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CORRESPONDENCE

Unilateral lymphadenopathy associated with COVID-19 vaccination

Dear Editor,

During the ongoing coronavirus disease (COVID-19) pandemic, COVID-19 vaccination is rapidly progressing in many countries of the world. Dermatologists also have the opportunity to experience side effects of these vaccines. Here, we report a case of unilateral lymphadenopathy associated with COVID-19 vaccination that presented to our outpatient department of dermatology with subcutaneous nodules.

A 31-year-old woman presented with small, tender, subcutaneous palpable nodules on her left upper clavicle and in the region of her left lower scapula (Figure 1A). Eight days prior, she received the first dose of the Pfizer–BioNTech COVID-19 vaccine in her left deltoid muscle. She did not present with typical adverse events such as fever, chills, fatigue, headache, and muscle and joint pain. Ultrasonography revealed a 15 × 6 × 7 mm sized lymphadenopathy on the left upper clavicle and multiple lymphadenopathies in the axillary region. Although all lymphadenopathies in the axillary region were within 10 mm, some of these enlarged lymph nodes were rounded, where fatty hilum was not observed (Figure 1B). Contrast-enhanced whole-body computed tomography (CT) showed not only supraclavicular and axillary lymphadenopathies, but also deep cervical lymphadenopathies on her left side (Figure 1C). There were no other abnormalities. We did not exclude the possibility of lymphadenopathy associated with malignancy such as breast cancer and malignant lymphoma. Needle biopsy of an enlarged, rounded lymph node in her lower scapular region was performed. Histopathological findings revealed follicular hyperplasia, but no evidence of malignancy. We speculated that the unilateral lymphadenopathy was associated with the COVID-19 vaccination. After 6 weeks of vaccination, ultrasonography showed decreasing size and number of unilateral lymphadenopathy. After 3 months, subcutaneous nodules became impalpable. The definitive diagnosis of unilateral lymphadenopathy associated with COVID-19 vaccination was made.

In the phase 3 trial of Pfizer–BioNTech COVID-19 vaccine, the rate of lymphadenopathy was reported to be 0.3% among vaccine recipients.[1] Although lymphadenopathy after vaccinations has been reported with other vaccinations such as H1N1 influenza A virus and human papillomavirus (HPV) vaccine,[2–5] lymphadenopathy after COVID-19 vaccination might be more difficult to differentiate from malignant lymph node. Cocco et al. have reported the ultrasonography findings of 66 lymphadenopathies after COVID-19 vaccine with the maximum size of 28 mm. They also reported some enlarged lymph nodes were subcentimetric size but suspicious for malignancy in ultrasonography, as is our case.[6] In addition, Granata et al.[7] have reported the ultrasonography findings of 58 lymphadenopathies after COVID-19 vaccine and 4 out of 58 lymphadenopathies showed displacement of the echogenic hilum and round shape, indicating malignant lymph nodes. It may be difficult to differentiate between

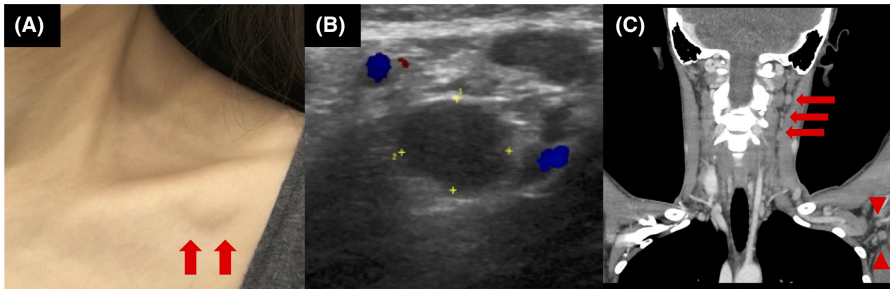

FIGURE 1 (A) Clinical appearance of the subcutaneous palpable nodule on her left upper clavicle (arrow). (B) Ultrasonography showing a rounded and hypoechoic lymph node without hilum. (C) Contrast-enhanced computed tomography showing not only axillary lymphadenopathies (arrow head), but also deep cervical lymphadenopathies (arrow) on her left sided

lymphadenopathies associated with COVID-19 vaccine and cancer metastasis by diagnostic imaging. Clinicians should keep in mind that unilateral lymphadenopathy can be observed after COVID-19 vaccination.

Our patient denied to receive the second dose for fear of side effects. Among patients who presented with lymphadenopathy after the first dose, some patients presented with lymphadenopathy again after the second dose, while others did not.[8] Further case accumulation is needed because the next dose of vaccine should be discussed in these patients.

DECLARATION SECTION

Approval of the research protocol: No human participant was involved in this study.

Informed Consent: The patient has provided informed consent for the publication of the images submitted with this article.

Registry and the Registration No. of the study/trial: N/A.

Animal Studies: N/A.

KEYWORDS

COVID-19, Dermatology, Lymphadenopathy, Pandemic, Vaccination

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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