

Addressing Nursing Safety Hazards and Mitigation Strategies for Elderly Endocrinology Patients in Hospital Care

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Abstracts: *Objective:* To investigate the safety hazards in nursing and explore mitigation strategies for elderly patients in the endocrinology department. *Methods:* A total of 240 bedridden elderly patients from February 2021 to January 2023 were recruited and divided into two groups using the random number table method. The control group ($n = 120$) received conventional nursing care, and the observation group ($n = 120$) received personalized nursing care. Patients' quality of life, the incidence rate of pressure sores, and patient satisfaction with nursing care were observed and analyzed. *Results:* The incidence of pressure ulcers in the observation group was significantly lower at 17.50% compared to 30.00% in the control group ($P < 0.05$). Quality of life in the observation group was significantly higher than that in the control group ($P < 0.05$). The satisfaction rate in the observation group was significantly higher at 93.33% compared to 84.17% in the control group ($P < 0.05$). *Conclusion:* These findings emphasize that only through the implementation of scientific and rational nursing measures can effectively reduce nursing risks, enhance therapeutic outcomes, and improve the quality of life for elderly patients.

Keywords: Endocrinology; Elderly patients; Nursing safety; Safety hazards; Mitigation strategies

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1. Introduction

With the aging of the population, the medical demands and challenges associated with caring for elderly patients are steadily increasing. This trend is particularly pronounced in the field of endocrinology, where elderly hospitalized patients frequently encounter a range of unique issues. These issues encompass physical function decline, cognitive impairment, psychological stress, the presence of multiple concurrent diseases, inappropriate medication use or medication refusal, reduced vascular elasticity, and compromised resistance^[1-10]. These challenges not only intensify the complexity of nursing care but also present significant hurdles for healthcare

professionals. In this paper, personalized nursing methods were employed to investigate the impact on quality of life, the occurrence of pressure ulcers, and overall nursing satisfaction.

2. General information and methods

2.1. General information

A total of 240 bedridden elderly patients in the endocrinology department of the Affiliated Hospital of Hebei University from February 2021 to January 2023 were selected and divided into two groups using the random number table method, with 120 patients in each group. The age range of patients was from 50 to 90 years old, with an average age of 69.36 ± 6.36 years. The occurrence of pressure ulcers among the patients was observed and analyzed.

2.2. Methods

The control group received conventional nursing care, while the observation group received personalized nursing care as follows:

- (1) **Dietary care:** Dietary care is of paramount importance for elderly endocrinology inpatients. Healthcare professionals should select appropriate foods for patients based on their physical condition and illnesses, and encourage healthy eating habits. Recommended diets should be rich in vitamins, minerals, and dietary fiber while avoiding foods high in sugar, fat, and salt. Adequate daily water intake, around 1,500–2,000 mL, is also recommended.
- (2) **Psychological care:** Elderly hospitalized patients in the endocrinology department often experience psychological issues such as anxiety and depression. Healthcare personnel need to monitor the psychological well-being of patients and provide psychological guidance through communication, care, and support. Simultaneously, educating patients and their families about their conditions can help them better understand their situation and cooperate with treatment and care.
- (3) **Pain management:** Pain is a common symptom in elderly hospitalized endocrinology patients. Healthcare professionals should administer appropriate analgesic drugs according to the patient's pain level. They should closely monitor the patient's response to the medication and adjust the dosage as needed to ensure pain relief while avoiding adverse drug reactions.
- (4) **Medication guidance:** For elderly endocrinology hospitalized patients, healthcare personnel must select medications suitable for their physical condition and illness. When administering medications, patients and their families should receive comprehensive information about usage, precautions, and possible adverse reactions to ensure proper use and close observation of adverse reactions.
- (5) **Sleep care:** Good sleep is essential for the recovery of elderly endocrinology inpatients. Healthcare professionals should create a quiet and comfortable sleeping environment and help patients establish a regular sleep routine. Patients should avoid consuming large meals, drinking coffee, or engaging in intense physical activity before bedtime. For patients with insomnia, appropriate medications can be administered to assist with sleep.
- (6) **Mobility and activity assistance:** Healthcare professionals should provide assistance to elderly endocrinology inpatients with limited mobility to ensure appropriate movement. The selection and proper use of walking aids, wheelchairs, and other assistive devices should be based on the patient's individual needs. Additionally, targeted rehabilitation training should be provided to promote the recovery of the patient's physical function as their condition allows.
- (7) **Skin and wound care:** Maintaining clean, dry skin is vital for elderly endocrinology hospitalized

patients. Medical staff should regularly bathe patients, change clothes and bed linens, and keep the bedding clean and dry. For patients with wounds, dressings should be changed regularly to prevent infections. Patients should also be educated on appropriate skin care to prevent complications such as pressure ulcers.

- (8) **Complication prevention and response:** Elderly hospitalized endocrinology patients may experience various complications, including infections, pressure ulcers, and deep vein thrombosis, among others. Healthcare professionals should take measures to prevent these complications, such as maintaining clean skin and regular repositioning. In cases where complications have already arisen, healthcare workers should actively address them, providing appropriate treatment and nursing care to alleviate patient discomfort.
- (9) **Family and social support:** Elderly hospitalized endocrinology patients often require care and support from their families and society. Healthcare professionals should maintain close communication with patients' families to ensure they understand the patient's condition and treatment plan, providing targeted health advice and guidance. Patients should also be encouraged to participate in social activities to enhance their quality of life during rehabilitation.

2.3. Observation indicators

The quality of life, the incidence of pressure ulcers, and nursing satisfaction were observed and analyzed in this study.

2.4. Statistical methods

The SPSS 18.0 statistical software was used to analyze and process the data. Measurement data were expressed as mean \pm standard deviation (SD) and analyzed using the *t*-test. Count data were expressed as % and analyzed using the χ^2 test, with a significance level set at $P < 0.05$.

3. Results

3.1. Comparison of the incidence rate of pressure ulcers and quality of life between the two patient groups

The incidence rate of pressure ulcers in the observation group was significantly lower at 17.50% compared to 30.00% in the control group ($P < 0.05$). Additionally, the quality of life in the observation group was significantly higher than that in the control group ($P < 0.05$), as shown in **Table 1**.

Table 1. Comparison of the incidence rate of pressure ulcers and quality of life between the two patient groups

Group	Incidence rate of pressure ulcers	Quality of life
Observation group ($n = 120$)	21 (17.50%)	60.36 \pm 2.36
Control group ($n = 120$)	36 (30.00%)	42.11 \pm 2.45
χ^2 / t	5.1769	5.6354
<i>P</i>	0.0229	0.0000

3.2. Comparison of nursing satisfaction between the two groups

The satisfaction rate in the observation group was significantly higher at 93.33% compared to the control group's rate of 84.17% ($P < 0.05$), as illustrated in **Table 2**.

Table 2. Comparison of satisfaction rate between the two groups

Group	Very satisfied	Satisfied	Dissatisfied	Overall satisfaction
Observation group (<i>n</i> = 120)	96 (80.00)	16 (33.33)	8 (6.67)	112 (93.33)
Control group (<i>n</i> = 120)	38 (31.67)	63 (52.50)	19 (15.83)	101 (84.17)
χ^2				5.0496
<i>P</i>				0.0246

4. Discussion

As the global population ages, the healthcare needs of elderly patients continue to rise. Elderly patients admitted to endocrinology departments face a multitude of potential safety hazards stemming from their unique physiological and psychological conditions. These include vision, balance, and muscle control problems that may lead to falls and accidental injuries; hearing, vision, and speech impairments resulting in communication difficulties; memory loss and decreased mobility contributing to a decline in self-care; and the prevalence of various concurrent diseases such as diabetes and hypertension, requiring multiple medications. Prolonged bed rest and decreased immunity can lead to venous thrombosis and infections in elderly endocrine patients, while issues such as decreased appetite and malnutrition need attention. Furthermore, urinary incontinence, defecation difficulties, geriatric syndromes, delirium, decreased mobility, and social isolation can pose additional challenges. Additionally, strict blood glucose control is often necessary for elderly endocrinology patients^[11-20].

Elderly patients hospitalized in endocrinology departments are susceptible to accidents and injuries, such as falls and choking, due to their declining physical functions. To mitigate such accidents, several measures should be implemented: regular patient safety education to enhance awareness; provision of adequate handrails, chairs, and facilities to maintain dry ward floors and eliminate potential safety hazards; routine equipment checks, including wheelchairs and bedside tables, to ensure they remain in good condition; personalized care plans tailored to individual patient conditions and physical statuses, along with increased inspection intensity to promptly identify and address safety hazards.

Elderly patients hospitalized in endocrinology departments often require long-term medication, emphasizing the importance of medication safety. To ensure the safety of medication, the following steps should be taken: in-depth understanding of the patient's condition and the proper use of medications, strict adherence to physician instructions, and accurate use of drugs; rigorous implementation of a drug management system, including regular quality checks and timely disposal of expired, damaged, or non-compliant drugs; close monitoring of the patient's response to medications, prompt reporting of any anomalies to the physician, and appropriate action taken; education of patients and their family members regarding medication use to improve compliance and safety awareness.

Elderly patients hospitalized in endocrinology departments may also experience skin issues such as diabetic foot and skin infections. Preventive measures should be taken to avoid skin damage: regular skin condition assessments, especially for diabetic patients' feet and perineum; maintenance of clean and dry skin to prevent infections; timely and appropriate nursing care for existing skin problems, such as the use of pressure-reducing pads and ensuring local areas remain dry; enhanced preventive nursing care for high-risk patients, including foot protection and pressure ulcer prevention.

Elderly patients hospitalized in endocrinology departments may need to disclose private information, making it essential to safeguard patient privacy. To protect privacy, healthcare personnel should: undergo

professional ethics education to ensure patient privacy is respected and protected; create private spaces in wards to facilitate patient-staff communication; educate patients on privacy protection to enhance their self-protection awareness; maintain strict confidentiality of information related to patients' privacy to prevent information leakage.

Effective glycemic control is a crucial therapeutic goal for elderly patients hospitalized in endocrinology departments. To achieve this goal, the following measures should be taken: development of a reasonable glycemic control program for patients, including diet, exercise, and medication; regular monitoring of patient's blood glucose levels and timely adjustments to the treatment plan; instruction of patients and their families in glycemic monitoring methods and related precautions; provision of psychological guidance and lifestyle support for patients with poor glycemic control to enhance their compliance and cooperation.

Elderly endocrinology hospitalized patients often have compromised immune systems and are prone to infections. To prevent infections, the following steps should be taken: strict adherence to hospital infection management systems, enhanced ward cleaning and disinfection; the implementation of nursing care measures for patients at risk of infections, including keeping their skin dry and preventing cross-infections; rational antibiotic use and avoidance of antibiotic misuse; the timely isolation of infected patients, along with corresponding nursing care based on the type of infection.

Elderly endocrinology hospitalized patients often face issues related to limb dysfunction, and rehabilitation exercises play a vital role in improving their quality of life. To ensure effective rehabilitation, the following measures should be taken: creation of personalized rehabilitation exercise programs based on the patient's condition and physical status; gradual progression of exercise intensity and time, following the principle of gradual progress; education and training of accompanying staff to assist patients correctly with rehabilitation exercises; prompt adjustments and improvements to address issues that arise during the rehabilitation exercise process.

In summary, addressing the nursing safety hazards of elderly endocrinology inpatients requires the implementation of a comprehensive response strategy to safeguard patient safety and treatment effectiveness. Close attention and support are essential for physical function, cognitive ability, psychological condition, concurrent diseases, drug use, vascular health, and resistance. Only through the application of scientific and reasonable nursing measures can nursing risks be effectively reduced and the therapeutic effects and quality of life of elderly patients improved.

Disclosure statement

The authors declare no conflict of interest.

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