

BRIEF ARTICLE

Pilomatricoma on the Abdomen with Overlying Striae Distensae: A Unique PresentationKennedy Sparling BS¹, Christina Harview MD¹¹ University of Arizona, College of Medicine - Phoenix**ABSTRACT**

Pilomatricomas are benign neoplasms of the hair follicle. Alterations in the skin overlying pilomatricomas are rarely reported, and there are no reports with overlying striae distensae. We present an unusual case of pilomatricoma with overlying striae distensae on the flank of a young man and report its clinical findings. Recognition of this unique presentation of pilomatricomas is crucial for timely diagnosis and improved patient care, as these lesions have the potential for malignant transformation into pilomatrix carcinoma.

INTRODUCTION

Pilomatricomas, also known as calcifying epitheliomas of Malherbe or pilomatrixomas, are relatively common benign neoplasms of the hair follicle.¹ They are generally asymptomatic and present as solitary, firm nodules on the head, neck, or upper extremities.^{1,2} Rarely, they can also occur on the chest, trunk, or lower extremities.² Pilomatricomas can present in any age, but are more prevalent in children and the elderly.²

Pilomatricomas have diverse clinical presentations, with most displaying a normal to pearly white or bluish overlaying of skin.¹ Half of the reported instances also reveal calcium deposits in the epidermis or atrophy of the overlying skin.¹ Several cases have been reported with anetoderma overlying the pilomatricoma, termed lymphangiectatic or pseudobullous variants.^{3,4} However, this is the first documented report of a

pilomatricoma with overlying striae distensae (SD).

In this report, we describe a unique presentation of pilomatricoma with overlying SD on the flank of a young man.

CASE REPORT

A male in his early 30s with no significant past medical history presented to the clinic with a worsening cyst of one-month duration. The lesion was located on the lower back and was described by the patient as a firm, non-painful lump that had been rapidly enlarging. The patient denied a history of trauma in the area. Review of systems was negative for fever, chills, rash, abdominal pain, headaches, vision changes, dysesthesia, blurry visions, and additional skin lesions. The patient had initially presented to his PCP a week prior, who had recommended he be seen by dermatology as soon as possible.

Clinical examination revealed a solitary, five cm firm subcutaneous tumor on the left inferior lateral mid back (**Figure 1A**). The overlying skin had purple-red striae running parallel on the skin's surface in an ellipse shape (**Figure 1B**). Given the incredibly rapid growth and firm, bound-down feel of the tumor, differential diagnosis included both malignant and benign tumors.

An elliptical excision was performed with the intent of diagnosing the subcutaneous tumor. The obtained sample was 5.8 x 1.6 x 1.9 cm and was described as tan, wrinkled, and slightly granular. Based on the clinical and histopathological findings, a diagnosis of pilomatricoma with overlying SD was made.

DISCUSSION

Pilomatricomas, hamartomatous tumors originating from the hair matrix, typically present with unremarkable or bluish overlay of the epidermis.¹ While rare, anomalous changes in the overlying skin, such as bulbous protrusions, skin atrophy, and anetodermic alterations, have been reported.^{3, 4} However, the case presented here, featuring SD superimposed on the pilomatricoma, represents a unique occurrence.

Entities demonstrating physiologic SD can manifest secondary to rapid tissue expansion, including pregnancy, muscle growth, and weight gain, and arise from stretching of the dermis and subsequent fiber rupture.⁶ Despite the rapid expansion that may occur with cutaneous lesions, there are no currently published documented cases of tumors or growths with overlying SD. A genetic predisposition is suggested in those who develop physiologic SD; however, the exact genetic mechanism remains incompletely understood. It is suggested

genes involved in collagen and fibronectin expression may play a role.⁶ Given the ongoing gaps in our understanding, the influence of genetics on our patient's presentation is uncertain but not implausible.

The exact mechanism underlying the various presentations of the overlying skin associated with pilomatricomas also remains incompletely understood. In this case, the patient reported a remarkable increase in lesion size by several centimeters within a short span of one month. The rapid progression in size observed in this case is not unexpected, given the atypical location of the lesion, which has been correlated with a propensity for increased tumor growth.⁵ This rapid growth indicates excessive dermal stretching as a plausible explanation for the observed presentation.

The underlying mechanism of physiologic SD development is thought to involve mast cell-induced elastolysis followed by collagen and fibrillin reorganization.⁶ Notably, a similar proposed mechanism has been associated with anetodermic presentations.⁷ Given these overlapping mechanisms, it is understandable that some pilomatricoma cases may exhibit overlying SD, particularly when rapid growth and excessive mechanical stretching are involved. Therefore, the presence of stretch marks over pilomatricomas or other rapidly growing tumors must be considered a potential manifestation for clinicians to be mindful of. It may also signal the need for more urgent workup to provide appropriate and timely diagnosis for patients. In our case, an immediate excisional biopsy was added into clinic due to the concerning features. Another reasonable workup would be the use of imaging such as ultrasound. In any case, the presence of striae overlying a neoplasm of uncertain behavior obviously suggests rapid growth and unequivocally deserves

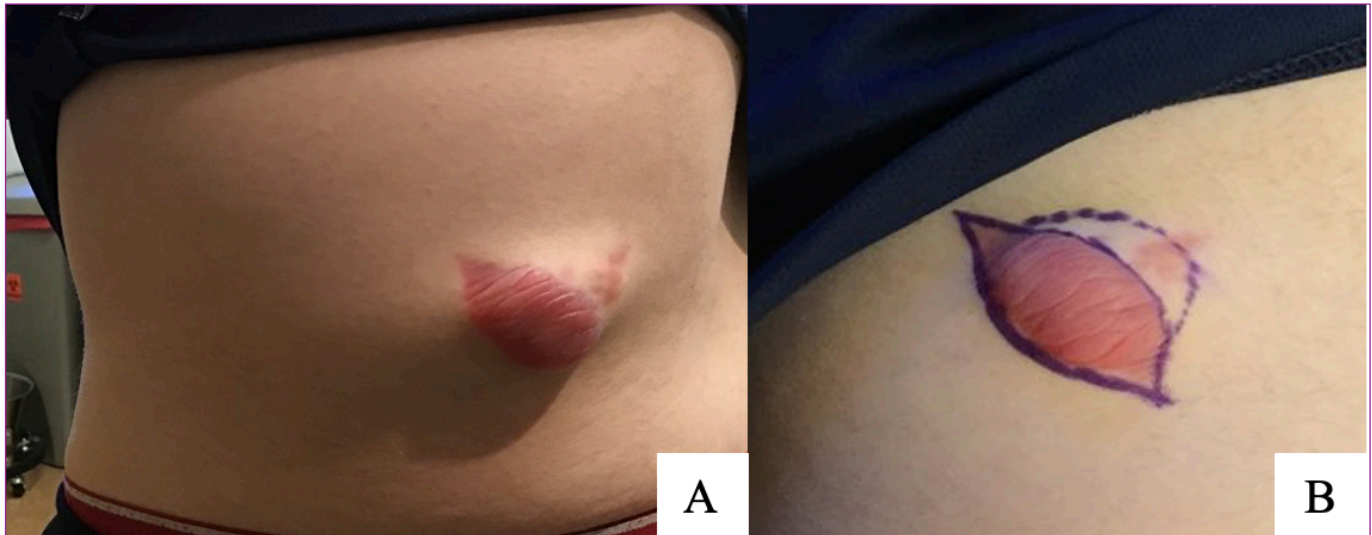


Figure 1. Clinical photographs of the pilomatricoma with overlying striae distensae (SD) on the left inferior lateral mid back before excisional biopsy (A) and while being prepared for excisional biopsy (B).

workup/testing within days rather than weeks to months.

Given the diverse clinical presentations and occasional resemblance to more common skin lesions, pilomatricomas can be challenging to diagnose. Therefore, clinicians should be aware of the potential variations in presentation. Considering the availability of non-invasive diagnostic methods like ultrasonography for pilomatricomas, the recognition of diverse clinical presentations can play a role in mitigating unnecessary patient harm.⁸ This case highlights the possibility of pilomatricomas exhibiting overlying striae distensae, emphasizing the importance of recognizing unique morphological variants and considering this condition in the differential diagnosis. Timely identification of pilomatricomas is critical as these lesions harbor the potential for malignant transformation into pilomatrix carcinoma, a life-threatening condition.⁹ To provide enhanced care for your patients, it is essential to remain cognizant of this unique presentation.

Conflict of Interest Disclosures: None

Funding: None

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