



Influence of Personality on Geriatric Rehabilitation Outcomes in Cauda Equina Syndrome Case

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Abstract

Cauda Equina Syndrome (CES) becomes more common as the population ages, making diagnosis challenging and leading to underdiagnosis and poor management. Person-centered care is crucial for successful rehabilitation outcomes, and patient's personality influences it. Female, 77 years old, diagnosed with CES caused by nucleus pulposus herniation at fourth to fifth lumbar vertebrae, with a complication of pressure injury grade IV due to immobilization. Her family's lack of caregiving skills, poverty, and histrionic personality disorder were her barriers to comply to rehabilitation program. Adding a psychotherapy based on personality on rehabilitation program increased her functional outcome. This case highlights the significance of assessing each patient's personality to optimize outcomes, emphasizing the importance of tailoring rehabilitation programs to individual needs, including psychosocial and environmental factors.

Keywords

aged, case report, psychosocial, rehabilitation program, spinal stenosis

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Introduction

Cauda Equina Syndrome (CES), a rare neurologic disease caused by compressed cauda equina due to lumbar spinal stenosis (LSS), is becoming more common due to degenerative changes (Yuan et al., 2019). About 45% to 60% of older persons over 65 may have MRI evidence of LSS without any symptoms (Comer et al., 2020). Improperly recognized and managed CES can lead to disability and negatively impact geriatricians' functioning and quality of life. The majority of CES patients have low mental health, increasing depression risk, necessitating psychological testing and management (Hazelwood et al., 2021).

Histrionic personality disorder (HPD) is a less common disorder with prevalence rates ranging (depending of the source) from 0.6% to 1-3% (Babl et al., 2023). People with HPD are ego-syntonic and believe their behavior is normal, leading to underdiagnosis until the disorder affects productivity and relationships (French & Shrestha, 2022). Establishing a trusting therapeutic alliance between healthcare providers and HPD sufferers is crucial for effective medical care. Patients may struggle with

prescribed medication or exercise regimens due to immediate gratification. Clear communication, setting boundaries, and managing expectations are essential components. This case report explores the impact of personality disorders on CES rehabilitation management outcomes, emphasizing the importance of diagnosing these disorders for effective treatment planning, communication, and self-awareness enhancement for successful outcomes.

Case

A 77-year-old female patient with a pressure ulcer (PU) at her tailbone and foot was referred to the Physical Medicine and Rehabilitation Department due to her severe disability after undergoing a rotational flap

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Figure 1. MRI of thoracolumbar.

operation to repair the wound. She experienced long immobilization caused by weakness in her lower extremities and radiating pain for 2 months, unable to feel sensations and hold urination and defecation. Only her low-vision son assisted her with cleaning up after defecating, bathing, dressing, and grooming.

Based on the physical examination, she has a mild cognitive impairment (Mini Mental State Examination score 21/30) and risk of being malnourished (mini nutritional assessment score 18.5). There was joint stiffness at the lower extremities, wound dehiscence on the rotational flap at the sacrum, and pressure injury grade IV at the right calcaneus (Figure 2). Physical examination showed that the patient's muscle strength for segment second lumbar to first sacral vertebrae was 1/5 with the sensation of light touch and pinprick impaired (score 1) from 11th thoracic vertebrae to below in both lower extremities. MRI Lumbosacral showed protruded intervertebral disc fourth to fifth lumbar with posterior diffuse herniation of nucleus pulposus that caused compression of the longitudinal posterior ligament, anterior saccus thecalis, and left spinal radix. Disc bulging on intervertebral disc lumbar first to second, second to third, and third to fourth with stretching of the annular ligament (Figure 1).

The rehabilitation team attempted a mobilization program and PUs care, but treatment progress was subpar. She refused to change positions, fearing pain, and refused to eat. The team re-assessed her socioeconomic status, revealing a low income, relying only on her low-vision son for wound care and false belief that time will cure her health problems hinders the rehabilitation outcome. After psychiatric assessment, she was diagnosed with HPD, also known as dramatic personality disorder, with exaggerated emotionality and attention-seeking behaviors. This disorder causes feelings of undervaluation and neglect, leading to border-crossing behaviors in therapy,

such as extreme neediness and requesting special attention from therapists (Babl et al., 2023; French & Shrestha, 2022). A physician and psychologist employing a personality-type can enhance motivation, ensuring appropriate actions and understanding of the condition. Psychotherapy outcomes are linked to improved patient-therapist relationships, potentially affecting compliance and rehabilitation outcomes.

She then underwent surgery for a protruded disc, resulting in a 1-year rehabilitation program. After 3 months of rehabilitation post operation, continuous psychotherapy, and medical management, sacrum wound dehiscence healed, the pressure injury was reduced to grade II (Figure 2), and she was motivated to mobilize. Despite impaired sensation and indwelling catheter use, she remains motivated to continue comply to the rehabilitation program.

Discussion

Pressure ulcers severely impact patients, caregivers, and the healthcare system, leading to pain, depression, and infections with management is crucial for health outcomes (Shiferaw et al., 2020). PUs significantly affects patients' psychological, physical, financial, social, and quality of life, emphasizing the importance of addressing patient factors like comorbidities, resistance, and lifestyle is essential (Al Aboud & Manna, 2023; Su et al., 2021). Multidisciplinary treatment is necessary to identify the underlying cause, improve psychosocial support, offload pressure sources, and provide adequate drainage (Petruzzi et al., 2022). In this case, early rehabilitation wound care failed to enhance PUs healing due to patient non-adherence. However, upon identifying the primary psychological issue and involving a medical social worker to connect the patient with her community, the rehabilitation outcome improved progressively improved, fostering increased motivation for recovery.

Personality disorders (PD), stemming from problematic interpersonal behavior, significantly impact treatment compliance and interventions with each type requiring a unique approach to overcoming psychological barriers (Kruisdijk et al., 2020). Patients' personalities, encompassing ideas, emotions, and behavioral patterns, influence their psychological, social well-being, and disease acceptance, particularly for those with specific PD traits like high negative emotionality, associated with increased risk of chronic illnesses and worse prognosis (French & Shrestha, 2022; Lahey, 2009).

HPD patients may experience depression and require individual psychotherapy, medications, and psychodynamic psychotherapy, also known as insight-oriented treatment, for effective treatment. Supportive psychotherapy is recommended for HPD patients, as it offers a non-threatening, comforting, and uplifting approach that can reduce emotional distress, boost self-esteem, and strengthen coping mechanisms (Giulio, 2021). Clarification-oriented psychotherapy (COP) focuses on interpersonal clarity, motivation, and self-regulation. Therapists should



Figure 2. (a) Pressure injury before surgery, (b) pressure injury 2 weeks after surgery, (c) pressure injury 2 months after rehabilitation, and (d) pressure injury 3 months after rehabilitation.

understand and manage the complexity of patients' internal and interpersonal functioning by recognizing their motives and schemas (Babl et al., 2022).

The World Health Organization reports that poor medication adherence can reach 50% in wealthy nations, particularly in the elderly, while exercise compliance is influenced by factors like socioeconomic status, education, housing, health conditions, physical activity, and depression (Kruisdijk et al., 2020; Rivera-Torres et al., 2019). Treatment of HPD was important of the success rehabilitation program, it aims to assist the patient identify their fears and motivations behind their thoughts and actions as well as teach them more constructive interpersonal interactions. PD features were found to predict worse functioning, including physical limitations, fatigue, and pain, even after controlling for chronic health problems (Powers & Oltmanns, 2012).

Rehabilitation of non-traumatic SCI necessitates a multidisciplinary team to tackle complex psychosocial and economic issues ensuring proper treatment and management, leading to significant improvement in the patient's condition (Molinares et al., 2022).

Author Contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. The first draft of the manuscript was written by Vitriana Biben and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Declaration of Conflicting Interests

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Consent for Publication

Written informed consent for publication of their details was obtained from the patient/study participant/parent/guardian/next of kin.

Availability of Data and Material

The datasets generated during and/or analyzed during the current study are not publicly but are available from the corresponding author on reasonable request.

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