PHENOTYPES OF EXTREME LONGEVITY: CLINICAL AND FUNCTIONAL PROFILE IN A COHORT OF HOSPITALIZED CENTENARIANS

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Introduction. Centenarians are the fastest-growing segment of the ageing population, yet clinical data in acute hospital settings remain limited. Extreme longevity shows marked biological heterogeneity, suggesting distinct clinical and cognitive phenotypes.

Objectives. To describe the clinical, functional, cognitive, and inflammatory profile of hospitalized centenarians and identify factors associated with in-hospital mortality and cognitive status.

Materials and Methods. Cross-sectional study of 35 consecutive patients aged ≥100 years admitted to an Acute Geriatric Unit in Rome (November 2022–January 2026). Assessment included ADL, IADL, SPMSQ, MNA, ESS, MPI, and CIRS. Laboratory parameters: CRP, lymphocyte percentage, albumin, and creatinine.

Results. The cohort was predominantly female (74.3%), mean age 101.5±2.0 years. Severe functional dependence: 61.8% (ADL), 73.5% (IADL); malnutrition: 58.8%; in-hospital mortality: 22.9%. Deceased patients showed higher ESS (0.81 vs 0.48), MPI (0.75 vs 0.64), CIRS-CI (5.20 vs 3.52), higher CRP, and lower lymphocyte percentage (7.40% vs 13.48%). Cognitive assessment revealed a bimodal distribution: 41.2% preserved cognition, 38.2% severe impairment. Cognitive impairment correlated with higher CRP, CIRS-CI, and MPI.

Conclusions. Hospitalized centenarians are highly vulnerable, with high disability, malnutrition, and mortality. Two phenotypes emerge: preserved cognition with physical decline vs. severe cognitive impairment with higher comorbidity and inflammation. ESS, MPI, and lymphocyte percentage may serve as useful prognostic markers, supporting the need for tailored approaches in the oldest old.