

Verrucous Carcinoma

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Statement of Purpose

Verrucous carcinoma is a rare malignant lesion. Presented below is a review of the literature and case report that highlights how to recognize and treat this lesion.

Introduction

Verrucous carcinoma of the skin is an uncommon low-grade squamous cell carcinoma characterized clinically as a slow but relentless enlarging warty tumor(1). Various names have been attributed to this condition based on the location, including Ackerman tumor (oropharynx), Buschke-Loewenstein tumor (genitalia), papillomatosis cutis (or cutaneous papilloma) and epithelioma cuniculatum which is the verrucous carcinoma of the feet (2).

The epidemiology of the disease typically presents in a middle-aged man with a painful exophytic mass on the plantar foot (3). The lesions are slow growing in nature presenting as an enlarging warty tumor. Keratotic debris collects within the crypts, resulting in a foul-smelling, greasy sebaceous material (1). These abscesses and microabscesses develop sinuses which open to the surface (4). Pedal verrucous carcinomas are characterized as slow growing, firm, exophytic, and polypoid (4). The lesions are nodular, well circumscribed, tan-pink in color, and can be “cauliflower” or “squashlike” in appearance (4). The lesion gradually increases in size and can invade deeper tissues; however, extension into bone is rare (3). The tumor has a poor metastatic potential, regardless of its duration, size or depth. (5). Therefore, the lesion is typically locally aggressive but has a relatively benign course (4).

The pathogenesis for verrucous carcinoma in the foot is unknown. It has been suggested that human papillomavirus is responsible for the development of the lesion (6). Other social factors that can attribute to the formation of the lesion include; tobacco use, alcohol consumption, and prolonged inflammation. Due to its warty presentation, diagnosis is often delayed or a misdiagnosis with improper treatment occurs. (7) Accurate diagnosis may be difficult initially and often requires repeat histopathologic evaluation by an experienced pathologist. The difficulty in histopathologic evaluation stems from the benign findings that are present in many other conditions (8). Differential diagnosis includes plantar wart, squamous cell carcinoma, basal cell carcinoma, eccrine poroma, pseudoepitheliomatous hyperplasia, giant keratoacanthoma, and condroma acuminatum (4).

Case Report

A 65-year-old male present with a left foot lesion present for years in duration. During this time the lesion had progressively increased in size and became more painful. Previous treatment had included Dr. Scholl wart remover with no improvement. The patient’s medical history included coronary artery disease, hyperlipidemia, retinoschisis, and history of renal calculus. Patient admitted to being a current smoker with a 10 pack year history. On physical examination, the patient’s neurovascular status was intact, including the presence of protective touch-pressure sensation. Examination of the plantar skin to the left 5th digit revealed a hyperkeratotic lesion with mild surrounding erythema and pain on palpation noted. Debridement of the hyperkeratotic tissue revealed pus exudate and an underlying ulceration which measured 1.5 cm x 1.3 cm x 0.2 cm. The ulceration did not probe to bone or track. An aerobic culture of the purulence revealed Staphylococcus epidermidis and the patient was placed on a ten day course of oral Keflex 500mg. A pathology tissue specimen was obtained of the debrided tissue and a diagnosis of Verruca vulgaris was made. At a one week follow-up visit, there was no evidence of erythema, edema, or signs of infection. The patient was instructed to clean the lesion daily with peroxide, and apply topical antibiotic ointment and dry sterile dressing daily. The open lesion healed within two weeks.

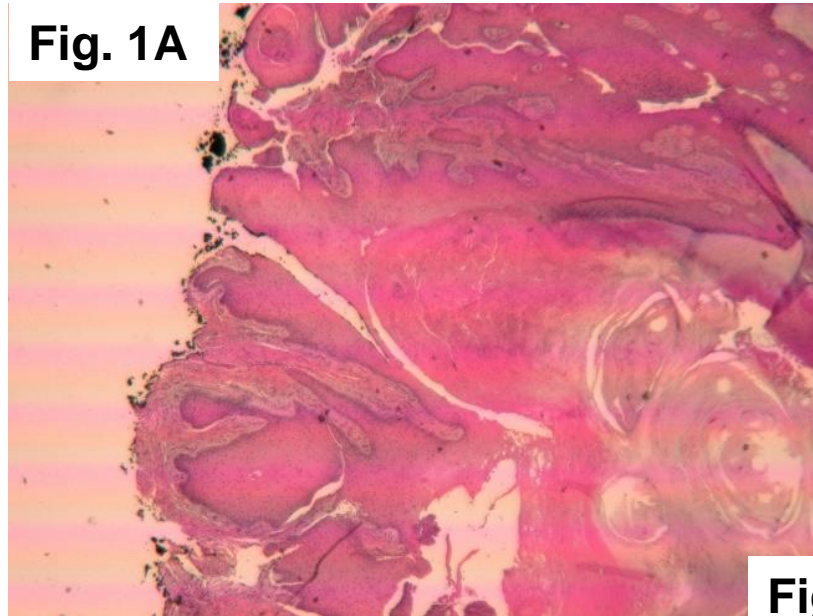


Figure 1 A: Superficial fragment of skin with papillomatosis and hyperkeratosis. There is downward proliferation of squamous epithelium. The broad bases with slight chronic inflammation is also indicative of verrucous type carcinoma.

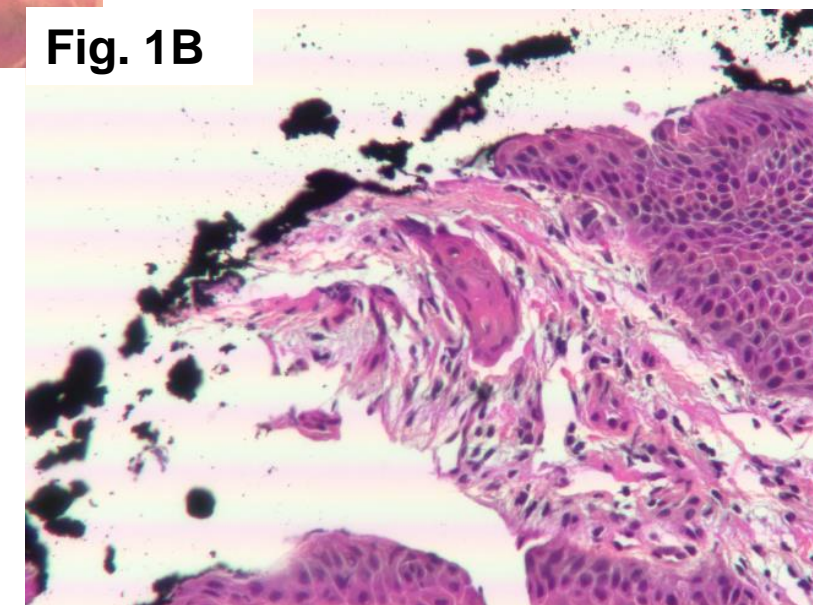


Figure 1 B: High powered view. Invasion with surrounding desmoplasia is noted. Individual fragments signifying invasive component noted with surrounding desmoplasia. Verrucous carcinoma present at the deep margin and is black in color.

Case Report Continued

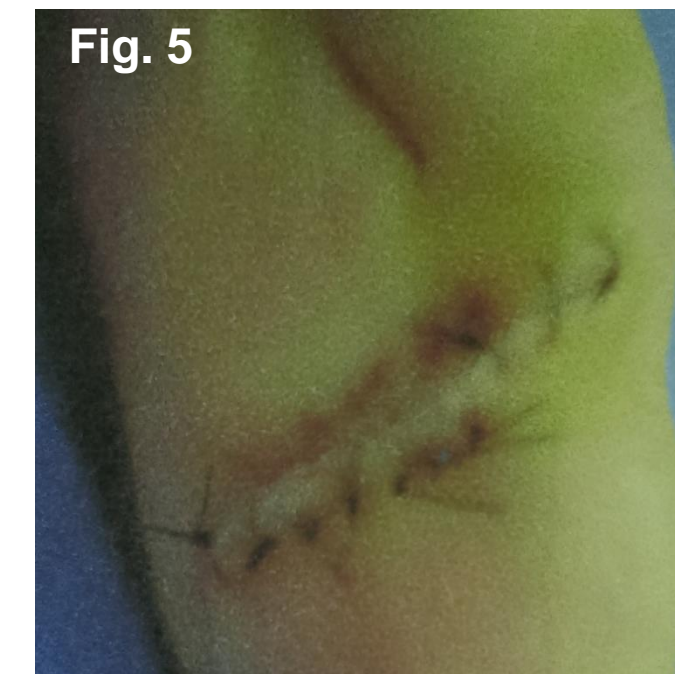


Figure 2 and 3: Lesion 3 weeks status post excisional biopsy.
 Figure 4: Lesion 8 weeks status post excisional biopsy and prior to Mohs surgery.
 Figure 5: Lesion status post Mohs surgery.

Case Report Continued

A six week follow-up revealed that the lesion developed a hyperkeratotic cap. There was no surrounding erythema or edema noted. Debridement of this approximately 1.0 cm x 1.0 cm lesion revealed pinpoint bleeding suggestive of a plantar verrucae. The patient opted for surgical excision of the lesion. Upon excision, the base of the lesion had areas of black discoloration. The specimen was sent to pathology and electrocautery was performed to the base. The pathology result came back as an invasive, well differentiated squamous cell carcinoma, present at the deep resection margin (Figure 1). At this point, the patient was called to inform him of his diagnosis and instructed of the subsequent course of action. Patient was referred to oncology and a consult for Mohs surgery was made. The following laboratory tests were ordered: CBC, CMP, chest radiograph, foot radiograph, ESR, CRP, liver function test, and phosphorus. Laboratory values and radiographs were within normal limits. The patient healed the excisional site without complication (Figure 2,3,4). The patient underwent Mohs surgery on October 10th, 2014, and the tumor was 1.6 x 1.2 cm and in stage 1. The patient has had follow up visits with dermatology and has had no complications to date.

Discussion

The original treatment of choice was aggressive excision or even amputation of the affected foot. As we progress with more knowledge of the disease, a transition from radical resection to wide excision with tumor free margins has increased in popularity (8). A downfall with wide excision, treating physicians can have a challenge with closure depending to the extent and location of the tumor. Therefore, in an effort to minimize soft tissue deficit, Mohs micrographic surgery is being utilized more frequently. This procedure allows the physician to preserve these important structures while maintaining function (9). Promising results from Mohs procedure have demonstrated a minimal recurrence rate while preserving the most amount of healthy tissue.

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