

If a Chronic Wound Does Not Heal, Biopsy It: A Clinical Lesson on Underlying Malignancies

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PRACTICE POINTS

- Patients with chronic wounds should have a thorough history and examination, appropriate laboratory tests, and purposeful search to determine etiology.
- Long-standing chronic wounds should be biopsied to exclude malignancy.

To the Editor:

Experience, subjective opinion, and relationships with patients are cornerstones of general practice but also can be pitfalls. It is common for a late-presenting patient to offer a seemingly rational explanation for a long-standing lesion. Unless an objective analysis of the clinical problem is undertaken, it can be easy to embark on an incorrect treatment pathway for the patient's condition.

One of the luxuries of specialist hospital medicine or surgery is the ability to focus on a narrow range of clinical problems, which makes it easier to spot the anomaly, as long as it is within the purview of the practitioner. We report 2 cases of skin malignancies that were assumed to be chronic wounds of benign etiology.

A 63-year-old builder was referred by his general practitioner with a chronic wound on the right

forearm of 4 years' duration. His medical history included psoriasis, and he did not have a history of diabetes mellitus or use of immunosuppressants. The general practitioner suggested possible incidental origin following a prior trauma or a psoriatic-related lesion. The patient reported that the lesion did not resemble prior psoriatic lesions and it had deteriorated substantially over the last 2 years. Furthermore, a small ulcer was starting to develop on the left forearm. Further advice was requested by the general practitioner regarding wound dressings. On examination a sloughy ulcer measuring 8.5×7.5 cm had eroded to expose necrotic tendons with surrounding induration and cellulitis (Figure 1A). In addition, a psoriatic lesion was found on the left forearm (Figure 1B). There were no palpable axillary lymph nodes. Clinical suspicion, incision biopsies, and subsequent histology confirmed cutaneous CD4⁺ T-cell lymphoma. This case was reviewed at a multidisciplinary team meeting and referred to the hematology-oncology department. The patient subsequently underwent chemotherapy with liposomal doxorubicin and radiotherapy over a period of 5 months. An elective right forearm amputation was planned due to erosion of the ulcer through tendons down to bone (Figure 2).

A 48-year-old Latvian lorry driver was referred by his general practitioner with a chronic wound on the left shoulder of 6 years' duration. His medical history

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Figure 1. An ulcer on the right forearm with exposed necrotic tendons, surrounding induration, and cellulitis (A), and a psoriatic lesion on the left forearm (B).



Figure 2. The ulcer on the right forearm progressed to skeletonize the right forearm with exposed bone.

included a partial gastrectomy for a peptic ulcer 18 years prior, and he did not have a history of diabetes mellitus or use of immunosuppressants. The general practitioner suggested the etiology was a burn from a hot metal rod 6 years prior. Advice was sought regarding dressings and suitability for a possible skin graft. Physical examination showed a 4.5×10-cm ulcer fixed to the underlying tissue on the anterior aspect of the left shoulder with no evidence of infection or presence of a foreign body (Figure 3A). Clinical suspicion, incision biopsies, and subsequent histology confirmed a highly infiltrative/morphoeic, partly nodular, and partly diffuse basal cell carcinoma (BCC) that measured 92 mm in diameter extending to the subcutis with no involvement of muscle or

perineural or vascular invasion. The patient underwent wide local excision of the BCC with frozen section control. The BCC had eroded into the deltoid muscle and to the periosteum of the clavicle (Figure 3B). The defect was reconstructed with a pedicled muscle-sparing latissimus dorsi musculocutaneous flap. The patient presented for follow-up months following reconstruction with an uneventful recovery (Figure 3C).

These 2 cases highlight easy pitfalls for an unsuspecting clinician. Although both cases had alternative plausible explanations, they proved to be cutaneous malignancies. The powerful message these cases send is that long-standing chronic wounds should be biopsied to exclude malignancy. Some of the other common underlying causes of wounds that may prevent healing are highlighted in the Table. Vascular insufficiency usually presents in characteristic patterns with a good clinical history and associated signs and findings on investigation. A foreign body, which can be anything from an orthopedic metal implant to a retained stitch from surgery or nonmedical material, may be the culprit and may be identified from a thorough medical history or appropriate imaging.

Infection is another possible explanation of a nonhealing wound. On the face, an underlying dental abscess with a sinus tracking from the root of the tooth to the skin of the cheek or jaw may be the source. Elsewhere on the body, chronic osteomyelitis may be the cause, which may be from any infective origin from *Staphylococcus aureus* to

Causes of Chronic Wounds

Common Causes	Uncommon Causes
Diabetes mellitus	Collagen disorders
infection	Dermatological conditions
Inflammation	(eg, pyoderma gangrenosum)
Malignancy	Hypothyroidism
Medications	iatrogenic radiation/
Peripheral vascular disease	cytotoxic therapy
Poor mobility	Liver, renal, and heart failure
Presence of a foreign body	Malnutrition
Pressure	Vasculitis
Venous hypertension	

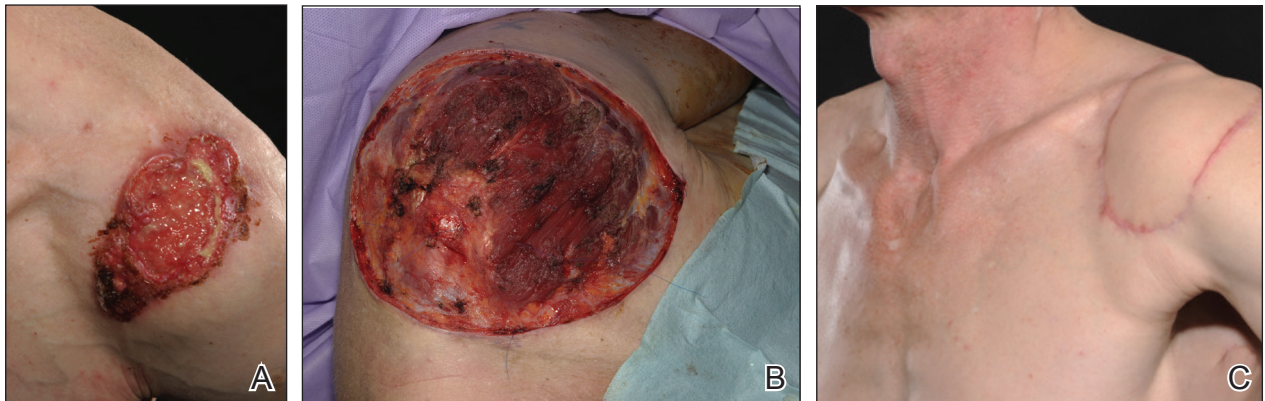


Figure 3. An ulcer on the left shoulder at initial presentation (A) and after wide local excision of the basal cell carcinoma down to the deltoid muscle (B). At 6 months following a pedicled muscle-sparing latissimus dorsi musculocutaneous flap reconstruction, the defect appeared repaired (C).

tuberculosis, and will most commonly present with a discharging sinus but also may present with a nonspecific ulcer.

Chronic wounds also may not heal because of a multitude of patient factors such as poor nutrition, diabetes mellitus, medication (eg, steroids, nonsteroidal anti-inflammatory drugs), other inflammatory causes, and poor mobility. Chronic wounds represent a substantial burden to patients, health care professionals, and the health care system. In the United States alone, they affect 5.7 million patients and cost an estimated \$20 billion.¹ Approximately 1% of the Western population will present with leg ulceration at some point in their lives.²

Physical examination of ulcers in any clinical setting can be difficult. We postulate that it can be

made more difficult at times in primary care because the patient may add confounding elements for consideration or seemingly plausible explanations. However, whenever possible, a physician should ask, “Could there possibly be an underlying malignancy here?” If there is any chance of malignancy despite plausible explanations being offered, the lesion should be biopsied.

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