
Risk Factors for Frailty and Death in the ICU



The population continues to age, and life expectancy continues to increase. While most elderly patients can be managed in the general ward, a certain percentage will need ICU admission. The number of elderly people admitted to the critical care unit has been increasing consistently. However, age alone is not a key factor for admission to the ICU. In fact, elderly patients who are severely ill or those who have progressive dementia or end-stage disease or extensive cancer are usually not admitted to the ICU because they are often beyond the curable stage, and their life expectancy is limited.

It has been commonly observed that patients who are frail do poorly when they fall sick. Many studies have shown that frailty is a major risk factor for complications after surgery. Even being admitted to the ICU after a severe illness can often result in complications for old and frail patients. But what about non-frail patients? How do they fare in comparison to frail patients?

In a new study, researchers determined risk factors for death and frailty or only frailty 6 months after patients were admitted to the intensive care unit. Patients included in the study were 65 years or older and were non-frail at the time of admission.

This prospective study was performed in the ICU of an academic institution and included non-frail patients who had been hospitalised for more than 24 hours in the ICU. Frailty was assessed by calculating the frailty index on admission and 6 months later. Patients who remained non-frail ($FI < 0.2$) were compared to patients who presented frailty ($FI \geq 0.2$) and those who presented with frailty and death at 6 months.

Of the 136 patients eligible in the study, 88 patients were assessed at 6 months (non-frail $n = 34$, frail $n = 29$, and death $n = 25$). Findings showed that patients who required mechanical ventilation were at a significantly higher risk for frailty or death at 6 months. Even after excluding patients who died, the duration of mechanical ventilation remained an independent major risk factor for frailty at 6 months.

Factors that play a role in ICU admission usually include the severity of comorbidity and functional status. However, some researchers believe that frailty should also be a factor when assessing ICU admission. It is established that frail patients have a decrease in physiological reserves and are unable to adapt to major stresses. There is now good evidence that frail patients admitted to the ICU are at risk for complications and death. This study observed that factors in the ICU are most likely responsible for inducing frailty or death. Patients who are ventilated often remain immobilised and bed-bound, and these two factors may further induce muscle loss, loss of joint function, contractures and consequently lead to frailty.

Source: [Journal of Intensive Care](#)

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