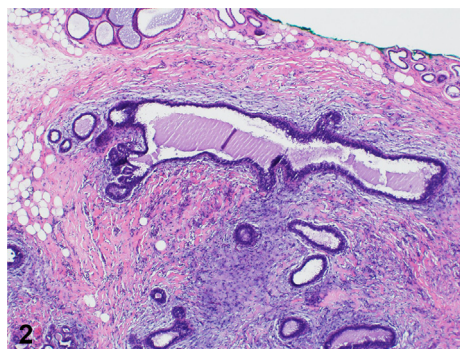
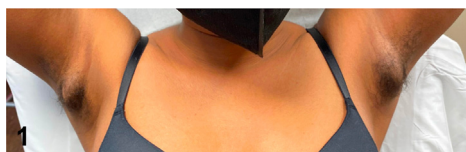


## Bilateral, tender axillary nodules



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**Key words:** accessory breast tissue; axilla; ectopic breast tissue; embryologic mammary ridge; hidradenitis suppurativa.



A 36-year-old woman presented with bilateral, nondraining, solitary axillary nodules that were initially noticed after her first pregnancy (Fig 1). She reported the nodules to be tender, nonfluctuant, and without drainage. In addition to the axillary nodules, she had multiple draining lesions and sinus tracts in her right groin. She was initially treated for presumed hidradenitis suppurativa (HS) with 2 months of oral doxycycline, topical clindamycin, and 10% benzoyl peroxide wash and reported mild improvement of the groin lesions but denied improvement of the axillary lesions. Despite the escalation of appropriate medical management for HS with topical 5% dapson and trials of spironolactone and adalimumab, she reported continued tenderness of the axillary nodules, most prominently around her menses. She ultimately underwent surgical excision of the groin lesions, which were proven to be HS histopathologically, and punch biopsy of one of the axillary nodules to establish the diagnosis.

### Question 1: What was seen on pathology of the axillary nodules?

- A. Follicular occlusion and rupture of pilosebaceous unit with acute inflammatory response
- B. Proliferation of mature adipocytes
- C. Keratin debris lined with stratified squamous epithelium
- D. Terminal ductal lobular units

E. Dense connective tissue containing well-developed follicles and plasma cells within medullary cords

### Answer:

A. Follicular occlusion and rupture of pilosebaceous unit with acute inflammatory response — Incorrect. This would be the histopathologic finding for HS.<sup>1</sup>

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**B.** Proliferation of mature adipocytes – Incorrect. This would be the histopathologic finding for a lipoma.<sup>2</sup>

**C.** Keratin debris lined with stratified squamous epithelium – Incorrect. This would be the histopathologic finding for an epidermal inclusion cyst (EIC).<sup>2</sup>

**D.** Terminal ductal lobular units – Correct. This is the histopathologic finding for the correct diagnosis (Fig 2).<sup>3</sup>

**E.** Dense connective tissue containing well-developed follicles and plasma cells within medullary cords – Incorrect. This would be the pathology finding for a normal lymph node.<sup>4</sup>

**Question 2: What is the most likely diagnosis of the axillary nodules?**

- A.** HS
- B.** Lymphadenopathy
- C.** Ectopic breast tissue (EBT)
- D.** EIC
- E.** Lipoma

**Answer:**

**A.** HS – Incorrect. HS may present with tender nodules in the axillae and inguinal region. HS typically has satellite lesions that are also inflamed and occasionally fluctuant, which our patient lacks.<sup>1</sup> Other diagnoses should be considered if axillary nodules are resistant to appropriate medical management for HS.

**B.** Lymphadenopathy – Incorrect. Our patient lacks the signs or symptoms of an underlying infection or malignancy inducing bilaterally axillary lymphadenopathy. Infectious lymphadenopathy presents as a tender, soft, and mobile mass. Malignant lymphadenopathy presents as a nontender, hard, fixed mass.<sup>4</sup> Furthermore, in our patient, a clinical breast examination did not reveal any abnormalities and an ultrasound of the breasts confirmed the absence of concerning lesions.

**C.** EBT – Correct. EBT may present with bilateral solitary, tender nodules that typically appear after puberty or first pregnancy. This may fluctuate in size throughout the menstrual cycle. EBT arises from a failure of regression of the breast tissue along the embryologic mammary ridge outside of the pectoral region.<sup>3</sup> EBT is susceptible to the same physiologic and pathologic seen in normal breast tissue.<sup>3</sup> Our

patient's biopsy report read, “accessory breast tissue with apocrine metaplasia and columnar change.” Notably, there has been one other case report of EBT being misdiagnosed as HS. In that case, the misdiagnosis was recognized during incision and drainage, where thin white fluid was noted rather than the purulent drainage expected with HS.<sup>5</sup>

**D.** EIC – Incorrect. EICs are typically nontender, do not have tenderness associated with menses, and may have a dark-colored punctum at the apex. It would also be atypical for EICs to occur in bilateral axillae.<sup>2</sup>

**E.** Lipoma – Incorrect. Lipomas present as slow-growing, round, and soft masses that are not tender. It would be atypical for lipomas to present in bilateral axillae.<sup>2</sup>

**Question 3: What is the appropriate treatment for this patient?**

- A.** Observation
- B.** Oral minocycline and topical 5% dapsone
- C.** Infectious disease workup
- D.** Lymph node biopsy and histological analysis
- E.** Surgical excision

**Answer:**

**A.** Observation – Incorrect. As her lesions were symptomatic, surgical excision is the best definitive management for this patient's EBT. Smaller and asymptomatic EBT can be managed more conservatively.<sup>6</sup>

**B.** Oral minocycline and topical 5% dapsone – Incorrect. Oral minocycline and topical 5% dapsone would be appropriate medical management options for HS.<sup>1</sup> Our patient's axillary nodules persisted despite a 3-month trial of oral doxycycline and topical 5% dapsone and eventual progression to spironolactone and adalimumab.

**C.** Infectious disease workup – Incorrect. Our patient is not displaying signs or symptoms concerning for a systemic infection. This patient's bilateral axillary nodules are due to EBT, rather than lymphadenopathy.

**D.** Lymph node biopsy and histological analysis – Incorrect. Our patient does not have any features concerning underlying malignancy. Lymph node biopsy is not indicated in the management of EBT.

**E.** Surgical excision – Correct. For both symptomatic relief and to eliminate malignant potential,

management of EBT includes surgical excision.<sup>6</sup> Our patient was symptomatic and received definitive treatment with surgical excision. To date, she has recovered well and is pleased with her outcome.

**Abbreviations used:**

EBT: ectopic breast tissue

EIC: epidermal inclusion cyst

HS: hidradenitis suppurativa

**Conflicts of interest**

None disclosed.

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