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Single Case

Porocarcinoma of the Groin: A Case Report

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Abstract
Introduction: Porocarcinoma is a rare skin cancer that arises from the intraepidermal ducts of sweat glands. It is classically found in the 60–70-year-old age group, and lesions are most commonly reported on the head and neck or lower extremities. ***Case Presentation:*** This case focuses on a 49-year-old man who presented to an outpatient dermatology clinic with a growing, painful nodule in his right groin. A shave biopsy was conducted and resulted in a diagnosis of a porocarcinoma. ***Conclusion:*** Porocarcinoma is an extremely rare skin cancer that most commonly occurs on the head, neck, or lower extremities of 60–70-year-olds. This report details the interesting findings of a porocarcinoma in an unexpected location and age group and reviews pertinent literature.

Introduction

Porocarcinoma (PC) is an extremely rare skin cancer that arises from the intraepidermal ducts of sweat glands with an incidence of 0.02–0.2 cases per 1,000,000 person-years [1]. PC is classically found in the 60–70-year-old age group, and lesions are most commonly reported on the head and neck or lower extremities; however, they can be found on the trunk and upper limbs [1]. Studies have reported some geographic and gender preferences of PC, with the potential for increased incidence in male subjects and English individuals, but more research is needed to cement these potential underlying associations [1].

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Case Presentation

This patient is a 49-year-old male with no significant past medical history who presented to an outpatient dermatology clinic with a painful lesion on the right medial groin. The lesion had been growing for approximately 3 months prior to the patient seeking evaluation. On exam, a firm, pedunculated, erythematous papule was present in the right inguinal crease (Fig. 1). A shave biopsy was performed, and histopathology resulted in a primary cutaneous carcinoma with basaloid, squamoid, and ductal features. The patient was subsequently diagnosed with a PC. MOHS micrographic surgery (MMS) was scheduled to ensure complete removal of the lesion. After complete resection of the mass in one surgical stage, the MOHS debulking specimen was sent for permanent sectioning, and the wound was closed with intermediate layered closure (Fig. 2). The final report of the debulking specimen demonstrated a portion of a poroma, which is consistent with the development of a PC within an existing poroma. At suture removal, the scar was well-healed with no new lesions appreciated. The patient was referred to oncology for further evaluation for metastasis and disease staging, and he is scheduled for follow-up 6 months after his last presentation for continued monitoring.

Discussion

In the above case presentation, our patient had an unusual PC presentation for multiple reasons. This patient was significantly younger at diagnosis than the average age for PC, and the lesion was found in an uncommon area. PC is primarily found on the head or lower extremities, with only 4% of lesions being reported in the genital or groin region [2]. Our patient's lesion was found on the right medial groin, an uncommon area for PC. Furthermore, there is a consensus within the literature that PC most commonly occurs in the elderly population [1]. The average age of diagnosis is recorded as 67.5 years, with a majority of patients falling within the 60–70-year age range [2]. Our patient was only 49 years of age at diagnosis, compounding the rarity of this lesion.

PC is challenging to diagnose due to its varied clinical and histopathologic presentation. Clinically, PC can present as a skin-colored, erythematous, or violaceous papule or nodule with or without accompanying itch and pain [1]. On dermoscopy, thin vessels can be seen throughout the lesion, similar to its benign counterpart the poroma, along with pale globules within the structure [1]. Histopathologic findings of PC are also diverse and can closely resemble squamous cell carcinoma or poroma [1]. Common findings histopathologically include mature eccrine ducts lined with cuboidal epithelial cells, squamous differentiation, and comedo necrosis; however, these findings are not specific to PC [1]. The combined variety of clinical and histopathologic presentations makes PC a challenging diagnosis and increases the incidence of misdiagnosis. There is some hope for easier diagnosis in the future with the study of new immunohistological markers. PC has been found to be associated with CD117, NUT, Rb, p16, and EMA markers; however, more research is needed to establish a definitive relationship and diagnostic criteria [1].

To further cloud the diagnosis, PC also has a poorly understood pathogenesis. PC has been reported to arise from multiple different entities including as a de novo mutation, secondary to sun or chemical exposure, and from the malignant transformation of a poroma [1]. The PC case discussed above most likely arose from a poroma due to the presence of poroma tissue within the Mohs debulking specimen. The variety of different entities that can result in a PC increases the number of risk factors providers must consider for this diagnosis and

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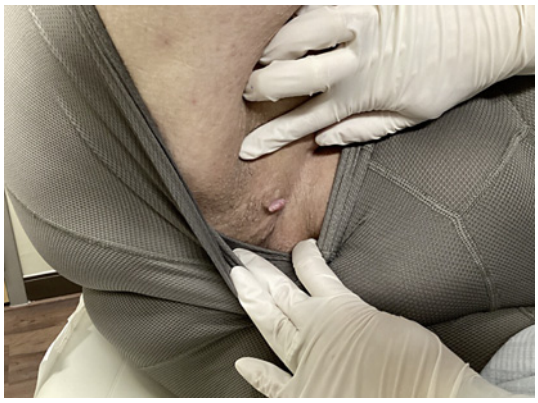

Fig. 1. Pedunculated, erythematous papule in patient's right groin at initial presentation.

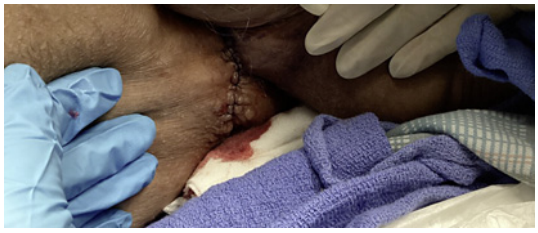

Fig. 2. Final defect after Mohs surgery in right groin.

convolutes the understanding of the underlying lesion. More research is needed to better understand the pathogenesis of this lesion.

Treatment of PC is primarily centered on surgical resection, specifically with Mohs micrographic surgery (MMS) [1]. MMS allows for confirmed clearance of margins of the lesion prior to closure of the surgical site and is now preferred by providers due to the lack of consensus on surgical margins for PC. Previously, the preferred treatment for PC was wide local excision; however, in recent years, the use of MMS has shown superior cosmetic outcomes, while limiting nodal or local reoccurrence [3]. The prognosis for this disease is widely varied based on stage, with an estimated 67% mortality for those with metastasis, compared to only 25.2% for those with local lesions [1]. Adjuvant radiation and chemotherapy have been used after surgical resection, but there is little consensus in the literature on how to implement these entities [1]. Cisplatin and 5-fluorouracil are two popular chemotherapy options, along with the more recent use of pembrolizumab for recurrent or metastatic lesions, but a variety of different chemotherapies have been recorded as successful [1, 4]. Furthermore, pembrolizumab radiation has been most successfully implemented for high-grade lesions or recurrent disease, but there are no guidelines on when or how to use it [1].

PC is a rare skin cancer with a poor consensus on presentation, treatment, and management. It is difficult to diagnose due to the wide variety of clinical and histopathologic phenotypes, and difficult to treat due to the lack of consensus and guidelines within the scientific community. This case report details an instance of PC that is increasingly rare due to the patient's age and area of presentation of the lesion. As this patient was only 49 at diagnosis, compared to the normal 60–70 age range, and had a lesion in the groin, where only 4% of other PCs have been recorded, this case helps broaden the differential for PC [2]. By detailing unusual presentations of skin cancers like PC, providers will be better informed on and prevent potential metastasis of malignant lesions such as PC.

The CARE Checklist has been completed by the authors for this case report and is attached as online supplementary material (for all online suppl. material, see https://doi.org/10.1159/000539101).

Statement of Ethics

Written informed consent was obtained from the patient for publication of the details of their medical case and any accompanying images. Ethical approval is not required for this study in accordance with local or national guidelines.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

All authors participated in the concept, design, definition of intellectual content, literature search, manuscript preparation, manuscript editing, and manuscript review for this article. They provide final approval of the work to be published as above and agree to be accountable for all aspects of the work integrity.

Data Availability Statement

All data generated or analyzed during this study are included in this article and its online supplementary material files. Further inquiries can be directed to the corresponding author.

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