

CASE REPORT

Carcinoma Cuniculatum Masquerading as Wart

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ABSTRACT

Carcinoma cuniculatum is a rare, slow growing tumour which is commonly mistaken for warts or corn especially when it presents on the sole. Although it rarely metastasizes, it may cause local invasion affecting the underlying tissue and bone. Early identification provides good prognosis as it can be managed with localized resection. We present a case of carcinoma cuniculatum which was misdiagnosed and treated as a common wart for two years until the diagnosis was confirmed by histopathology. By the time of diagnosis, the lesion had involved the underlying bone and patient required amputation. Carcinoma cuniculatum is rare and easily confused with common warts in the early stages hence, it is important to create awareness to identify and differentiate these two conditions.

Keywords: Carcinoma cuniculatum, Squamous cell, Verrucous, Warts

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INTRODUCTION

Carcinoma cuniculatum or verrucous carcinoma is a low-grade variant of squamous cell carcinoma (SCC) which grows slowly over years (1). It is commonly found in mucosal surfaces of the oropharynx, genitalia and rarely on the foot. It is locally aggressive in nature, invading adjacent deeper structures such as adipose tissue and bone. Rarely, it metastasizes to the regional lymph nodes and lungs. Diagnosis of this condition is often delayed as it is commonly mistaken for benign plantar wart (*verruca vulgaris*) or corn due to its verrucous, keratotic appearance and location on the sole.

CASE REPORT

We present a case of verrucous carcinoma in a 71-year-old man which was initially mistaken and treated as a wart for 2 years before it was diagnosed as carcinoma cuniculatum. The initial lesion was asymptomatic and patient self-treated the lesion with over-the-counter salicylic acid adhesives (corn cap). When there was no improvement, he consulted a doctor who diagnosed as the lesion as a wart and treated with cryotherapy (liquid nitrogen). Initially, the lesion appeared to respond but gradually enlarged. He had diabetes, hypertension and COPD for which he was on medication and had been a smoker for more than 30 years. There was no

history of excessive sun exposure or any relevant family malignancies.

On examination there was a large, fleshy, pinkish, foul smelling mass measuring 4cm x 2cm x 1.5cm on the plantar surface of the right foot. The lesion extended laterally from the base of the big toe up to the third toe. Dorsally, the mass extended into the first and second toe web spaces (Figure 1).

On close-up view, the surface of the growth appeared verrucous, cauliflower like with undulated surface and some areas of ulcerations. There was no bleeding and the lesion was mildly tender. Regional lymph nodes were not palpable and there were no other lesions elsewhere (Figure 2).

The lesion was provisionally diagnosed as squamous cell carcinoma with a differential diagnosis of deep fungal infection. The lesion was biopsied for histopathology and fungal culture. Right foot x-ray was also done. Histopathology showed verrucous squamous cell carcinoma with islands of squamous cell and keratin pearl formation invading into the mid and deep reticular dermis (endophytic). Periodic Acid-Schiff stain (PAS) and Grocott staining for fungal organisms were negative. The right foot X-ray showed involvement of second and third metatarsal bones and patient underwent trans-metatarsal amputation. Post amputation specimen confirmed the diagnosis of verrucous carcinoma with clear surgical margins. Patient recovered well and was managed with foot rehabilitation.



Figure 1: Plantar view of the right foot showing a large pinkish, fleshy mass with undulated surface



Figure 2: Close up view of the lesion shows a fungating mass with verrucous surface and ulceration

DISCUSSION

Carcinoma cuniculatum, also known as verrucous carcinoma or epithelioma cuniculatum is a rare, low grade Squamous Cell Carcinoma (SCC) which can occur anywhere on the skin, mucosal membrane of oropharynx and anus. It commonly affects older men with an average age at diagnosis of 60 years. When the lesions occur on the foot, it commonly affects the ball of the foot (plantar surface), toes, heel and web spaces of the toes. A purulent, foul smelling, greasy

fluid may also be noted (2). The lesion tends to grow slowly over years and rarely metastasizes but is locally invasive (1). Unlike the SCCs on other parts of the body, it is postulated that sun exposure is not a risk factor for developing carcinoma cuniculatum. Instead, repeated trauma, weight bearing, tobacco use, infections, such as osteomyelitis and chronic inflammation e.g. intertrigo have all been postulated as possible risk factors. The role of Human Papilloma Virus (HPV) especially types 6, 11, 16, and 18 has also been postulated (3).

Early diagnosis of carcinoma cuniculatum can be challenging as it is slow growing, giving a false impression of being benign and clinically resembling verruca vulgaris (wart) or callous. Paring the superficial keratin layer of a plantar wart would reveal black dots representing thrombosed capillaries which are absent in carcinoma cuniculatum (4). A clinical suspicion of malignancy can be made if the lesion has been present for a prolonged duration of time, increases in size or responds poorly to standard therapy. Rarely, malignant transformation may occur especially in genital warts and among immunocompromised individuals. The clinical and histological differences between verruca vulgaris and carcinoma cuniculatum of the sole are summarised in the table below (Table 1).

Other differential diagnosis to consider include mycetoma, pseudocarcinomatous hyperplasia, mycosis, dermatofibroma, giant seborrheic keratosis or benign adnexal tumours (1). Biopsy is indicated if the lesion is large, shows poor response to treatment within three months, positive personal or family history of malignancy, diagnostic uncertainty, intractable lesions or immunocompromised state (5). Diagnosis based on biopsy may be challenging especially if the sample is superficial, missing the deeper malignant cells. A deep biopsy section of the dermis and subcutaneous would yield a more accurate information (5).

The prognosis for carcinoma cuniculatum is generally good as it rarely metastasizes. The treatment of choice for localized carcinoma cuniculatum, is wide surgical resection or Mohs surgery as this results in low recurrences and a more cosmetically acceptable scar. Large lesions without underlying bone involvement may benefit from wide excision and skin grafting. Lesions with bone invasion warrants amputation. The role of radio and chemotherapy, especially for lesions on the foot is inconclusive and less described in literature.

CONCLUSION

This case depicts how the initial misdiagnosis and the delay of identifying a cutaneous malignancy resulted in deep tissue and bone invasion requiring amputation. It is important for physicians to be aware of carcinoma cuniculatum, as early detection renders the condition potentially curable. Suspicious skin lesions should

Table 1: Clinical and histological differences between verruca vulgaris (common wart) and carcinoma cuniculatum on the feet (4, 5).

Features	Verruca vulgaris	Carcinoma cuniculatum
Common age group	Children and young adults	Elderly
Gender	No gender predilection	More common among men
Location on the sole	Anywhere on the sole	Commonly on pressure points of the sole & web spaces
Size	small and multiple	single and large
Clinical appearance	Black dots present (thrombosed capillaries) & does not bleed easily	Absent black dots & Bleeds easily
Tenderness	Non-tender except on pressure points	Tender
Superficial spread to other sites	Spreads by contact (either direct or indirect)	Does not spread to other sites
Localized invasion	No localized invasion	Localized invasion to underlying tendon & bones
Regional lymph nodes	Not enlarged	Enlarged if metastasis has occurred
Response to treatment	Moderate response (50-70%) to topical treatment e.g. cryotherapy, topical imiquimod	Poor or no response with topical treatment
Histopathology	Infiltrative changes absent, koilocytic cells present	Hyperplastic, infiltrative changes & keratin pearl present
Progress	About 60% may resolve spontaneously	Does not resolve spontaneously

be subjected to early histopathological evaluation to confirm the diagnosis and institute appropriate management to achieve good outcome.

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REFERENCES

- Bhatt Y, Singh S, Vaghani S & Doshi P. Verrucous carcinoma of the foot - A series of 4 cases. *International Journal of Biomedical Research*. 2015;6. 2015;591. 10.7439/ijbr.v6i8.2383.
- Seremet S, Erdemir AT, Kiremitci U, Gunel S, Demirkesen C. Unusually early-onset plantar verrucous carcinoma. *Cutis*. 2019;104(2):E34-E36.
- Murao K, Kubo Y, Fukumoto D, Matsumoto K, Arase S. Verrucous carcinoma of the scalp associated with human papillomavirus type 33. *Dermatol Surg*. 2005;31(10):1363-5.
- Al Aboud AM, Nigam PK. Wart (Plantar, Verruca Vulgaris, Verrucae). In: *StatPearls*. Treasure Island (FL): StatPearl Publishing; 2020. <https://www.ncbi.nlm.nih.gov/books/NBK431047/> (Accessed 10th December 2020)
- Black A, Sccomanno R, Stowers JM, Markinson BC. Verrucous Lesions: When To Biopsy, When Not to Biopsy. *Podiatry Today*. 2017;30(10):33-43. <https://www.podiatrytoday.com/verrucous-lesions-when-biopsy-when-not-biopsy>. (Accessed on 2nd July 2020)