The Influence and Mechanism of Postoperative Weakness in bladder cancer Patients Based on Neuman System Model

Chunyan Shen

Shapingba District Hospital of TCM,Chongqing

www.ics-eus.org/2025/abstract/ 26399

Objective:The purpose of this study is to use Neuman system model to analyze the impact of postoperative fatigue (POF) in bladder cancer patients and its potential mechanism.

Methods: A prospective cohort design was used to include 200 patients who underwent bladder cancer surgery in a Grade III Grade A hospital from June 2023 to June 2024. According to the three defense lines of the Neumann system model (basic structure defense line, resistance line, and recovery/adaptation line), the Fried frailty scale was used to assess frailty status, the Brief Mental Health Scale (GHQ-12) was used to assess the patient's psychological state, and the Social Support Scale (SSS) was used to assess the patient's level of social support.

Results: This study showed that the incidence of postoperative weakness was 55%, with the highest incidence of fatigue (70%) and the lowest incidence of decreased grip strength (30%). Logistic regression analysis showed that age (OR=1.05, P=0.003), postoperative complications (OR=2.34, P=0.023), low level of social support (OR=1.76, P=0.021), and poor mental health (OR=3.12, P=0.001) were significantly positively related to postoperative weakness of bladder cancer.

Conclusions: The application of Neuman system model reveals that postoperative weakness of bladder cancer patients is the result of interaction, which provides a theoretical basis for clinical medical staff to identify and manage the risk factors of postoperative weakness of bladder cancer patients.