

Pilonidal Cyst with Malignant Degeneration: A Case Report

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Abstract

Introduction: Pilonidal cyst is a frequent surgical pathology with low risk of malignancy. Here, we present a case of a chronic pilonidal cyst with transformation to skin squamous cell carcinoma.

Case presentation: A 67-year-old male patient with a chronic presentation of injury in the sacrococcygeal region with occasional bleeding that got worse with progressive growth and purulent discharge. Initially was treated as a soft tissue infection with oral antibiotics but did not solve. A skin biopsy reported a squamous cell carcinoma, extension studies showed no secondary disease of the lesion. The patient was treated as if he was diagnosed a squamous cell carcinoma of the anal margin. Treatment was initiated with Nigro protocol chemoradiotherapy and wide local resection of the lesion with oncological margins of 1cm with success.

Discussion: The pilonidal cyst is an episodic inflammatory disease in the sacrococcygeal zone that usually responds to antibiotic treatment and surgery if it's necessary, malignant degeneration is rare, might it be related with chronic inflammation that affects repair mechanisms and create a predisposition for malignancy. The optimal treatment is in bloc surgical resection with tumor-free margins and complementary treatment depends on the histology.

Conclusion: This is an uncommon case of a Pilonidal cyst with transformation to skin squamous cell carcinoma managed with Nigro protocol chemoradiotherapy and wide local resection. This case will give surgeons another tool to treat this condition.

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Keywords: Pilonidal cyst; Squamous cell carcinoma; Malignant transformation.

Introduction

Pilonidal cyst is a common surgical pathology. It is estimated to have an incidence of up to 26 per 100,000 inhabitants [1,2]; nevertheless, it has a very low risk of malignancy, which has been reported only in recurrent disease [3]. It is diagnosed in people over 50 years of age and is more prevalent in the male sex [4]. The most commonly associated non-melanoma skin cancer is squamous cell carcinoma [3,5]. In which patients should we suspect malignant transformation? Based on this question, we present a clinical case managed in an interdisciplinary manner with satisfactory result.

Case presentation

A 67-year-old male patient was referred to the dermatology service with a clinical picture of several years of evolution consisting of an injury in the sacrococcygeal region with occasional bleeding. Four months earlier, it had a rapid, progressive growth associated with purulent discharge, which was treated as a soft tissue infection with oral antibiotics. On physical

examination, multiple bridged comedones were found in the posterior cervical, axillary, and bilateral inguinal regions (Figure 1a). In the sacrococcygeal region and upper part of the intergluteal fold, a tumor lesion of approximately 7 x 4cm was identified, which was erythematous, suppurative, lobulated, indurated, with a keratotic center surrounded by an indurated area, painful on palpation, and fistulas with purulent discharge (Figure 1b). A skin biopsy was performed that reported a well-differentiated infiltrating squamous cell carcinoma, and chest and abdominal tomography showed no extension of the lesion. The patient was assessed by a clinical oncologist who, given the findings of the physical examination, considered it to be squamous cell carcinoma of the anal margin. Treatment was initiated with Nigro protocol chemoradiotherapy, with adequate tolerance without adverse events as reported by the patient, achieving a good clinical response (Figure 1c); the lesion was reduced toward the sacrococcygeal region, allowing the realization of a wide local resection of the lesion with oncological margins of 1 cm.

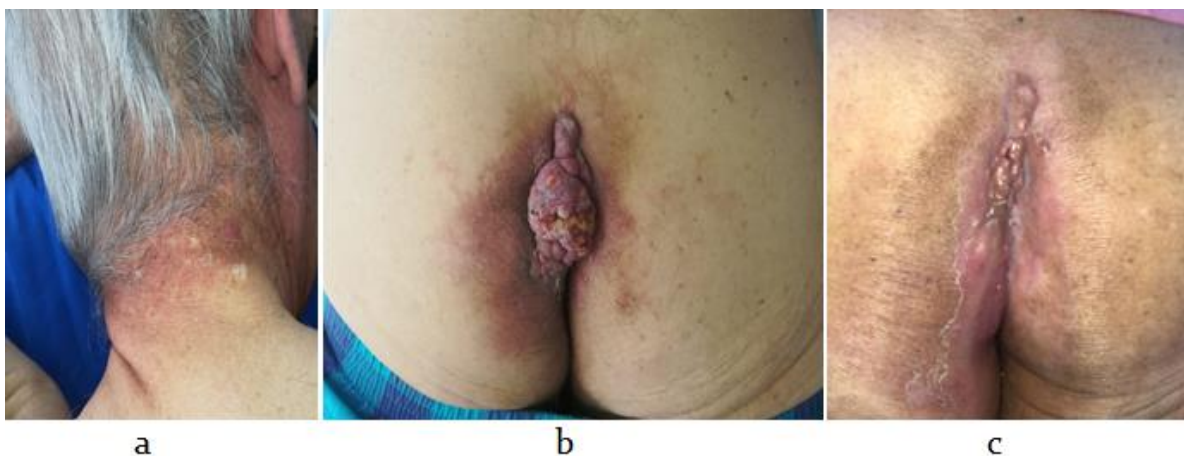


Figure 1: (a) Multiple bridged comedones in posterior cervical region (b) Lobed exophytic tumor (c) post-management with radiotherapy and chemotherapy.

The pathological anatomy showed a skin specimen with a macroscopic description of an indurated plaque on the surface, with a depressed center of 4 x 6cm; in the sclice, a fistulous path was revealed from the epidermal surface to the center of the tumor lesion (Figure 2a). The histological report described a fistulous tract lined with keratinizing squamous epithelium, with a dilation located in deep dermis that showed

markedly hyperplastic squamous epithelium and basal atypia infiltrating the dermis, as well as the cyst surrounded by chronic inflammation and extensive fibrotic changes, without lymphovascular or perineural invasion and with tumor-free margins (Figure 2b). The patient had a satisfactory evolution after resection and did not present recurrence in the three-year follow-up period (Figure 2c).

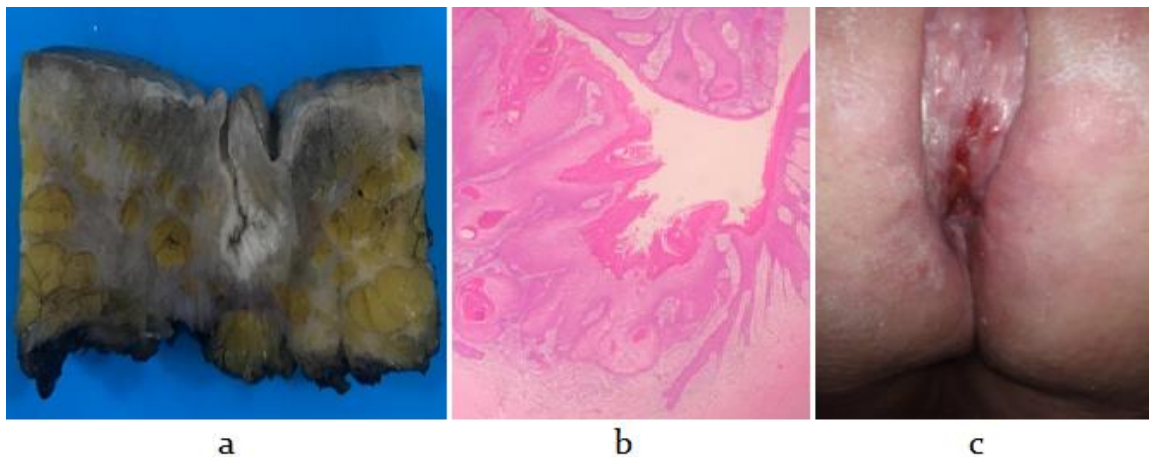


Figure 2: (a) Surgical specimen (b) Histological image showing markedly hyperplastic squamous epithelium with basal atypia infiltrating the dermis (c) Post-surgical result.

Discussion

The pilonidal cyst is an episodic inflammatory disease in the sacrococcygeal region [6]. Its development is attributed to intrusion of hair into the subcutaneous cellular tissue, which triggers a chronic inflammatory response [7]. It has been suggested that it is part of the spectrum of follicular occlusion diseases, a chronic, systemic condition with an autoinflammatory basis that includes dissecting cellulitis of the scalp, acne conglobata, hidradenitis suppurativa, and pilonidal cyst [8,9], which is compatible with the initial clinical picture presented by our patient. Although the pilonidal cyst is an extremely frequent pathology, its malignant degeneration is rare with an estimated incidence of up to 0.1% [10]. The

mechanism by which it occurs is similar to that of chronic scars and Marjolin ulcers due to recurrent and chronic inflammation. The release of free radicals by inflammatory cells causes damage to the genetic material. In addition, chronic inflammation affects repair mechanisms, creating a predisposition for malignancy [11,12]. In most cases, it develops into squamous cell carcinoma, which has an aggressive and recurrent behavior [13,14].

The indicated treatment is in bloc surgical resection until the presacral fascia, with tumor-free margins [15]. Adjuvant radiotherapy and chemotherapy have been recommended, observing a decrease in local recurrence [12,14]. Early resection reduces morbidity and mortality, but this risk must always be considered. Experts recommend

conducting a pathological study in all long-standing pilonidal cysts, in patients older than 50 years, and in case of atypical findings during clinical evaluation [16].

Conflicts of interests

The authors do not have existing conflict of Interest

Ethics approval

Written informed consent was obtained from the patient for participated and

publication for this case report and accompanying images.

Availability of data and material

The data of the clinical history is true and rests in the clinical history system of the San Ignacio University Hospital

Authors' contributions

Each one of the authors contributes with the elaboration and correction to finish the document.

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