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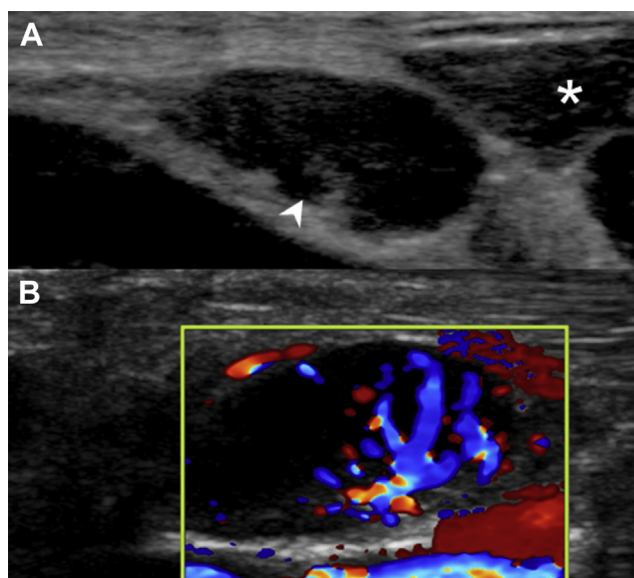
<https://doi.org/10.1016/j.annemergmed.2021.08.021>

Figure. A, Point-of-care ultrasound of the lower neck and internal jugular chain demonstrating multiple enlarged (approximately 2 cm × 1 cm), hypoechoic, elliptic, and elongated lymph nodes; one of them is marked with an arrowhead. B, Color Doppler sonogram of the same reactive lymph node revealing extensive vascularity originating in the hilum. The sternocleidomastoid muscle is marked with an asterisk.

[Ann Emerg Med. 2022;79:e13-e14.]

A 31-year-old woman presented to the emergency department with progressive onset of left-side neck pain for 2 days. She had received the first dose of the Oxford-AstraZeneca (ChAdOx1 nCoV-19) COVID-19 vaccine in her left arm 1 week before. On physical examination, she was afebrile with normal vitals. Neck examination was remarkable for multiple palpable, mobile, tender masses. Point-of-care ultrasound of the left side of the neck was performed (Figure, Video E1 [available at <http://www.annemergmed.com>]).

*For the diagnosis and teaching points, see page e14.
To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com*

IMAGES IN EMERGENCY MEDICINE

*(continued from p. e13)***DIAGNOSIS:**

Neck lymphadenitis after COVID-19 vaccination. Lymphadenitis resolved spontaneously 2 weeks later, and the patient was asymptomatic at the 1-month follow-up (Video E1 [available at <http://www.annemergmed.com>]). Systemic and local side effects commonly develop within 8 days of COVID-19 vaccination.¹ Point-of-care ultrasound is an ideal noninvasive diagnostic tool for rapidly differentiating lymphadenitis from pathology.² In ultrasonography, normal lymph nodes are 3 to 8 mm in size and are hypoechoic, elliptic, and elongated. Inflammation causes vasodilatation, which increases the vascularity as noted in the color Doppler mode.

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REFERENCES

1. Menni C, Klaser K, May A, et al. Vaccine side-effects and SARS-CoV-2 infection after vaccination in users of the COVID Symptom Study app in the UK: a prospective observational study. *Lancet Infect Dis.* 2021;21:939-949.
2. Ahuja AT, Ying M. Sonographic evaluation of cervical lymph nodes. *AJR Am J Roentgenol.* 2005;184:1691-1699.