



Image in medicine

Lung ultrasound in the frontline diagnosis of COVID-19 infection

Ecografía pulmonar en primera línea del diagnóstico de la infección por COVID-19

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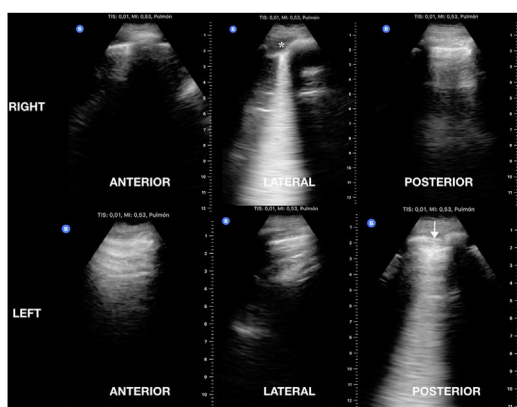


Fig. 1.

We herein report a case of a 35-year-old woman who presented to the emergency department with dry cough, anosmia and malaise. Her temperature was 37.3 °C, SpO₂ of 98%. The physical exam was unremarkable. A nasopharyngeal swab reverse transcription polymerase chain reaction (RT-PCR) of the nucleic acid of SARS-CoV-2 test resulted negative. A lung ultrasound (LUS) was performed with a hand-held ultrasound device (Butterfly IQ), showing a thickened and irregular pleural line with prominent B-lines (asterisk) and subpleural consolidations (arrow) spread bilaterally (Fig. 1).

Since she had lung involvement, she was advised to start hydroxychloroquine (off-label use), and stay isolated at home. The patient condition improved after one week of symptom onset. Then, the RT-PCR was repeated, being positive.

In this emergency, is critical the ability to quickly confirm a suspected case. However, the main diagnostic method, the RT-PCR,

has many limitations such as the low sensitivity of the test at initial presentation, the technical difficulties to perform it correctly and as the outbreak spreads, the shortage of the reagents, which constitutes an undeniable public health threat. The usefulness that LUS presents in pandemic, especially in the diagnosis of suspected cases with negative X-ray or RT-PCR is worth consideration.

Relevance

We describe a patient with newly diagnosed clinically mild COVID-19 infection who had an initial negative RT-PCR and positive lung ultrasonography (LUS). LUS which is easy to perform at the bedside, even in the isolation room, helps the treating clinician to raise suspicion of the disease in the current pandemic context.

Ethics

This work has not been supported by public grants or financial support. No sources of funding were used to assist in the preparation of this case report. The author certifies that he has no commercial associations that might pose a conflict of interest in connection with the submitted article. I certify that the reporting of this case was conducted in conformity with ethical principles of our institution.

We have obtained written informed consent from the patient.

Conflict of interests

The authors declare no conflict of interests.

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