CORR Insights®: Influenza Vaccination Is Not Associated with Increased Number of Visits for Shoulder Pain

David H. Sohn JD, MD

Where Are We Now

When a vaccination is introduced into the shoulder, practitioners aim to administer the antigenic material into the deltoid muscle. Some localized pain is normal, and the shoulder may even hurt for a day or two. However, there is a subset of patients who have shoulder pain that lasts more than 7 days, sometimes accompanied by stiffness and rotator cuff dysfunction.

This CORR Insights® is a commentary on the article “Influenza Vaccination Is Not Associated with Increased Number of Visits for Shoulder Pain” by Gonzalez and colleagues available at: DOI: [10.1097/CORR.0000000000001215](https://doi.org/10.1097/CORR.0000000000001215).

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D. H. Sohn (✉), Department of Orthopaedic Surgery, University of Toledo Medical Center, 3065 Arlington Avenue, Mail Stop 1094, Toledo, OH 43614 USA, Email: david.sohn@utoledo.edu

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There is even a name for this atypical post-vaccination shoulder pain: shoulder injury resulting from vaccination administration (SIRVA) [1]. However, SIRVA has only been reported in case reports and case series [1, 2], or studies of claims made against vaccination injury compensation funds [4]. No one has asked the question of whether shoulder pain that arises after vaccination is truly caused by the vaccination, or simply arises temporally afterwards. In this article, however, Gonzalez et al. [3] show that the number of visits from shoulder pain was unchanged before and after flu immunization. This suggests that shoulder pain after vaccination might actually be causally unrelated to the immunization.

Viruses and vaccinations are at the forefront of public health. From coronavirus disease 2019 to the reintroduction of measles, viruses and controversies about the safety and efficacy of vaccinations are important public health issues. We know that controlling viruses and introducing herd immunity is important. What we need are studies showing safety and efficacy. This eloquent article by Gonzalez et al. [3] provides insight into the cost side of the equation. This study

compares the frequency of shoulder pain visits before and after the administration of influenza vaccinations to the shoulder. The authors showed that in more than 12,000 patients given a flu shot, there was no difference in shoulder-related clinic visits before and after the shots. This is a wonderful starting point, which allays concerns about the costs and side effects of forced vaccine administration.

Where Do We Need to Go?

Future studies [3] could be expanded in size and scope, however. This population is young (median age 20 years) and busy, and may have different thresholds to reach before seeking medical care for shoulder pain than the general population. And, of course, the key underlying question that calls for our attention going forward is whether shoulder pain that arises after vaccination is in fact caused by the vaccination, or simply arises temporally afterwards.

How Do We Get There?

To get a better handle on that fundamental question, future studies could expand on the model shown here and examine larger segments of the populace. In this study [3], the authors looked at a closed system: a university healthcare system. Using International

D. H. Sohn, Chief, Shoulder and Sports Medicine, University of Toledo Medical Center, Department of Orthopaedic Surgery, Toledo, OH, USA

Classification of Diseases, Ninth Revision codes for shoulder pain, they were able to track who received flu shots and whether these patients were seen in clinic within 3 months. To see a broader swath of the population, a different model would have to be used. The National Vaccine Injury Compensation Program is a compensation program for patients injured by vaccine administration. The National Vaccine Injury Compensation Program's Injury Compensation System database could be searched for SIRVA claims, which could then be compared with nationwide flu

shot administration. This could give a rough incidence report of SIRVA. This could be compared with the overall incidence of shoulder pain to see whether there is a difference. If they yield similar results to Gonzalez et al.'s [3], then perhaps shoulder pain after vaccination is only a coincidence, not a causal relationship.

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