

[ PICTURES IN CLINICAL MEDICINE ]

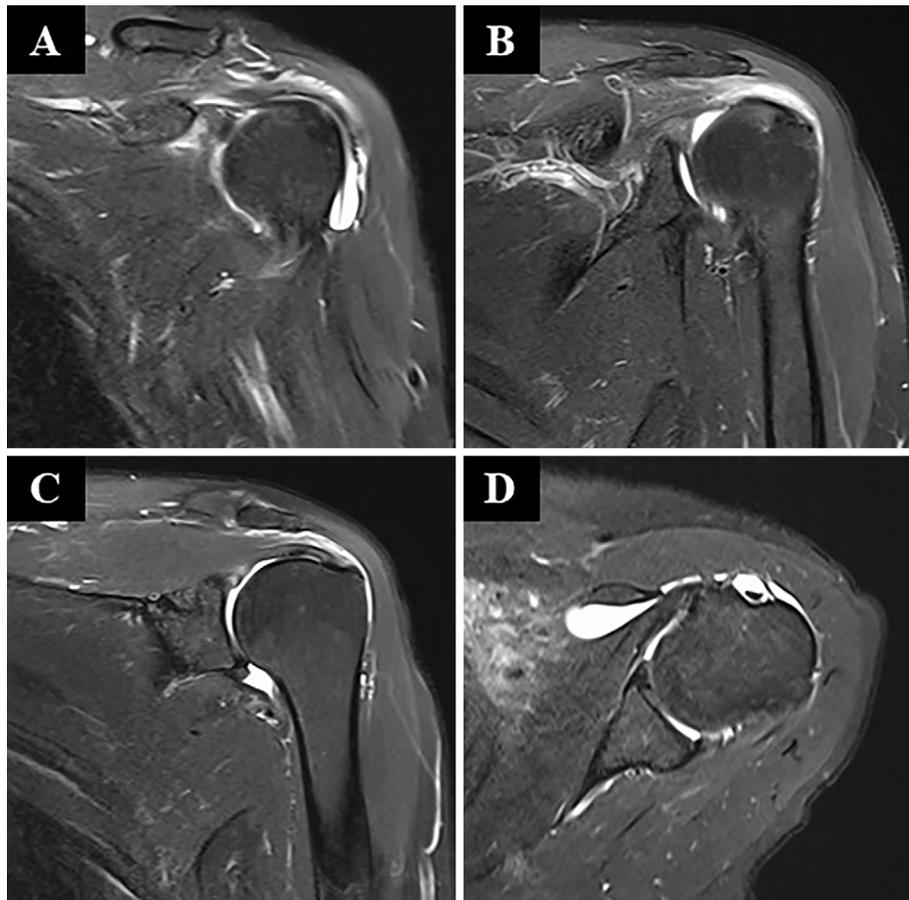
## Shoulder Injury Related to Zoster Vaccine Administration

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**Picture 1.**

A 50-year-old woman presented with left shoulder pain that developed 1 day after the intramuscular administration of a zoster vaccine (Picture 1). She had been experiencing this pain for the past six weeks. Magnetic resonance imaging (fat suppression T2-weighted imaging) revealed subacromial bursitis and tendinitis of the supraspinatus and biceps (Picture 1A-D). She was diagnosed with a shoulder injury

related to vaccine administration (SIRVA). SIRVA has recently been reported as a side-effect after receiving the coronavirus disease-2019 vaccine (1). However, many medical professionals in Japan are unaware of SIRVA, since most vaccines are administered subcutaneously. To reduce the risk of SIRVA, vaccines administered intramuscularly should be injected at the deltoid area, between the anteroposterior axil-

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**Picture 2.**

lary line and perpendicular line from the midacromion (2). In the present case, vaccination near the shoulder joint (injection position too high on the arm) was considered to be

the cause of SIRVA (Picture 2; the black circle indicates the suspected vaccinated site in this case, while the black triangle indicates the appropriate injection site). Healthcare workers, particularly those in Japan, should be aware of SIRVA when administering vaccines intramuscularly, especially the recently approved zoster, coronavirus, pneumococcal and meningococcal vaccines.

**The authors state that they have no Conflict of Interest (COI).**

### References

1. Honarmand AR, Mackey J, Hayeri R. Shoulder injury related to vaccine administration (SIRVA) following mRNA COVID-19 vaccination: report of 2 cases of subacromial-subdeltoid bursitis. *Radiol Case Rep* **16**: 3631-3634, 2021.
2. Nakajima Y, Mukai K, Takaoka K, et al. Establishing a new appropriate intramuscular injection site in the deltoid muscle. *Hum Vaccin Immunother* **13**: 2123-2129, 2017.

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