

## < RESPONSE TO REVIEWERS' COMMENTS >

We appreciate your kind comments for our humble article.

Reviewer #1:

**Scientific Quality:** Grade D (Fair)

**Language Quality:** Grade B (Minor language polishing)

**Conclusion:** Major revision

**Specific Comments to Authors:** The manuscript describes a case of gouty arthritis extending to tendons and soft tissues and causing compartment syndrome.

Comments: 1. Please provide key data that confirm gout diagnosis. This is an unusual case of inflammation thought to be caused by gout. However, gout diagnosis is not confirmed by the presence of MSU crystals. Crystal identification is essential in atypical cases, especially when the clinical feature fits much better with bacterial infection (regardless of culture results).

➔ Yes, the authors would like to emphasize that the diagnosis of gout in the patient was confirmed at a rheumatology department four years ago, characterized by the presence of positive monosodium urate and elevated serum urate levels. Furthermore, the patient has a documented history of experiencing three separate gout attacks specifically involving the right great toe. We added this information in the first paragraph of the 'Case presentation' section. Notably, the absence of monosodium urate (MSU) crystals in the biopsy of the bone and soft tissue from the patient's hand raises the possibility of a concurrent occurrence of gout-related inflammation and bacterial infection. This nuanced consideration underscores the intricacies of the case. As part of the limitations of our study, we acknowledge the potential coexistence of these pathologies and have addressed this aspect in the final paragraph of the 'Discussion' section.

2. Please state clearly if the case received IV antibiotics before, during and after surgery. I believe that patient must have received antibiotics, may be even before surgery. So, it is not surprising that the cultures are negative. This is an important data point because the presence of ABO will increase the chance that this is not a gout flare but rather an infection with negative culture because of prior exposure to ABO. The chance that this is a gout case will, on the contrary, be more likely if the manuscript is able to explicitly state that no antibiotics were given throughout the course of disease.

➔ Yes, the authors have additionally provided a detailed timeline of antibiotic administration. The intravenous administration of the first-generation cephalosporin (Cefazedone 2 g) was initiated immediately following the primary fasciotomy. Specimens for cultures were collected prior to the commencement of empirical antibiotics. Empirical antibiotics were administered for a duration of ten days at intervals of every 12 hours and were discontinued promptly upon

confirmation of negative culture results, with suspicion of gout tenosynovitis. Additionally, another surgical debridement was performed within a one-week interval, and further cultures of the same types were obtained. Once again, the results yielded entirely negative outcomes. Full closure of the wound with a skin graft was carried out during the third postoperative week following the primary fasciotomy. This chronological information has been incorporated into the fourth paragraph of the 'Case Presentation' section. However, we acknowledge and appreciate the keen insight of the reviewer regarding the potential for coinfection involving atypical bacteria. This perspective has been acknowledged as a limitation in the concluding paragraph of the Discussion section.