

Response to “Comment on: Respiratory physiotherapy in intensive care unit: Bibliographic review”[☆]



Respuesta a «Comentario sobre: Fisioterapia respiratoria en la unidad de cuidados intensivos: revisión bibliográfica»

I read with great interest the narrative review from Goñi-Viguria et al.¹ on the respiratory physical therapy techniques for critical care patients. Because this is a summary of the current evidence in such a vast field of knowledge, I understand that is challenging to make a wide-ranging approach. It is likely that this was the reason why techniques as expiratory rib cage compression (ERCC), inspiratory muscle training (IMT), and ventilator hyperinflation (VHI), that are broadly used by the physiotherapists in this setting, were not explored in this manuscript. Therefore, we provide a brief comment on these modalities aiming to complement the information.

ERCC consists of a manual compression applied to the thorax through the expiration with the aim of increasing the expiratory flow and, thus improve the secretion removal. However, studies with mechanically ventilated patients,^{2,3} have failed to demonstrate any clinically relevant benefit (small effect size) in mucus clearance and respiratory mechanics with ERCC.

Regarding IMT, a recent systematic review showed improvement in inspiratory muscle strength and weaning outcomes in selected patients, especially those with inspiratory muscle weakness and/or in prolonged weaning.⁴ It is noticeable that these results still need confirmation because of the high level of heterogeneity among the included studies.

Finally, many studies, including a systematic review,⁵ showed that VHI has the same benefits than manual hyperinflation (MH) on secretion clearance, oxygenation,

and respiratory mechanics, with no significant adverse hemodynamic effects. Different from MH, VHI does not require the disconnection of the patient from the ventilator. Thus, VHI is preferable than MH because it provides better control of peak pressure, volume delivered, inspiratory flow and inspired oxygen fraction, and there is no loss of PEEP during the procedure.⁵

References

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