



The Value of Wound Biopsy in the Setting of Atypical, Non-Healing Wounds

A Retrospective Analysis of Wounds Found in a Medically Underserved Outpatient Center

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Introduction

Chronic wounds continue to pose a significant clinical challenge for wound care clinicians, placing a substantial financial burden on our healthcare system.^{1,2} When chronic wounds persist despite optimal wound management, it is crucial to consider additional testing to avoid misdiagnosis and prevent further delays in the healing process.³ Hence, for atypical chronic wounds that have not responded to conventional treatment, it is advisable to contemplate performing skin biopsies.^{4,5} By conducting biopsies, valuable insight can be gained to uncover the underlying etiology.

AIM OF STUDY:

- To evaluate the value of wound biopsy in non-healing, atypical chronic wounds
- Correlate clinical and pathologic findings diagnosed through biopsy

Methods

A retrospective chart review was conducted in the setting of two outpatient wound care centers in medically underserved areas.

A total of 113 patients out of 1359 (8.31%) seen between 2020-2022 were included in the study, and all had atypical nonhealing wounds nonresponsive to standard and advanced wound care modalities. Biopsy locations included lower extremities, abdomen, and upper extremities.

Patient charts were reviewed and distinguished using various parameters which included the patient identifier, age, biopsy location, biopsy method, biopsy results, clinical diagnosis, and histopathological findings including malignancy and autoimmune diseases.

Biopsy types used included punch, debridement, wedge, shave, excision, and incisional.

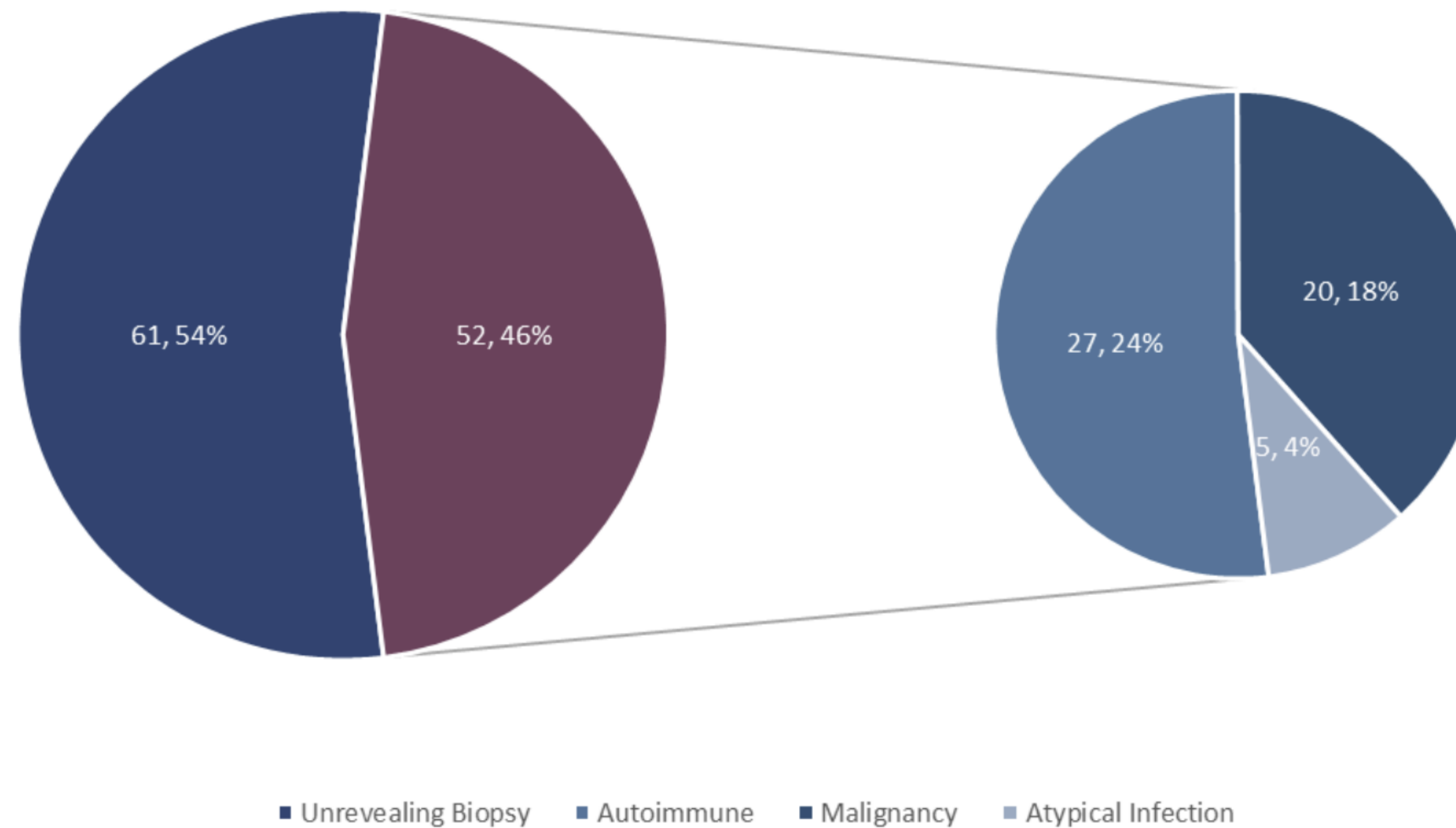
Results

Out of the total of 113 patients examined, 20 individuals (17.69%) were diagnosed with an underlying malignancy.

Among the 113 wounds subjected to biopsy, 5 of these (4.4%) unveiled atypical infections as the root cause of non-healing. The identified culprits encompassed *Peptoniphilus spp*, *Nocardia spp*, various fungal organisms, and HSV.

Out of 113 wounds biopsied, 27 (23.9%) were found to have an autoimmune etiology, which significantly impacted the healing process of these wounds.

Etiologies Underlying Atypical, Non Healing Wounds



Case Reports



Hidradenitis Suppurativa primarily affects regions of the groin, axillae, and other apocrine-related areas. Clinical symptoms reveal importunate or recurring boils/atypical wounds.⁶

←Figure 1. Patient with a non-healing wound on right buttocks area. Vessel loops used as setons to help with drainage. Biopsy revealed an underlying diagnosis of Hidradenitis Suppurativa.

Case Report Cont



Primary cutaneous T-cell lymphoma normally presents with a predilection for skin lesions. Multi-organ involvement is uncommon, barring advanced stages.⁷

↑Figure 2. Atypical skin lesions and non-healing chronic wounds on torso. Biopsy confirmed diagnosis of primary cutaneous T cell lymphoma. Patient without previous history of malignancy.

Discussion

Given the high rates of underlying malignancies and autoimmune disease associated with non-healing wounds, it is paramount to have a high index of clinical suspicion in order to proceed with a timely skin biopsy. This can avoid future delays in diagnosis and can potentially lower the morbidity and mortality related to occult cutaneous malignancies and autoimmune diseases, as well as those associated with atypical infections. Future directions will include analyzing rare and unusual cases of non-healing wounds in a case series format.

References

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