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Multidisciplinary Rehabilitation in a Geriatric Patient with Severe Malnutrition: A Case Report

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Background

Psychosocial factors often hinder recovery and lead to underestimating a geriatric patient's rehabilitation potential. This 'vicious cycle' is reversible through a multidisciplinary team (MDT) approach.
We report a successful 4-week recovery of a severely frail patient,
demonstrating that psychological complexity should be an indication for MDT intervention
rather than a reason for clinical exclusion.

Case Presentation

A 67-year-old female was admitted with severe gait disturbance and a history of multiple vertebral fractures. (Figure 1) Upon admission, she weighed 28.1kg (BMI 11.5) with a Frailty Index of 0.41. Functional assessments revealed significant impairment, with a Functional Ambulation Category (FAC) of 1, requiring maximal assistance for transfers. Initial Berg Balance Scale (BBS) score was 5, Short Physical performance Battery (SPPB) score was 5, Frailty Index of 0.35. Body composition analysis showed a Skeletal Muscle Mass (SMM) of 12.9 kg and an elevated extracellular water (ECW) ratio of 0.432.

Baseline gastroenterological evaluations ruled out major malignancies. Psychiatric consultation revealed that her severe malnutrition originated from somatic symptom disorder, characterized by an extreme fear of digestive discomfort following a major depressive episode 25 years ago. Through a 4-week program, an intensive intervention was implemented, including Nutrition Support Team (NST) for high-calorie intake, psychiatric management for somatic symptom disorder, and progressive physical therapy.

The patient demonstrated remarkable clinical and functional improvements. Following psychiatric intervention and medication, her anxiety and fear of ingestion diminished, leading to increased oral intake, improved sleep quality, and effective pain control. Consequently, her daily fasting body weight increased to 29.9 kg. Qualitative body composition improved as Skeletal Muscle Mass (SMM) increased to 13.2 kg and extracellular water (ECW) ratio decreased to 0.426, indicating improved anabolism (Fig 2). Functional mobility showed dramatic gains: SPPB rose to 6/12, BBS improved from 5 to 46, and K-MBI rose from 50 to 77. Her ambulatory status progressed from FAC 1 to FAC 4, achieving independent indoor gait.

Figure 1. L spine MRI (T2)
Multilevel vertebral collapses, involving
T11, T12, L2, L3, L4, L5

Parameter	26.01.16	26.02.13
Weight (kg)	28.1	29.9
Skeletal Muscle Mass (kg)	12.9	13.2
Percent Body Fat (%)	3.0	3.0
ECW ratio	0.432	0.426

Figure 2. Body Composition Analysis
Improvement in Body weight, Skeletal Muscle Mass
and Extracellular water ratio

CONCLUSION

Severe frailty and functional decline in the elderly can be reversible. Achieving psychiatric weight goals and muscle gain through an MDT approach provided the foundation for returning to independent ambulation within one month. Multidisciplinary intervention is essential to overcome complex barriers and maximize rehabilitation potential in frail geriatric populations.