## LETTER TO THE EDITOR



## Commentary on "Late seroma of the breast in association with COVID-19 infection: two case reports" by Martínez Núñez P, Pérez González M & Juárez Cordero A

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Sir,

We would like to share some ideas on the article entitled "Late seroma of the breast in association with COVID-19 infection: two case reports" by Martínez Núñez P et al [1]. The authors conclude that "Among the causes of non-BIA-ALCL late seroma, ... an inflammatory exudate from the periprosthetic capsule that gives rise to the seroma ... late breast seroma as a manifestation of SARS-CoV-2 infection" [1]. Although we concur that the patients had seroma of the breasts, the specific pathophysiology remains unknown. The presence of seroma can be confirmed by aspirating fluid from the collection, which could also rule out BIA-ALCL. Nonetheless, whether or not the fluid collection is linked to COVID-19 remains an issue.

Further studies on this presumed clinical association should have been conducted. If this were a clinical problem related to immune related hyperinflammation in patients with COVID-19, there should be clinical evidence of inflammation in several organs and laboratory proofs (such as an interleukin profile) [2]. In the current cases, however, there is no information on aberrant immunological parameters.

Finally, the seroma might be just a coincidence. There is no clear information on the duration of illness in both of the cases reported [1]. Only a history of a sudden clinical condition is given in the first case. In the second case, the only history is of a considerable increase in breast volume. Because the seroma appeared before severe COVID-19 respiratory problem, therefore, hyperinflammation might not have already occurred. Seroma is also a possible clinical manifestation of prosthesis infection, and the patient may first present with a breast seroma without clinical symptoms of inflammation [3]. An aspirate fluid microbiological test is required to rule out an infection. This test should have been indicated by the authors.

During COVID-19 or after COVID-19, the patient may have other medical issues that lead to seroma formation. As previously stated, more research is needed to reach a definitive conclusion about the interrelationship between seroma of the breast and COVID-19.

## Declarations

Ethical approval No ethical approval was required for this letter.

Consent to participate N/A

Consent for publication N/A

**Conflict of interest** Rujittika Mungmunpuntipantip and Viroj Wiwanitkit declare no conflict of interest.

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