ICU
MANAGEMENT & PRACTICE

Sleep and Circadian Health of Critical Survivors

A new study explores the long-term impact of ICU stays on sleep and circadian health among critical illness survivors, particularly those from the COVID-19 pandemic. Many patients experience persistent sleep disturbances and disrupted circadian rhythms after hospital discharge, attributed to factors like artificial light exposure, nighttime care interventions, and medical treatments. The research explored these effects over a 12-month period, identifying predictors of long-term sleep issues and their associations with mental health, quality of life, and physical recovery. The study highlights the importance of addressing sleep and circadian health to enhance outcomes for ICU survivors, especially in the context of widespread critical illness during the pandemic.

The study included 260 patients (69.2% male) with a median age of 61.5 years. Their median ICU stay was 11.0 days, with 56.2% requiring invasive mechanical ventilation (IMV). Post-discharge, 43.1% reported poor sleep quality based on the Pittsburgh Sleep Quality Index (PSQI). Circadian rhythm fragmentation was influenced by disease severity at 3 and 6 months but not significantly in the long term. However, longer ICU stays and IMV duration predicted greater rhythm fragmentation at 12 months. Associations were noted between PSQI scores and anxiety/depression and between rhythm fragmentation and lung function.

The study revealed persistent sleep and circadian disruptions among critical illness survivors 12 months post-hospital discharge. While there was a slight improvement in subjective sleep quality over time, circadian function remained unchanged throughout the follow-up period. Disease severity, particularly marked by the use of IMV, initially impacted circadian rhythm fragmentation in the short to mid-term but was no longer significant by the 12-month follow-up. Longer hospitalisation and ICU stays predicted continued circadian rhythm fragmentation in the long term. The study also identified associations between poor sleep quality and mental health issues such as anxiety and depression, particularly noting a correlation with female sex.

Overall, the study found a high prevalence of critical illness survivors experiencing poor sleep quality 12 months post-hospital discharge. Actigraphy data showed persistent circadian disruptions, with disease severity potentially influencing circadian rhythm fragmentation, though this effect lessened by the 12-month mark. These findings underscore the importance of addressing long-term sleep and circadian health in critical illness recovery strategies, suggesting potential long-term impacts beyond immediate hospitalisation factors, possibly linked to unresolved illness and respiratory function.

Source: Critical Care Medicine

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