

Usefulness of Lung Ultrasound in COVID-19: A Primary Care Experience

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ABSTRACT

During the first wave of the COVID-19 pandemic, a multitude of studies have been published on performing lung ultrasound, describing the typical, but not specific, findings of the pulmonary involvement of SARS-CoV-2 infection, its use in a multitude of hospital settings: ICU, hospitalization wards, emergency room, allowing to rule out lung damage and to assess the severity and evolution when it occurs.

We have studied a sample of 61 patients in three primary care health centers in the region of Madrid (Spain), establishing a proposal for an “ultrasound severity scale”, the use of which has been significantly associated with appropriate referral to the emergency services. The higher the severity grade on the scale, the more appropriate the referral to hospital. The presence of coalescent B-lines was the only independent ultrasound finding that was significantly associated with appropriate referral ($p=0.008$), with a higher probability of hospital admission ($p=0.02$) and with pathological findings on chest x-ray.

We show our experience using lung ultrasound, as a supporting diagnostic tool for suspected COVID-19 patients in the primary care setting. We consider that a sensitive and specific imaging test such as lung ultrasound performed by primary care physicians may decrease the uncertainty about clinical decisions in these patients. It may detect early lung involvement (and consequent better hospital referrals) and it may also safely avoid unnecessary referrals.

Keywords: COVID-19 pandemic, Primary care health, Hospital settings

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