

Review of: "[Case Report] Profound Symptom Alleviation in Long-Covid Patients After PAMP-Immunotherapy: Three Case Reports"

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Potential competing interests: No potential competing interests to declare.

Thank you for allowing me to read this interesting description of the use of PAMP immunotherapy in 3 patients with Long Covid (LC), demonstrating a useful clinical response. Whilst the results are encouraging and merit further exploration, I can offer the following comments:

1 The WHO definition of LC is of symptoms persisting for 3 months after infection /exposure /vaccination, not 4 weeks, and lasting for at least two more months

2 The PAMP protocol as applied in the three cases described needs to be defined in greater detail. What exactly does the injection contain and how often is it administered? What explicit guidance can the authors offer around duration of therapy?

3 Of the three cases, the first is well described and appeared to benefit markedly for several weeks before relapsing, while the other two had limited data available but made full recoveries. What does the literature say about the presence of chronic pain syndromes as a risk factor for developing LC, and for the duration of its response to therapy?

4 The second and third cases might have resolved spontaneously without therapy - the natural history is towards gradual improvement in most cases with no underlying illness. This should be discussed.

5 The absence of any control patients and such a small series with variable outcome and limited follow up data in two makes any scientific conclusion difficult to justify

6 However, the authors state that they have data on many cancer patients who responded well to treatment and it would be interesting to know of their predictors for response

7 Finally, there is some evidence that neurodivergent people are at greater risk of LC and this appears to fit with the observation that many of these also have chronic pain syndromes such as fibromyalgia and dysautonomia. Could this be a factor in the first patient's relapse and is it worth studying in future larger prospective controlled studies?