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Frailty: A Comprehensive Review of an Emerging Geriatric Syndrome

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Abstract

Frailty is a multidimensional geriatric syndrome characterized by decreased physiological reserve and reduced resilience to stressors, placing older adults at higher risk of adverse health outcomes. It represents a complex interplay of biological, psychological, and social factors that accelerate vulnerability to falls, disability, hospitalization, and mortality. Despite increasing recognition, frailty often remains underdiagnosed in clinical practice. Early detection using validated tools such as the Frailty Phenotype and Frailty Index can improve patient outcomes through targeted interventions. This article provides an overview of the conceptual models, risk factors, clinical consequences, and current approaches to assessment and management of frailty in aging populations.

Introduction

Frailty has emerged as one of the most significant clinical challenges in geriatric medicine. As global populations continue to age, the prevalence of frailty is rising, affecting nearly 10–20 percent of community-dwelling older adults and even more within hospital and long-term care settings [1,2]. Frailty is typically defined as a state of increased vulnerability resulting from cumulative age-related declines in multiple physiological systems. This decline reduces the body's ability to maintain homeostasis when exposed to stress [3,4].

Two major conceptual models have shaped our understanding of frailty. The first, known as the *Frailty Phenotype* introduced by Fried and colleagues, views frailty as a physical syndrome marked by weakness, unintentional weight loss, exhaustion, slow gait speed, and low physical activity. The second, the *Frailty Index*, considers frailty as the accumulation of health deficits, including diseases, symptoms, disabilities, and laboratory abnormalities.

Risk factors for frailty include advanced age, chronic illnesses, polypharmacy, malnutrition, reduced physical activity, cognitive impairment, and social isolation. Sarcopenia, the age-related loss of muscle mass and strength, plays a central role in the development of frailty. Understanding these risk factors is crucial for implementing early preventive strategies [5].

Frailty is associated with numerous adverse outcomes. Frail older adults are more likely to experience falls, fractures, functional decline, hospitalization, and institutionalization. Moreover, frailty is a strong predictor of mortality independent of chronological age. These consequences highlight the importance of systematic frailty screening in clinical practice.

Management of frailty requires a multidisciplinary approach involving physical exercise programs, nutritional interventions, medication review, cognitive support, and social engagement. Resistance and balance training remain the most effective interventions to improve strength and mobility. Nutritional supplementation, especially protein and vitamin D, further enhances outcomes. Addressing social determinants, such as loneliness and lack of support, is equally essential for holistic care.

Conclusion

Frailty is a prevalent and impactful geriatric syndrome that significantly influences health outcomes in older adults. Early identification and comprehensive management can reduce the risk of disability, hospitalization, and mortality. As the aging population grows, incorporating frailty assessment into routine clinical practice becomes essential. A combination of physical activity, nutritional optimization, medication management, and social support has proven effective in improving resilience and quality of life. Continued research and education are needed to enhance frailty care and promote healthy aging worldwide.

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