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EDITORIAL

Multidisciplinary approach to the sequelae of severe COVID-19 pneumonia at discharge from Critical Care: are there differences depending on the respiratory therapy used?

Seguimiento multidisciplinar tras el alta de UCI de las secuelas por neumonía grave COVID-19

In the present number of *Medicina Intensiva*, I have read the study: ''Multidisciplinary approach to the sequelae of severe COVID-19 pneumonia at discharge from Critical Care: are there differences depending on the respiratory therapy used??''[1] with interest.

The purpose of the study was to analyze the sequelae one month and up to one year after discharge among patients that had suffered severe COVID-19 pneumonia requiring admission to the Intensive Care Unit (ICU). The study sample consisted of approximately 100 patients that had undergone high-flow nasal oxygen therapy or invasive mechanical ventilation, with an evaluation of possible differences in perceived sequelae after discharge.

In contrast to what was expected, the patients subjected to mechanical ventilation presented no differences in terms of perceived physical sequelae after hospital discharge versus those subjected to high-flow nasal oxygen therapy during admission due to severe respiratory failure in the context of COVID-19.

According to the World Health Organization (WHO), ''Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity''. Thus, the ideal situation at discharge should be such that following a short period of recovery, the patient is able to return to his or her daily activities with the fewest sequelae possible.

However, on what and on whom does the minimization of post-ICU sequelae depend upon? The techniques and support measures adopted during admission? Socioeconomic factors of the individual? The intensity of rehabilitation in the ICU? A good post-ICU convalescence period? The healthcare system and its organization?

Certain factors depend on the individual, such as regular physical activity, weight control, the individual perception of sequelae and of health, etc. Other economic and social factors in turn impact health, such as socioeconomic level and well-being, but also the prevention of sequelae through an adequate rehabilitation program, to avoid the impact of the techniques and treatments applied in the ICU.[3]

The pandemic was characterized by stressed resources, great teamwork, and multidisciplinary efforts, all with a common purpose. It represented the example of a ''great functional unit'' in which all the professionals jointly contributed to managing the critical patient, based on their own individual area of knowledge, thereby affording added value.[4]

The article combines efforts in relation to multidisciplinary work, of benefit according to other studies,[2] in order to address the impact of the ICU upon the functions of people. Of note in the study is the evaluation of the problem of post-ICU sequelae in a multidisciplinary and proactive manner after admission, with proactive follow-up of the patients, from which a positive impact upon functionality can be expected, in addition to an improved patient return to daily life, and with the fewest sequelae possible.

Another significant point of the study is the multidimensional nature of the rehabilitation program, addressing physical, psychological and cognitive factors, and assessing the individual in a holistic and comprehensive (not only partial) manner.[2]

The study appears to record no differences in the observed sequelae according to the respiratory therapy used (high-flow nasal oxygen therapy versus invasive mechanical ventilation). *A priori*, this finding was not to be expected, since patients subjected to invasive mechanical ventilation

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are more seriously ill and usually suffer greater sequelae. The data in this regard therefore must be viewed with caution. During admission, it is unclear whether early rehabilitation took place – such early measures have been shown to lessen the subsequent rehabilitation needs. It is also possible that since patients requiring invasive mechanical ventilation have been more seriously ill, their perception of sequelae is comparatively less intense – as has been reported in other studies on the perceived quality of life at discharge.

From the results of the study, it is seen that the patients on mechanical ventilation required more group therapy and had more functional sequelae. Although significance was not reached, these tendencies point to the need for further studies involving larger samples, in order to consolidate the results. In addition, the study must be placed in the context of the pandemic, in which some patients were treated outside the ICU, likewise with high-flow nasal oxygen, and it would be interesting to know the sequelae in this group of subjects, in order to examine possible differences versus the patients admitted to the ICU.

Finally, the study again places value on rehabilitation,[5] multidisciplinary work and a multidimensional approach to the critical patient, and concludes that there are no differences in sequelae between patients subjected to high-flow nasal oxygen therapy versus invasive mechanical ventilation. Due caution is nevertheless required in interpreting these findings.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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