

Case Report
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Breaking the Mold: Mobiluncus in Male Breast Abscess– Unveiling an Unlikely Culprit

 Veera Jayasree Latha Bommu^{1*}, Kaanchi Utpat² and Travis Hendricks DO³
¹Internal Medicine Resident, Rutgers Health/Community Medical Center, Toms River, New Jersey, USA

²Biotechnology High School, New Jersey, USA

³Infectious Disease Specialist, Faculty, Rutgers Health/Community Medical Center, New Jersey, USA

***Corresponding author**

Veera Jayasree Latha Bommu, Internal Medicine Resident, Rutgers Health/Community Medical Center, 99 Highway 37 West, Toms River, New Jersey, 08755. USA.

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Introduction

Breast abscesses are predominantly encountered in females, with male cases being exceedingly rare. When present in males, they often occur in the setting of immunosuppression, trauma, or underlying breast pathology. Apart from this, mobiluncus species are most frequently considered in relation to bacterial vaginosis and are rare to be found in extravaginal sites. Here, we present a case of a 28-year-old immunocompetent male with a breast abscess, where microbial culture identified mobiluncus curtisii as the causative agent, a pathogen seldom implicated in such cases.

Case Presentation

A 28-year-old male presented to the emergency department (ED) with a two-week history of progressive swelling, erythema, and tenderness in the left breast. He denied any history of trauma or recent medical interventions. His medical history includes hidradenitis suppurativa in axillae, and a perianal abscess with staphylococcus epidermidis and corynebacterium a month prior to this episode. He was treated with oral Augmentin and doxycycline for 10 days at that time. He reported no systemic symptoms such as fever, night sweats or weight loss. Family history is negative for any immunodeficiency. Notably, he disclosed having multiple female sexual partners without consistent condom use.

On examination, the left breast showed marked erythema, warmth, and tenderness localized to the upper outer quadrant, with no palpable masses. There were no signs of nipple discharge or axillary lymphadenopathy. Additionally, he was noted to have shaved his chest hair which is a new finding compared to his previous admission. Upon further questioning, he admitted that he has used his partner's razor. Vitals and laboratory investigations, including complete blood count and serum electrolytes, were within normal limits. Human immunodeficiency virus (HIV) screening was negative.

Ultrasound imaging of the left breast revealed a well-defined hypoechoic lesion with internal vascularity consistent with an abscess. Fine-needle aspiration was performed, yielding purulent fluid for culture and sensitivity testing. Microscopic examination revealed gram-variable bacilli and culture subsequently identified moderate growth of mobiluncus curtisii.

The patient underwent incision and drainage of the breast abscess under local anesthesia. Empiric antibiotic therapy with intravenous (IV) vancomycin, ceftriaxone, and oral clindamycin was initiated pending culture results. Following drainage, the patient reported significant symptomatic improvement, with resolution of swelling and erythema over the subsequent weeks. Antibiotic therapy was later narrowed down to oral Amoxicillin-clavulanate upon discharge for a total of 14 days guided by culture and sensitivity.

Discussion

Breast abscesses in males are rare and are often attributed to underlying conditions such as immunosuppression, trauma, or ductal ectasia. There are only ten reported cases of breast abscess in a male patient [1]. Mobiluncus species are anaerobic Gram-variable bacilli typically associated with bacterial vaginosis in females. In a study done by Nyirjesy P et al., mobiluncus curtisii was discovered in 65.3% of women with bacterial vaginosis and was rarely observed in individuals without the illness [2]. It was also found in rectal samples of females in some studies [3]. There are six reported cases of mobiluncus bacteremia with the source being gastrointestinal in most of them and the uterus in one of them. 5 out of those 6 are females and only one of them was in a male patient [3].

The pathogenic mechanism of mobiluncus is not clearly defined in our extensive literature review. However, in one of the studies done in patients with bacterial vaginosis by Zeng W et al., it is found to be due to the genomic segment encoding the CAMP factor, a 25 kDa pore-forming toxin that is known to be involved in the CAMP reaction, synergistic lysis of erythrocytes [4].

History-taking serves as a fundamental component of the diagnostic process, offering insights into potential etiologies and guiding further investigation. Specific inquiries regarding sexual behavior, recent travel, and exposure to potential sources of contamination are crucial in cases of suspected mobiluncus infection. Our patient did share his partner's razor which is a potential risk factor for his breast abscess with mobiluncus. Moreover, a comprehensive review of the patient's medical history can elucidate predisposing factors and comorbidities that may influence disease presentation and management. Their presence in a breast abscess in a male patient is exceptionally uncommon and may suggest fecal contamination or unusual routes of transmission. The role of sexual activity in the transmission of mobiluncus to the male breast warrants further investigation. This case also emphasizes the importance of appropriate diagnostic workup, including imaging and microbiological studies, to guide targeted antibiotic therapy.

Conclusion

We present a rare case of mobiluncus-associated breast abscess in an HIV-negative male with multiple female sexual partners. This case underscores the need for clinicians to consider unusual pathogens in the evaluation and management of breast abscesses, particularly in male patients with unique risk factors. Further research is warranted to elucidate the role of sexual transmission in the pathogenesis of mobiluncus-associated breast abscesses.

Declaration of Interests

None

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