

# Get It Off Your Chest: A Narrative Review of Breast Ulcers

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**GENERAL PURPOSE:** To provide comprehensive information about breast ulcers to facilitate accurate diagnosis and treatment of these lesions.

**TARGET AUDIENCE:** This continuing education activity is intended for physicians, physician assistants, nurse practitioners, and nurses with an interest in skin and wound care.

**LEARNING OBJECTIVES/OUTCOMES:** After participating in this educational activity, the participant will:

1. Differentiate common wound complications after mastectomy.
2. Identify the clinical manifestations of various types of breast ulcers.
3. Explain appropriate pharmacologic and nonpharmacologic treatment options for various types of breast ulcers.

## ABSTRACT

Cutaneous breast ulcers are uncommon but important encounters in clinical practice. Myriad causes may introduce ulcers in the breast tissue. Women are more prone to breast ulcers than men because of having heavier breast fatty tissue. Thorough medical history may easily reveal the underlying etiology; however, a tissue biopsy is often required to rule out other potential causes. The clinical presentation varies based on the underlying etiology, but some clues include surgical scars for postoperative wound dehiscence or well-defined violaceous borders with undermined ulcer base in pyoderma gangrenosum. In this article, the authors divide breast cancers into two major groups: with and without underlying mass. Depending on the underlying etiology, treatment may involve topical medications; optimal wound care; systemic medications such as antibiotics, immunosuppressive medications, or biologics; surgery; or a combination of all of the above. This article aims to shed light on a less frequent anatomic location of ulcers and provide advice to clinicians to facilitate accurate diagnosis and treatment.

**KEYWORDS:** breast angiomatosis, breast neoplasm, breast ulcers, breast wounds, pyoderma gangrenosum, postoperative ulcers

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## INTRODUCTION

Cutaneous ulceration is a common cause of morbidity worldwide.<sup>1,2</sup> Common types of skin ulcers include diabetic foot ulcers; vascular ulcers, such as chronic venous insufficiency and peripheral arterial dysfunction; and pressure injuries.<sup>3</sup> However, depending on the underlying etiology, skin ulceration may appear in any anatomic region including the breast tissue. The authors have used anatomy as a framework to facilitate clinicians' recall for the long list of differential diagnoses in ulcer management, previously publishing an approach to scalp ulcers.<sup>4</sup> Breast ulcers are uncommonly encountered in medical practice but are a unique, specific anatomic location that can be affected. In contrast to the aforementioned ulcers with specific pathophysiologic backgrounds to explain their development (eg, neuropathy in diabetic foot ulcers or vascular incompetence for venous leg ulcers or arterial leg ulcers), ulceration of the breast tissue has a wide array of possible causes. Breast tissue tends to ulcerate when exposed to trauma because of the presence of fatty tissue immediately under the skin. Naturally, these ulcers are more frequently encountered in women, but the exact prevalence is difficult to determine. Nevertheless, it requires more than trauma alone to sustain ulceration of the breast.

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In this review article, the authors discuss several types of breast ulcers, including trauma-induced breast ulcers; infections (mastitis); iatrogenic causes due to medications; radiation-induced ulcers; factitious ulcers; postoperative complications such as dehiscence; and inflammatory causes, including pyoderma gangrenosum (PG), granulomatous vasculitis, and ulcers resulting from neoplastic illness.<sup>5</sup> In addition, the authors provide clinicians with guidance regarding patient management. The Table provides a list of possible differential diagnoses, their clinical features, and treatment options, and Figure 1 provides an algorithm to facilitate accurate diagnosis.

Information for this review was gathered from textbooks; PubMed, EMBASE, and MEDLINE literature searches; and expert opinion. The PubMed, EMBASE, and MEDLINE searches were performed using search words including “skin ulcers,” “skin ulcerations,” “cutaneous ulcerations of the breast,” “pyoderma gangrenosum of breast,” “hidradenitis suppurativa of the breast,” and “diffuse dermal angiomatosis of the breast,” together with additional key words such as “malignant ulcers of the breast,” and “nonhealing ulcers of the breast.”

## BREAST ULCERS WITHOUT AN UNDERLYING MASS

### Postoperative Wound Complications

Slow-healing wounds may appear after breast surgery as a result of wound infection, necrosis of mastectomy flaps, and wound dehiscence.<sup>6</sup> The latter is one of the most prevalent noninfectious wound complications after mastectomy. Unless there is an underlying specific cause to prevent or stall wounds from healing, such as diabetes mellitus, morbid obesity, smoking, or immunosuppressive illness or medications, postoperative wounds are considered healable ulcers. Such cases should be evaluated individually to determine the reasons for the eruption of wounds and/or stalled healing process and, if necessary, may be referred to a wound healing clinic for further management.

### Traumatic and Iatrogenic Breast Ulcerations

Breast tissue may be subject to trauma due to motor vehicle crash or any other source of damage to the skin, such as penetrating injury. Cutaneous necrosis of the breast tissue may also be iatrogenically caused by radiation injury that erupts as open wounds many years later, adverse reactions to implants or other injections, or self-inflicted manipulation of the tissue. A thorough medical history is critical in the diagnosis of these conditions.

### Infection-Induced Breast Ulcerations

In conjunction with localized fungal and bacterial infection, local trauma, such as that provoked by the metal underwire of a bra, may lead to erythema and edema in certain cases; this is termed intertrigo. If left untreated,

this may eventually ulcerate (Figure 2). Initial treatment for intertrigo includes commercially available topical creams including corticosteroids, antifungals, and antibacterial preparations. In selected cases, systemic antibacterial or antifungal medications are required. Viral infection with herpes zoster (varicella-zoster virus) is relatively common in older adults and can be treated with systemic acyclovir or valacyclovir. It rarely ulcerates, but this diagnosis must be considered.

**Radiation Dermatitis.** Traditionally, radiotherapy was one of the core therapies involved in breast cancer management regimens; however, the by-product of radiotherapy was collateral damage to the surrounding skin, including dermatitis and ulceration.<sup>7</sup> With the introduction of new technologies in radiation therapy, fewer radiation-induced cutaneous lesions are observed. Most currently affected patients are older adults who were treated with radiation decades ago for breast carcinoma. Common cutaneous reactions include erythema, edema, peeling, pigmentary changes, and, less often, ulceration. When chronic radiation-induced ulcers in the chest wall do occur, they are difficult to heal because of the reduced blood supply, fibrosis, and impaired cellular repair potential associated with radiation therapy.<sup>7,8</sup> The ulcers may enlarge and deteriorate if left untreated.<sup>9</sup>

Oil-based breast implants are out of favor in almost all countries and have been replaced by newer types of implants, including silicone. However, there are multiple case reports of breast ulcerations years after implant surgery, and foreign body granuloma formations due to implant rupture.<sup>10,11</sup>

**Factitious Ulcers.** Physically induced lesions may appear after self-manipulation, as published in one case report of a 22-year-old patient with unusual ulcers that were diagnosed histologically as lobular panniculitis. After meticulous anamnesis and tighter surveillance, the patient confessed to self-inflicting trauma to introduce the lesions. Because factitious ulcers are extremely rare, they are a diagnosis of exclusion after a thorough history and extensive survey appear futile. Only then should the clinician reinvestigate the patient. Establishing a rapport based on trust will put the patient at ease to admit the etiology.<sup>12</sup> Factitious ulcer misdiagnosis can lead to repetitive biopsies, unnecessary surgeries, poorer outcomes, and patient dissatisfaction.

**Brown Recluse Spider Bite.** Brown recluse spiders, endemic to some parts of the world, such as the southern part of the US, are notorious for inducing cutaneous necrosis when accidentally encountering human beings. The affected skin appears indurated, and erythematous and dry necrotic eschar may appear approximately 7 to 10 days after the bite of the spider. Most often their bite is followed by a relatively benign course, but rarely it may cause significant tissue injury associated with constitutional symptoms

**Table. DIFFERENTIAL DIAGNOSIS OF BREAST ULCERATION**

Diagnosis Category	Clinical Features	Treatment
Traumatic and iatrogenic breast ulcerations	Various clinical presentation, localized	Removal of underlying triggers, proper wound care
Radiation dermatitis	Erythematous, firm, sclerotic tissue, ulceration	Topical corticosteroids, emollients, proper wound care, monitor for evolvement of squamous cell carcinoma
<b>Postoperative wound complications</b>		
Postoperative wound infection	Linear ulcers on or underneath the fatty breast tissue, surrounded by edema, erythema, local tenderness, wound bed secretions	Systemic antibiotics, saline compresses, rest and analgesics, debridement of ulcer
Postoperative wound dehiscence	Linear ulcers on or underneath the fatty breast tissue, may observe previous suture site	
Mastectomy flap necrosis	Necrotic (blackish) skin surrounded by sutures	Surgical debridement, resection of flaps, and novel correction with new flap or leave for secondary intention
Infection	Erythema, edema, local warmth, wedge-shaped area over the breast, tenderness, increased secretions in ulcer bed +/- fever or axillary lymphadenopathy	Systemic antibiotics, saline compresses, rest, and analgesics
Intertrigo	Localized erythema and edema underneath the breast tissue near metal underwire of bra	Topical combined preparations
<b>Inflammatory causes</b>		
Hidradenitis suppurativa	Furuncles, abscesses, and sinus tracts, scars located in the submammary areas; lesions may also be located in the axilla, groin, and inguinal areas	Systemic antibiotics (rifampicin with clindamycin, doxycycline), biologics such as adalimumab (anti-TNF- $\alpha$ )
Pyoderma gangrenosum	Ulcer with undermining border and tenderness at ulceration site; "wrinkled paper" scar once healed	Systemic corticosteroids, immunosuppressive medications (eg, mycophenolate, cyclosporin), IVIg, anti-TNF- $\alpha$
Granulomatous mastitis	Firm to hard mass with overlying erythema or tumor that may involve any part of the breast, but most often is found in the upper outer quadrant	Depending on the underlying etiology, antibiotics, systemic corticosteroids, immunosuppressive medications (eg, mycophenolate, cyclosporin), or surgery
<b>Vasculitis and autoimmune diseases</b>		
Pemphigus vulgaris	Mostly erosions but lesions may ulcerate, remnants of flaccid bullae or vesicles	Rituximab, systemic corticosteroids, immunosuppressive medications (eg, mycophenolate, azathioprine)
Vasculitis	Palpable purpuric papules, pustules, ulcers of various size	Treat the underlying condition if possible; stop offending drug; systemic corticosteroids; immunosuppressive medications (eg, mycophenolate, azathioprine); biologics such as etanercept, infliximab, adalimumab (anti-TNF- $\alpha$ )
Panniculitis of the breast	Hard, firm tender nodules	Treat the underlying condition if possible, antimalarial drugs, systemic corticosteroids, immunosuppressive medications (eg, mycophenolate, azathioprine), and surgery
<b>Vascular disorders</b>		
Diffuse dermal angiomas	An indurated, painful erythematous plaque that later erupts as an ill-defined cutaneous ulcer	Surgery
Mondor disease	A painful cord-like induration in the affected area; rarely, lesions may ulcerate	Warm compresses and nonsteroidal anti-inflammatory drugs; rarely, corticosteroid injections or surgery
<b>Neoplastic ulcers of the breast</b>		
Adenocarcinoma of the breast	Early lump without associated skin findings	Surgery, radiation, chemotherapy, and hormonal therapy
Squamous cell carcinoma	Erythematous scaly patch or slightly elevated plaque that later ulcerates	Surgery
Basal cell carcinoma	Shiny pearly papule with rolled border and central ulceration	Surgery
Phyllodes tumor	Firm, smooth, rubbery, well-defined tumors that vary in size and mimic fibroadenomas	Surgery

(continued)

**Table. DIFFERENTIAL DIAGNOSIS OF BREAST ULCERATION, CONTINUED**

Diagnosis Category	Clinical Features	Treatment
Breast lymphoma	Red-brown nodules or tumors	Surgery, radiation, chemotherapy
Breast fibrosarcoma	Rare, poorly defined stony hard tumors	Surgery, radiation, chemotherapy
<b>Drug-induced ulcers of the breast</b>		
Warfarin necrosis	Partial retiform purpura within or at the margin of the cutaneous lesions	Cessation of warfarin therapy, heparin, vitamin K, protein C
<b>Exogenous</b>		
Factitious	Various clinical pictures may mimic infection or PG-like presentation	Refer to a psychiatrist, cognitive behavioral therapy, SSRIs, TCAs, antipsychotic medications
Brown recluse spider bite (rare)	Indurated and erythematous and dry necrotic eschar that erupt as ulcer; may be associated with constitutional symptoms (eg, fever, fatigue)	Systemic antibiotics, systemic corticosteroids, antihistamine medications, proper wound care

Abbreviations: IVIg, intravenous immunoglobulin; PG, pyoderma gangrenosum; SSRI, selective serotonin reuptake inhibitor; TCA, tricyclic antidepressant; TNF- $\alpha$ , tumor necrosis factor  $\alpha$ .

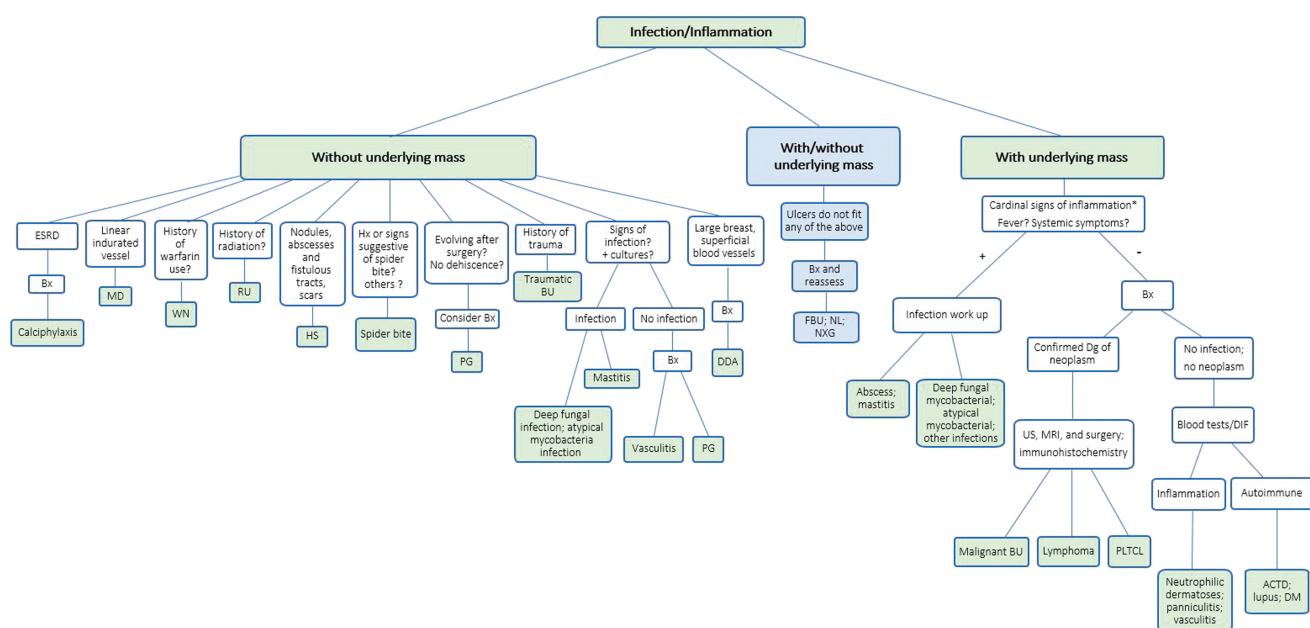
termed loxoscelism, hemolytic anemia, and even death.<sup>13</sup> The most affected areas include the buttocks, thighs, and shins and only rarely the breast tissue.<sup>14</sup>

### Inflammatory Disease of the Breast

**Pyoderma Gangrenosum.** This uncommon, ulcerative cutaneous disease has a unique morphologic presentation. It belongs to the neutrophilic dermatoses group and is frequently associated other systemic diseases, including inflammatory bowel disease, rheumatoid arthritis, and

hematologic malignancy.<sup>15,16</sup> Although PG may affect any anatomic location, it most commonly presents on the limbs, especially the lower extremity, around an abdominal stoma, or adjacent to wounds including post-surgical sites.<sup>17,18</sup> Although the breast is not a common location for PG lesions, it is a common surgical site, and postsurgical PG is a common complication of breast and chest surgeries. The diagnosis of PG relies mainly on clinical background, usually with an underlying etiology suggestive of the disease. Because the histopathology of

**Figure 1. BREAST ULCER DIAGNOSTIC ALGORITHM**



Abbreviations: ACTD autoimmune connective tissue disease; BU, breast ulcer; Bx, biopsy; Cx, clinical presentation; Dg, diagnosis; DIF, direct immunofluorescence assay; DM, dermatomyositis; ESRD, end-stage renal disease; FBU, factitious breast ulcer; HS, hidradenitis suppurativa; Hx, history/anamnesis; GM, granulomatous mastitis; MD, Mondor disease; NL, necrobiosis lipidica; NXG, necrobiosis xanthogranuloma; PG, pyoderma gangrenosum; PLTCL, panniculitis-like T-cell lymphoma; RU, radiation ulcer; US, ultrasound; VAC, vacuum-assisted closure; WN, warfarin necrosis.

\*The five cardinal signs of inflammation are redness, swelling, heat, pain, and loss of function.



**Figure 2. BREAST ULCERS INDUCED BY INTERTRIGO AND LOCALIZED INFECTION**



Patient provided consent for image to be published.

PG is nonspecific, it is a diagnosis of exclusion. However, recently, the diagnosis of ulcerative PG has been revised to include one major histopathologic criterion (neutrophilic infiltrate) and four out of eight minor criteria to fulfill the requirements to establish the diagnosis of ulcerative PG.<sup>19</sup> Reports indicate that PG presenting on the breast usually does not involve the nipple, which could be related to different skin structures and cell types.<sup>19–22</sup> It is important to counsel patients with a history of PG or high risk for PG regarding pathergy (induction of PG lesions after trauma), so they are aware of the risk of ulceration following any elective procedure such as breast piercing or future surgeries.

### Autoimmune Disease of the Breast

**Vasculitic Breast Ulcers.** Breast ulcers have been reported in association with systemic vasculitis and mainly with granulomatosis with polyangiitis, giant cell arteritis, and polyarteritis nodosa. One literature review of 67 biopsy-proven cases reported that the typical manifestation was breast mass (79%) or breast ulcer. Glucocorticoids and immunosuppressants are the main therapies, and the prognosis is usually good.<sup>23</sup> The clinical picture of these painful ulcers is very similar to PG, but the histology of vasculitis and laboratory tests help differentiate these conditions.

### Vascular Disorders of the Breast

**Diffuse Dermal Angiomatosis.** Initially described by Krell et al<sup>24</sup> as a specific subtype of reactive angioendotheliomatosis, diffuse dermal angiomatosis (DDA) is a rare, acquired entity that is related to ischemia. It is more accurately categorized as a variant of a larger group of skin diffuse vascular

lesions termed cutaneous reactive angiomatosis.<sup>25</sup> There are three major subtypes of DDA: intravascular reactive angioendotheliomatosis, diffuse reactive angioendotheliomatosis, and acroangiodermatitis. Diffuse dermal angiomatosis was originally described as a variant of cutaneous reactive angioendotheliomatosis, which is characterized by hyperplasia of endothelial dermal cells and intravascular proliferation. However, DDA is now more commonly considered to be a distinct disorder on the spectrum of cutaneous reactive angioendotheliomatosis rather than as a variant of this group of disorders. Although DDA may be located anywhere, it primarily presents on the limbs; vascular ischemia is related to its underlying cause. Although breast tissue is not a commonly affected area, approximately 15 case reports of DDA affecting the breast have been published. Because the underlying etiology may be vascular, patients with peripheral vascular diseases and its risk factors, such as smoking and diabetes mellitus, are at greater risk.

The morphologic presentation of DDA varies but generally is depicted as an indurated and painful erythematous plaque that spontaneously erupts as an ill-defined cutaneous ulcer. The histopathologic findings include a proliferative endothelial lesion involving the reticular dermis. The lesion contains compactly arranged cells without atypia or mitosis-forming, variably sized luminal structures dissecting between dermal collagen bundles. Mixed minimal inflammatory cell infiltrate is present, and scattered intraluminal thrombi may be present as well.<sup>26</sup> The morphologic presentation is not specific and may vary; hence, the diagnosis relies on the histopathologic background. The treatment is surgical correction. Recurrence is uncommon.<sup>26,27</sup> Although DDA is benign, it may be alarming clinically and may end with cutaneous ulceration.<sup>27</sup>

**Mondor Disease.** Mondor disease is superficial thrombophlebitis of the breast, an uncommon and self-limiting disease that only rarely causes ulceration. Risk factors include smoking, pendulous breasts, and peripheral vascular disease. However, because of the various causes that may lead to this condition, including breast surgery, it should be mentioned here.<sup>28</sup> Inciting events that may cause Mondor disease include breast biopsy; surgery, including breast augmentation procedures, even many years after the procedure was performed;<sup>29</sup> breast carcinoma; and trauma. Morphologically, a painful cord-like induration may appear in the affected area, corresponding to the involved vein. Rarely, these lesions may ulcerate.<sup>30</sup> The clinical diagnosis is confirmed with Doppler ultrasonography. Although self-limiting, patients with Mondor disease are treated with warm compresses and nonsteroidal anti-inflammatory drugs. Rarely, other invasive measures such as corticosteroid injections or surgery may be warranted.<sup>28</sup>

## BREAST ULCERS WITH AN UNDERLYING MASS

### Neoplastic Ulcers of the Breast

**Ulcerated Breast Cancer.** The anterior chest wall and breast are the most common location for cutaneous metastasis due to direct extension of cancer; breast cancer is the most common primary cancer-causing cutaneous metastasis.<sup>31</sup> Ulcerated breast cancer represents a subgroup of locally advanced breast cancer with an unfavorable tumor stage and poor overall survival.<sup>32,33</sup> Fortunately, this group does not represent most breast cancers (approximately 6% to 15%). In one study evaluating the histopathologic features of ulcerated versus nonulcerated breast cancers, most of the neoplasms were invasive ductal carcinoma (85.5%), and only 9.9% were noninvasive ductal carcinoma.<sup>33</sup> Yet, cancers with much less frequent primary breast neoplasm, such as sarcoma, may present as ulcerated lesions as well, requiring tissue biopsy.<sup>34</sup> Other general characteristics of ulcerated breast neoplasm observed in previous research include advanced age at diagnosis, larger tumor size, and greater lymph node involvement.<sup>33–35</sup>

**Nonmelanoma Skin Cancer.** Squamous cell carcinoma and basal cell carcinoma are nonmelanoma neoplasms most commonly affecting sun-exposed areas in the head and neck region.<sup>36</sup> These lesions may present clinically as localized ulcerated lesions that are usually amenable to surgical therapy. Breast tissue is not common for such presentation but should still be sought in the differential diagnosis.<sup>37</sup>

**Phyllodes Tumors.** Phyllodes tumors of the breast are rare, rapidly growing tumors that mimic fibroadenomas; they account for less than 1% of all breast tumors.<sup>38,39</sup> Phyllodes tumors may be benign or malignant and are usually encountered in women in their fourth decade of life. Accurate diagnosis requires histopathologic sampling; if the tumor is malignant, complete surgical excision is required.<sup>40</sup> Other tumors such as lymphoma are extremely rare but may occur and are provided in the algorithm (Figure 1).

### Inflammatory Disease of the Breast

**Hidradenitis Suppurativa.** A chronic cutaneous disease of the folliculoinfundibular unit, hidradenitis suppurativa (HS) is characterized clinically with the eruption of furuncles, abscesses, and sinus tracts that heal with scars and occurs most often in the axilla, groin, and inguinal areas.<sup>41</sup> The breast tissue, especially the submammary areas, are also known affected areas.<sup>42</sup> Diagnosis is made on clinical grounds, and histopathologic sampling is rarely required. Although sinus tracts or fistulous tracts are the cutaneous features of HS, when lesions erupt and are left untreated, they may appear as ulceration (Figure 3). Further, HS may rarely be associated with PG in syndromic disorders such as PASH (PG, acne, and suppurative hidradenitis).<sup>43</sup> Treatment is established based on staging and

may involve local and/or systemic antibiotics, anti-inflammatory drugs, and immunomodulatory drugs. However, when HS is located on the breast, proper wound management cannot be overemphasized.<sup>42,44</sup>

**Granulomatous Mastitis.** Idiopathic granulomatous mastitis is a rare, benign, chronic inflammatory condition of the breast involving young women. The histology is consistent with noncaseating granuloma with or without abscess formation.<sup>45</sup> It usually imposes diagnostic challenges, and exclusion of other conditions such as sarcoidosis, granulomatous vasculitis, and infectious causes is needed in most cases.

The most common presentation of granulomatous mastitis is a subcutaneous mass with overlying erythema in any quadrant, but most often in the upper outer quadrant.<sup>45,46</sup> The mass can be painful and often has a cutaneous peau d'orange appearance, abscess, draining tunnels, and, uncommonly, ulcerations. The diagnosis requires a high index of suspicion with a histology to exclude other causes. Treatment options include corticosteroids, antibiotics, immunosuppressive agents, and surgery.<sup>47</sup>

### Autoimmune Disease of the Breast

**Panniculitis.** Inflammation of fatty tissue—panniculitis—is a rare etiology of breast ulcer but should be included in differential diagnoses because of the considerable amount of adipose tissue in the breast. Depending on the etiology, panniculitis can be classified into two main groups: suppurative and nonsuppurative. Lupus mastitis is a rare manifestation of lupus panniculitis first described in 1971. It sometimes is the initial presentation of lupus and can be associated with fat necrosis and ulceration.<sup>48</sup> Because it can mimic breast malignancy, this brings a diagnostic dilemma requiring further investigation and histopathology. Treatment for lupus mastitis includes antimalarial drugs, systemic corticosteroids, and other immunosuppressive medications.<sup>49</sup>

### Drug-Induced Ulcers

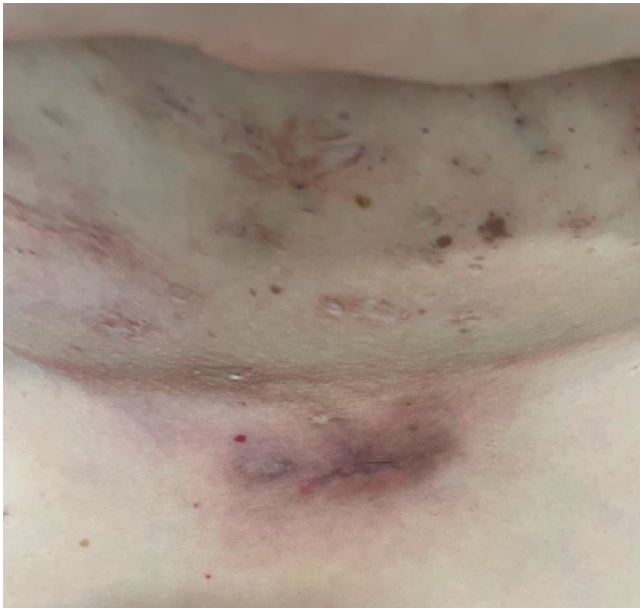
**Warfarin-Induced Necrosis.** Warfarin-induced skin necrosis is a rare complication of anticoagulant therapy, which commonly presents 3 to 5 days after initiation. Although not limited to the breast tissue, cutaneous necrosis may invariably involve the breast tissue. The diagnosis relies on clinical history and cutaneous features in conjunction with laboratory and histopathologic findings.<sup>50</sup>

### DIAGNOSIS

Diagnosis requires a thorough medical history and physical examination, and, in almost all cases, histopathology sampling is mandatory as well. It provides the clinician with a primary diagnosis (eg, tumor) and aids in ruling out other pathologic possibilities. For example, a pathologist may easily discern tumors such as adenocarcinoma with

### Figure 3. A 50-YEAR-OLD PATIENT WITH HIDRADENITIS SUPPURATIVA

Patient has a submammary ulcer as well as other lesions typical of hidradenitis suppurativa. Patient provided consent for image to be published.



hematoxylin-eosin staining, even without the need for additional immunohistostaining to support the diagnosis. In contrast, inflammatory disorders may require clinicopathologic correlation for the suggested clinical diagnosis. The classic histologic presentation of PG, for example, is neutrophil-rich cell infiltrate in the dermis, but this is mostly seen when an early lesion is biopsied. As emphasized previously, neoplasm must be ruled out in many cases, which is possible with the current histopathologic tools. Imaging is also essential prior to surgical intervention; this may include ultrasonography, mammography, and MRI.

### MANAGEMENT

The ultimate goal is to treat the underlying disease that led to the ulceration. This goal is not always feasible, though, such as in cases of advanced cancer when treatment options are limited. In these cases, palliative surgery or radiotherapy is possible, and pain management is essential. In autoimmune diseases and vasculitis, among others (Table), the core therapy is systemic corticosteroids and immunosuppressive medications.

Proper wound care includes cleansing to prevent secondary infections, the appropriate utilization of topical antibacterial agents in the presence of localized infection, and maintenance of a moist wound environment. Conservative debridement (enzymatic, autolytic, or surgical) to remove nonviable tissue should be performed while awaiting surgical correction. Proper wound healing is important when the disease is curable but is vital even if it is

for palliation alone. Wound dressings should be chosen to provide comfort, control drainage, and reduce pain.

### CONCLUSIONS

Breast ulceration results from a diverse, heterogeneous group of diseases with a shared clinical diagnosis of wounds located in the fatty breast tissue. Possible causes discussed here include infectious, inflammatory, and neoplastic disorders affecting the breast. Assessing the possible underlying etiologies will enable clinicians to approach skin ulceration of the breast systematically, facilitating accurate diagnosis and thus more quickly establishing and managing care for these patients. Appropriate care management requires a multiprofessional approach to treat the underlying disease, optimize local wound care, and manage pain. ●

### PRACTICE PEARLS

- A diverse group of diseases affecting the breast can induce breast ulceration.
- Breast ulcers arise for many reasons including infection, inflammation, traumatic injury, and neoplastic illness.
- Thorough clinical history is essential to establish the exact diagnosis; histopathologic sampling is warranted in the majority of cases.
- Treatment is dictated by the underlying disorders but should also address other needs of the patients, including optimal wound dressing and pain management.

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