Critical illness neuropathy following heart transplantation – case report and nursing perspectives

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Introduction: Critical illness neuropathy (CIN) is a diffuse peripheral neuropathy that occurs in patients with severe systemic illness, most frequently in sepsis or multi-organ dysfunction, and is associated with prolonged intensive care stay and mechanical ventilation[1]. In heart transplant recipients, additional factors such as immunosuppressive therapy, recurrent infections, and metabolic disturbances may increase the risk and complicate recovery.

Case report: We present a 61-year-old male patient with dilated and valvular cardiomyopathy who underwent orthotopic heart transplantation in December 2024. His postoperative course was complicated by infections (*Klebsiella pneumoniae, Enterococcus faecalis, Candida glabrata*), pleural and pericardial effusions, and recurrent cytopenias. During recovery, he developed progressive symmetrical muscle weakness and paraplegia. Neurological evaluation and clinical course were consistent with CIN. The patient required prolonged rehabilitation, nutritional optimization, and repeated hospital readmissions for endomyocardial biopsy and immunosuppressive adjustments. Despite complications, graft function remained stable, with ISHLT rejection grade 0–1R during follow-up biopsies. CIN in post-transplant patients poses unique diagnostic and therapeutic challenges, with no specific pharmacological therapy available. Management is primarily supportive, focusing on infection control, metabolic balance, early mobilization, and physiotherapy. Nurses play a pivotal role in recognizing early signs of neuromuscular weakness, preventing secondary complications (pressure ulcers, contractures, respiratory decline), and supporting rehabilitation. Nursing interventions in this case included assisted mobilization and transfer training, respiratory physiotherapy, glucose monitoring, and patient motivation in prolonged recovery.

Conclusion: CIN remains an under-recognized but significant complication after heart transplantation. Early recognition, multidisciplinary collaboration, and targeted nursing interventions are essential to optimize functional recovery and quality of life in this vulnerable patient population.

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LITERATURE

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