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Letter to the editor

Resistant breast abscess due to covid-19 vaccination

Dear Editor,

We read the recent article by Locklin et al about the cases including breast and axillary tail findings following Covid-19 vaccination with great interest.[1] The authors reported inflammatory changes observed in breast tissues after Covid-19 vaccination.[1] In addition to that we would like to present a case of breast abscess occurred after Pfizer-BioNTech COVID-19 vaccine administration.

A 32-year-old female patient admitted to general surgery out-patient clinic with a sensitive palpable mass at her left breast. The patient was nulliparous without a history of any hormonal medications. In April two days after receiving the first dose Pfizer-BioNTech COVID-19 vaccine in her left arm, she had felt tenderness and induration at her left breast. At that time, in another medical center, she had evaluated as mastitis and antibiotic medication had been applied. All these mastitis symptoms completely regressed. However, in May, after the administration of second dose Pfizer-BioNTech COVID-19 vaccine, mastitis findings had repeated. This time, painful swelling had been added to those mastitis findings. Although antibiotic medication had been repeated, there was a slight regression in the inflammation findings. Especially, a further increase in the size of the swelling in the breast had been observed. As the inflammatory findings had regressed, the patient had stopped the

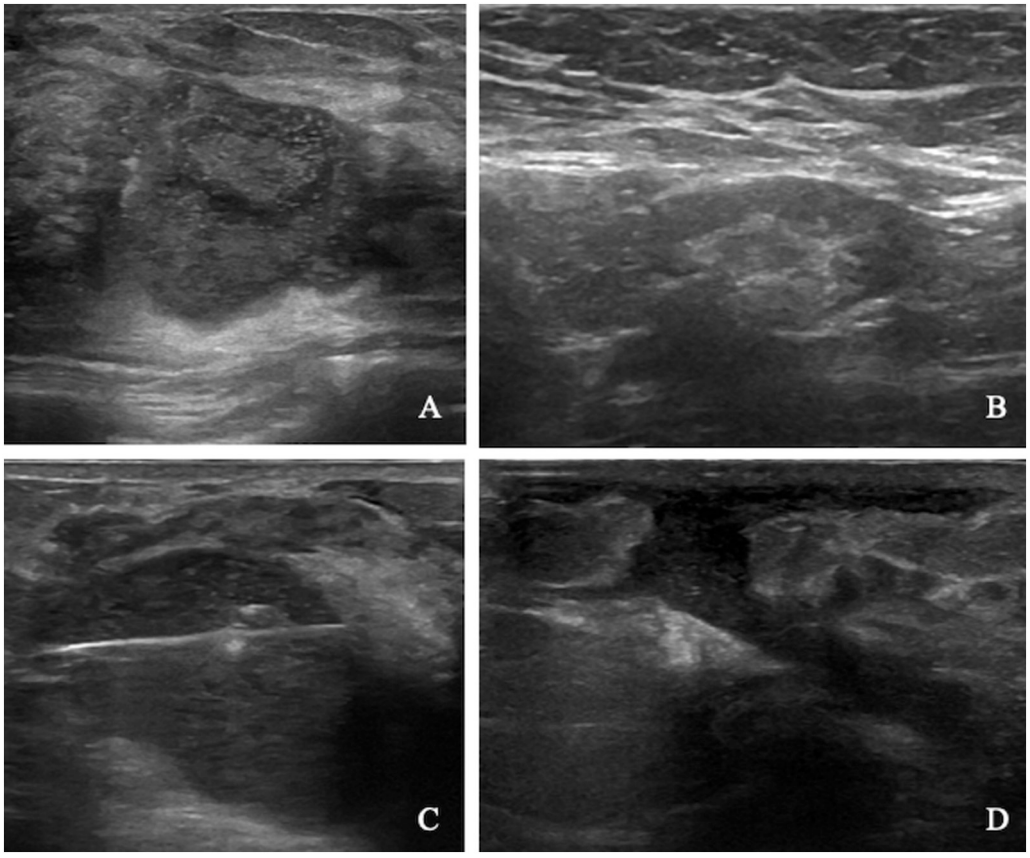


Fig. 1. A. US image showing collection with heterogeneous internal echoes compatible with abscess. B. Targeted axillary US image reveals a lymph node with asymmetric cortical thickening. C. The image showing Core biopsy administration with US guidance. D. Control US evaluation showing a collection extending to the drainage location at periareolar region.

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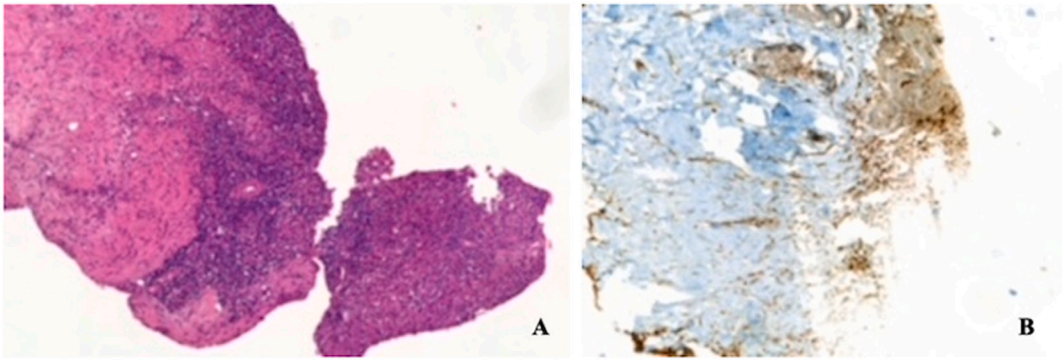


Fig. 2. A. H&E, ×20 with lymphohistiocytic cell infiltration including neutrophil leukocytes between fibrotic tissue fragments B. CD68, ×20 showing positive staining in macrophages.

medication by herself. However, the swelling had increased in the time and in September she had admitted to the general surgery out-patient clinic in our institution. During this admission, her laboratory tests were in normal limits. She was redirected to our breast imaging department for breast ultrasonography (US) examination. US revealed that, there was a collection with mobile internal echoes. The collection was associated with the nipple and extends up to mid depth of the breast. This component was more hypoechoic than the other parts of the collection. Additionally, an axillary lymph node with asymmetric cortical thickening was detected in targeted axillary US. Core biopsy was applied to this non-regressive breast collection (Fig. 1). The pathology result revealed that, there were lymphohistiocytic cell infiltration including neutrophil leukocytes between fibrotic tissue fragments. These findings were evaluated as breast abscess resorption. In immunohistochemistry, p63 (myoepithelial cells) and CD68 (macrophages) were positive, pancreatin was negative (Fig. 2). Drainage was applied with additional antibiotic medication. However, three months later, the patient had admitted with dense-liquid discharge through the drainage site. Control US evaluation showed a collection extending to the drainage location at periareolar region.

The breast abscess was evaluated because of inflammatory changes occurred after the ipsilateral arm vaccination. Different from your cases, the inflammatory changes were not transient additionally these changes were resistant to the medication and even drainage. Although, short interval follow up is recommended to evaluate the resolution confirmation in cases with inflammatory changes after vaccination,[2] resistant inflammation and abscess occurrence should be kept in mind. As these findings mimic inflammatory breast cancer, core biopsy is a useful diagnostic method for exact diagnosis.

References

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Isil Basara Akin[a,*], Merih Guray Durak[b], Canan Altay[a], Suleyman Ozkan Aksoy[c], Pinar Balci[a]
[a] *Dokuz Eylul University, School of Medicine, Department of Radiology, Izmir, Turkey*
[b] *Dokuz Eylul University, School of Medicine, Department of Pathology, Izmir, Turkey*
[c] *Dokuz Eylul University, School of Medicine, Department of General Surgery, Izmir, Turkey*

[*] Corresponding author.
E-mail addresses: slbasara@yahoo.com (I. Basara Akin), pinar.balci@deu.edu.tr (P. Balci).