Rheumatology Advances in Practice, 2024, **8(3)**, rkae104
https://doi.org/10.1093/rap/rkae104
Advance access publication 23 August 2024
Letter to the Editor

British Society for Rheumatology
RHEUMATOLOGY ADVANCES IN PRACTICE
OXFORD

Letter to the Editor (Case report)

Recurrence of Kikuchi-Fujimoto Disease following influenza vaccination, diagnosis aided using ultrasound examination

Simran Grewal [1] **and Ali S. Jawad** [1,*]

[1]Department of Rheumatology, Royal London Hospital, London, UK

*Correspondence to: Ali S Jawad, Department of Rheumatology, Royal London Hospital, Bancroft Road, London E1 4DG, UK.
E-mail: alismjawad1@hotmail.com

Key message

- Vaccination with influenza can act as a trigger of Kikuchi-Fujimoto disease.

Dear Editor, A 44-year-old woman, of Indian origin, presented with a month history of fever, headache, sweating and the feeling that her palms were hot. She also noticed lumps in both her axilla more so on the left side. Of note, fourteen days prior to her symptoms starting, she had the Quadrivalent Influenza Vaccine (split virion, inactivated). She, also, had two doses of the Oxford AstraZeneca vaccine, five and nine months earlier. Three months earlier, she contracted COVID-19, PCR confirmed but with mild anosmia and cough which resolved within a week.

Eight years ago, she developed a febrile illness with severe night sweats and rigours while living in India. This was associated with significant swelling in her neck, particularly the anterior chain. She then underwent a biopsy which showed necrotizing lymphadenitis, consistent with the histology of Kikuchi-Fujimoto disease. She was treated successfully with a 2-month reducing regime of prednisolone. An autoantibody screen at the time was negative. There is family history of autoimmune diseases. The parents are not consanguineous.

On examination, the patient was afebrile with palpable left axillary lymphadenopathy but nil lymphadenopathy elsewhere. There were no peripheral stigmata of connective tissue disease and no hepatosplenomegaly.

Blood tests revealed a raised ESR of 42 and CRP of 11. Virology for HIV/EBV and CMV was negative. There was no paraprotein band on serum electrophoresis. Autoimmune screen showed an isolated RNP antibody. The patient underwent an ultrasound examination of the abdomen, axilla and groyne which revealed two enlarged lymph nodes in the left axilla, measuring 9 mm in the short axis with normal fatty hilum with perinodal fat swelling with increased echogenicity in-keeping with Kikuchi Fujimoto disease (Fig. 1) [1].

As the patient's symptoms appeared to be abating, they were observed with no treatment. Over the course of three weeks the patient's symptoms improved with a normal examination and normalization of inflammatory markers.

Kikuchi-Fujimoto disease is an enigmatic disease usually of the young, with a female preponderance. It usually presents with fever and anterior cervical lymphadenopathy as well as an inflammatory blood picture. It frequently is diagnosed in the context of looking for more serious pathology, as it can mimic lymphoma. To our knowledge this is the first case of Kikuchi-Fujimoto disease reoccurrence in the context of the influenza vaccine. It has previously been reported as a primary event following influenza vaccine, as well as other vaccinations including COVID vaccination [2–4]. Interestingly, in the COVID vaccination cases axillary involvement was present similar to our case. Recurrence is very rare, reported in 3–7% of cases and the aetiology is poorly understood, although an abnormal T cell and histiocyte response to a wide array of stimuli is noted including infectious, autoimmune, chemical and malignant stimuli [5]. Other musculoskeletal diseases, such as progressive monarthritis of the shoulder, have been reported post influenza vaccination [6].

The diagnosis of Kikuchi-Fujimoto disease is based on distinctive histopathology of a lymph node. There is partial or complete lymph node involvement by irregularly shaped, pale areas of histiocytes, plasmacytoid dendritic cells, eosinophilic granular material and abundance of karyorrhectic debris (nuclear dust), often surrounding a central zone of overt necrosis. The regions between pale areas include small lymphocytes, immunoblasts and clusters of plasmacytoid dendritic cells producing a mottled or starry sky appearance. There are no neutrophils seen and rare to absent plasma cells [7].

While diagnosis is usually based on biopsy, with paracortical and cortical changes of the lymph node with an abundance of T cells and histiocytes, ultrasound can be used to differentiate from lymphoma, showing a characteristically preserved fatty hilum [8]. The short disease course of our patient meant we were not able to confirm with histology. Nonetheless adopting a watch and wait policy paid

Accepted: 20 August 2024

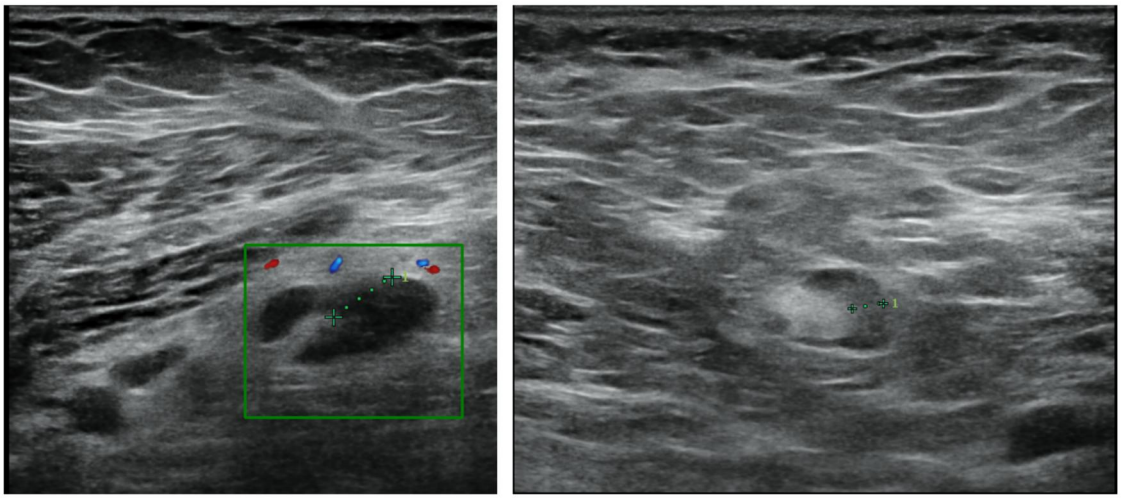

Figure 1. Ultrasound examination. On the left hand side, one of the 2 enlarged lymph nodes in the left axilla, measuring 9 mm in the short axis with normal fatty hilum with perinodal fat swelling with increased echogenicity in-keeping with Kikuchi Fujimoto disease. On the right hand side a normal looking lymph node in the right axilla

dividends in this instance; indeed there is no agreed treatment as the majority resolve spontaneously. Prednisolone, hydroxychloroquine and NSAIDs have all been used in symptomatic and severe cases and thankfully serious complications are rare.

In summary, we present a case of Kikuchi-Fujimoto disease reoccurring following the influenza vaccine. Readers need to be aware of vaccination as a trigger of primary presentation and reactivation.

Data availability

The data underlying this article are available in the article.

Contribution statement

Both authors contributed equally to writing and editing the manuscript.

Funding

No specific funding was received from any funding body in the public, commercial and not-for profit sectors for this article.

Disclosure statement: The authors have declared no conflicts of interest.

Consent: The patient provided informed consent for the publication of this manuscript.

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