2]

Our hope lies in education for early presentation and community outreaches at attempting to "catch them early". Hospital policies in this 21st century, in a depressed economy like ours must of necessity factor in the plight of the poor.The Federal Health Insurance project must also develop ways and means of catering for poor Nigerians.

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