Recovery from intensive care unit acquired weakness: molecular determinants and consequences for physical recovery and quality of life in patients after cardiac surgery and severe cardiorespiratory failure.

What is ICU acquired weakness?

Severe muscular wasting that occurs in patients that are critically ill, especially those with cardiac and respiratory failure.

Why is this important to investigate?

1. Prevalence is high, ranging from 7%-100%
2. 49% are unable to return to work 18 months after hospital discharge, and the overall general health scores were lower than 'healthy' counterparts
3. Currently, there are no treatments for ICUAW

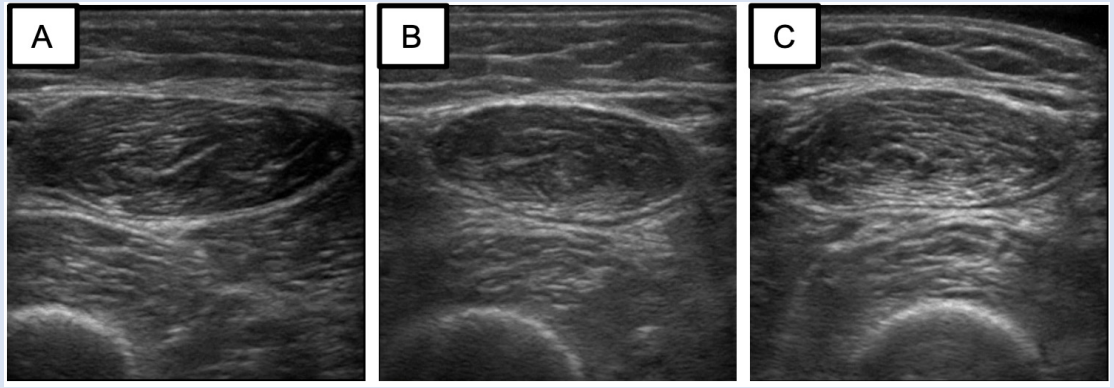
What did we do?

The study explored muscle loss in patients with ICUAW and characterise its effects on physical function and health related quality of life.

Ultrasounds of the rectus femoris muscle, located in the thigh, were taken at different phases of a patient's recovery journey.

What we found:

Patients lost 24% muscle in 7 days, and this seemed unrecoverable at follow up. Patients, however, did regain strength and function however how that compares to pre hospitilisation is unknown. This is because they were emergency admissions



A: Size of rectus femoris (RF) Day 0, B: Size of RF Day 7 (hospital discharge), C: Size of RF at follow up

What this means for future care:

Health care professionals can focus on ways to prevent ICAW and promote best patient outcomes and recovery