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LETTER TO THE EDITOR

Revisiting reactive arthritis during the COVID-19 pandemic

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We are grateful to Slouma and associates for mirroring our thought processes in the letter [1] in response to our review on reactive arthritis (ReA) before and after COVID-19 [2].

They have reiterated the need to differentiate infective viral arthritis from post-viral reactive arthritis. The initial concept of ReA was that it was a para-infectious arthritis due to an autoimmune phenomenon without direct invasion of the infectious agents into the synovium. However, the demonstration of Chlamydial elementary bodies [3] or bacterial DNA [4] in joints of "ReA" has blurred this distinction. The time period between the infection and the onset of arthritis may be important, but in post-streptococcal reactive arthritis, this gap is very small [5]. Even in the case of COVID-19, this time gap is not known and our review included all cases labelled as the authors by post-COVID ReA to demonstrate how variable the interpretation could be. Ultimately, the immunopathogenesis of post-COVID ReA must be understood to be able to differentiate it from acute viral arthritis [6].

Slouma and associates are correct that certain drugs may precipitate or unmask rheumatic symptoms. However, if they check Table 1 in the review, they will see that most patients have received only non-steroidal anti-inflammatory drugs, and oral, parenteral or intra-articular steroids [2]. Also, in most of the case reports, the respective authors have specified how they have excluded other diagnoses before making a diagnosis of post-COVID ReA.

Autoimmune/inflammatory syndrome induced by adjuvant (ASIA) can be considered a differential diagnosis for post-vaccination ReA. Most of the post-vaccination autoimmune phenomena will meet the criteria for ASIA [11]. However, there are some controversies raised about this entity [12] and the mere swapping of names will not leave anyone the wiser.

This letter has helped bring out the message from our review. The various controversies related to ReA diagnosis are summarized in Table 1. Whether the concept of post-COVID ReA should be treated as a separate entity needs to be explored. Large online surveys of treating physicians and multi-national cohort studies of reactive arthritis are required to analyse the concept of viral arthritis and post-COVID-19 joint involvement during the pandemic. This should be a clarion call to clinicians and rheumatology societies worldwide to get together to update and craft better classification criteria enabling better understanding of this enigmatic entity.

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Table 1 Current controversies related to the diagnosis or classification of reactive arthritis

Serial	Area	Controversy
1	Manifestations of ReA	Should ReA incorporate only spondyloarthritic manifestations as stated in the National Medical Library Medical Search Heading terminology [2] or all types of arthritis?
2	Source of preceding infection	Should the definition of ReA be limited to arthritis post-genitourinary and gut infection [7], or any infection in any part of the body?
3	Organisms leading to ReA	Should this be restricted to a list of specified bacteria or viruses [8] or can include new and emerging infections as was in the case of COVID-19?
4	Severity of disease	Should at least one joint have clinical swelling (as seen in countries with a high prevalence of infections) [9] or any minor inflammatory phenomenon is sufficient [10]?
5	Duration of symptoms	Should short-lasting arthritis such as post-streptococcal ReA be included in the definition of classical ReA?
6	Duration from the onset of infection to onset of symptoms	This will depend on the organisms and manifestations included in the final definition

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Compliance with ethical standards

Conflicts of interest SA reports speaker honorarium from Cipla, Novartis, DrReddy, Pfizer, and Jannsen, outside the submitted work. The other authors have no potential conflicts of interest to declare.

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