



327 - RECTUS FEMORIS THICKNESS BY ULTRASOUND AS A PREDICTOR OF MORTALITY IN FRAIL PATIENTS WITH DIABETES

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Resumen

Introduction: Sarcopenic obesity (SO) and diabetes are major contributors to frailty. This study evaluated rectus femoris thickness (RFT), measured by muscle ultrasound (MUS), as a potential mortality risk marker in frail patients with diabetes.

Methods: Ninety diabetic patients (62% female; mean age 79) classified as frail by FRAIL Scale or Clinical Frailty Scale, confirmed by Fried's phenotype or Rockwood Index, were studied prospectively with baseline and 18-month follow-up. Sarcopenia was defined by SARC-F. Bioimpedance analysis (BIA) measured Sarcopenia Risk Index (SRI), fat mass (FM), and phase angle (PhA). MUS assessed RFT and subcutaneous fat (SF).

Results: Baseline RFT positively correlated with SRI ($r = 0.4$, $p < 0.005$) and PhA ($r = 0.24$, $p = 0.002$); SF correlated with FM ($r = 0.23$, $p = 0.003$). During follow-up, 21 patients (23.3%) died: 7 with SO, 2 with obesity only, 10 with sarcopenia only, and 2 with neither. Notably, sarcopenic patients had a higher mean RFT (0.74 cm) than non-sarcopenic patients (0.68 cm), which was driven by the 18 patients with SO, who showed the highest baseline RFT values (mean 0.86 cm). Similarly, obese patients had a higher RFT than non-obese ones (0.79 cm vs. 0.66 cm; $p < 0.005$). After excluding the 9 deceased patients with obesity or SO, the follow-up analysis showed lower mean RFT in sarcopenic (0.66 cm) versus non-sarcopenic patients (0.76 cm). MUS-RFT may unmask poor prognosis in patients with misleadingly high muscle thickness.

Conclusions: RFT measured by MUS correlates well with BIA parameters and may help identify regional sarcopenia. The paradoxically higher baseline RFT observed in sarcopenic patients was driven by those with SO and obesity was associated with increased mortality. The reversal in RFT trends after excluding these patients underscores the prognostic value of MUS. Larger studies are warranted to validate MUS as a screening and risk stratification tool in sarcopenic obesity.