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IMAGES IN INTENSIVE MEDICINE

Diaphragmatic evaluation in patient with COVID-19 during the start of non-invasive mechanical ventilation

Evaluación diafragmática en paciente con COVID-19 durante el inicio de la ventilación mecánica no invasiva

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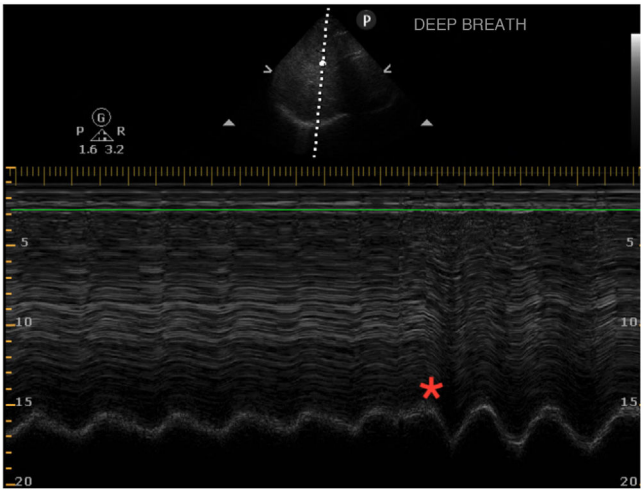

Figure 1

This is the case of a 66-year-old man admitted to the ICU due to COVID-19 after high-flow nasal oxygen failure at the conventional hospital ward setting. Non-invasive support (non-invasive ventilation) is initiated with the following parameters: BiPAP mode with IPAP of 12, EPAP of 9, and a FiO2 of 100% with a tidal volume of approximately 350—450 mL (6.25—8 mL/kg of ideal weight) with respiratory rate dropping from 30 to 23 breaths/min. The diaphragmatic ultrasound performed at admission reveals the presence of a regular diaphragmatic excursion of 2 cm. The patient is asked to take a deep breath (*). Inverted diaphragm motion occurs that triggers the use of accessory muscles. M mode is used. Diaphragmatic thickening of only 3% is reported. Nor the pressure or the volume change dramatically. Twenty-four hours later, failed later non-invasive ventilation is confirmed followed by the need for intubation. Figs. 1 and 2.

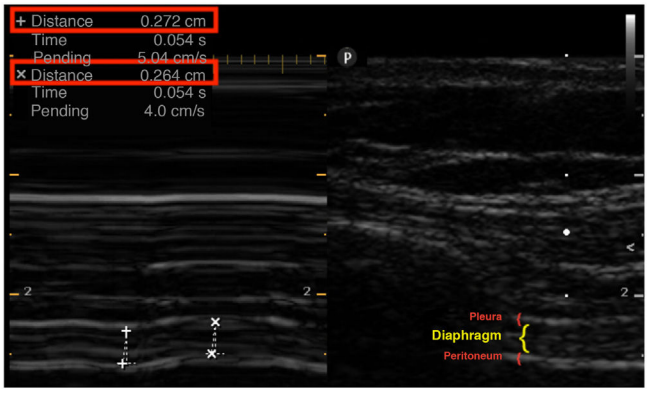

Figure 2

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