

COVID-19 vaccination-associated ipsilateral supraclavicular lymphadenopathy

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WE REPORT A CASE OF COVID-19 vaccination-associated ipsilateral supraclavicular lymphadenopathy in the context of clinical management. Among the 18,491 COVID-19 vaccine doses administered at our general practice, only one case of supraclavicular lymphadenopathy was recorded and reported on SAFEVAC as an adverse event following immunisation (AEFI). It is important to recognise a possible AEFI, as this can avoid unnecessary investigations and hence the burden on the patient and health system.

CASE PRESENTATION

A woman aged 40 years reported left arm soreness at the vaccination site within 48 hours after her second dose of Pfizer (Comirnaty) vaccination. Approximately 3–5 hours after the onset of the soreness, she developed ipsilateral neck and chest soreness with a painful lump in the neck region. She initially thought that this could be due to burpees that she had been doing in the past two weeks. She was afebrile. The left deltoid region was locally tender at the site of injection. One left supraclavicular lymph node, approximately 1 cm in size and tender to touch, was identified. No ipsilateral axillary lymph nodes were palpable.

Discussion

Lymphadenopathy, whether localised (only one area involved) or generalised (enlarged in two or more non-contiguous areas), is clinically worrisome, particularly left supraclavicular lymphadenopathy (Virchow node).¹ Failure to take a proper history and examination can sometimes lead to further unnecessary diagnostic testing and follow-up examinations. In the present case, the ipsilateral lymphadenopathy led to a detailed exploration of the regional lymphatic drainage. As a result of the acuteness of the clinical presentation, time-associated Pfizer vaccination, patient's age and localised symptoms with no other underlying systemic conditions, the 'wait and watch' approach was chosen.

Cases of vaccination-associated lymphadenopathy in ipsilateral axillary and supraclavicular regions have been reported, and these have been attributed to a local immune response.² The mid-deltoid region, which drains into the deltopectoral lymph node, is the usual intramuscular injection site for the Pfizer vaccine.^{3,4} However, if the injection site is higher up (ie closer to shoulder), it crosses into the supraclavicular lymph node draining area.⁵ The patient's vaccination site was noted to be higher than the usual site of vaccination – approximately one finger width below the acromion process – resulting in vaccine-associated reactive supraclavicular lymphadenitis.

Furthermore, a range of injuries have been related to vaccination performed too high in the deltoid region – bursitis, tendinitis, rotator cuff injury, and injuries to the posterior circumflex artery or the anterior branch of the axillary nerve.⁴ Using the correct injection technique can prevent shoulder injury related to vaccine administration (SIRVA).

CASE CONTINUED

We followed up on the patient at one week and three weeks post vaccination and found that the symptoms completely resolved within the first week of vaccination with no residual neck pain or swelling. In this case, the importance of vaccination history – including injection site and date – in a clinically evident post-vaccination lymphadenopathy was crucial. Additionally, with no risk factors for malignancy, we decided on the 'wait and watch' approach, as recommended, for at least 4–6 weeks until resolution before referring for diagnostic imaging or biopsy of nodes.²

Conclusion

Lymphadenopathy associated with COVID-19 vaccination can be a clinical conundrum for clinicians. This is especially true for left supraclavicular lymphadenopathy, as the differential diagnosis includes inflammation,

infection, lymphoma or metastatic sign of underlying malignancy. A thorough history and examination in cases of post-vaccination lymphadenopathy can help reassure patients, thereby avoiding unnecessary imaging or biopsies. A conservative approach of observation for at least 4–6 weeks in post-vaccination presentations is a safer option, before referring for diagnostic imaging or biopsy of nodes. Finally, appropriate training in intramuscular vaccination technique can help prevent self-limited acute ipsilateral supraclavicular lymphadenopathy and other SIRVA.

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