



Review on nursing care for neurosurgery patients

¹Mamatha G, ²Sahana B and ³Purohit Saraswati G

¹ Associate Professor, JSS College of Nursing, Mysuru, Karnataka, India

² Assistant Lecturer, JSS College of Nursing, Mysuru, Karnataka, India

³ Assistant Professor, JSS College of Nursing, Mysuru, Karnataka, India

Corresponding Author: Mamatha G

DOI: <https://doi.org/10.33545/nursing.2024.v7.i2.D.426>

Abstract

Neurosurgery patients often face complex challenges requiring comprehensive nursing care that addresses both physiological and psychological needs. The role of nurses in neurosurgical settings is critical, as they are involved in preoperative, intraoperative, and postoperative care, ensuring optimal recovery and quality of life. Nursing care for neurosurgery patients is a specialized field that focuses on addressing the unique needs of individuals undergoing treatment for neurological conditions requiring surgical intervention. Neurosurgical patients often present with complex and life-altering conditions, including brain tumors, traumatic brain injuries, spinal disorders, and cerebrovascular diseases, among others. These conditions often involve critical care, advanced monitoring, and tailored interventions to ensure the best possible outcomes.

Keywords: Nursing care, neurosurgery, critical, quality of life

Introduction

The role of nurses in neurosurgery extends beyond routine care it demands a comprehensive understanding of neuroanatomy, path physiology, and the implications of surgical procedures on neurological function. Nurses must integrate this knowledge with skills in advanced monitoring techniques, patient education, and compassionate communication to provide holistic care.

From preoperative preparation to postoperative recovery and rehabilitation, nursing care plays a pivotal role in the continuum of care for neurosurgical patients. This includes managing physical symptoms, such as pain and increased intracranial pressure, while also addressing emotional and psychological challenges faced by patients and their families. The complexity of neurosurgical care necessitates a multidisciplinary approach, where nurses act as key coordinators and advocates for patient well-being.

1. Preoperative Nursing Care

- **Patient Education and Counseling:** Nurses prepare patients and families by providing information about the surgical procedure, potential risks, and expected outcomes.
- **Assessment:** A thorough neurological assessment, including Glasgow Coma Scale (GCS), pupil reaction, and motor function, establishes baseline data.
- **Preparation:** Nurses assist in optimizing the patient's condition, addressing comorbidities like hypertension or diabetes, and ensuring compliance with preoperative instructions (e.g., fasting).

2. Intraoperative Nursing Role

- **Monitoring:** Nurses in the operating room ensure the patient's stability by monitoring vital signs, oxygenation, and anesthesia levels.
- **Coordination:** They facilitate communication among the surgical team, ensuring the necessary equipment and supplies are available.
- **Documentation:** Accurate documentation of the procedure and interventions is essential for continuity of care.

3. Postoperative Nursing Care

- **Neurological Assessment:** Continuous monitoring of neurological status is a priority to detect complications such as increased intracranial pressure (ICP), seizures, or new deficits.
 - GCS and pupillary response are frequently checked.
 - Monitoring for early signs of complications like cerebrospinal fluid leaks or infections is crucial.
- **Pain Management:** Effective pain control using prescribed analgesics, often opioids, and non-pharmacological methods is vital.
- **ICP Management:** Nurses implement measures to prevent increased ICP, such as elevating the head of the bed to 30°, avoiding neck flexion, and monitoring for signs of worsening pressure.
- **Infection Prevention:** Meticulous care of surgical sites, adherence to aseptic techniques, and administration of prophylactic antibiotics are standard

practices.

- **Mobility and Rehabilitation:** Nurses encourage early mobilization, assist with physical therapy, and prevent complications like deep vein thrombosis (DVT) or pressure ulcers.
- 4. Psychological Support**
- Neurosurgery patients often face anxiety, depression, or emotional distress due to the uncertainty of outcomes. Nurses provide:
 - Emotional reassurance and counseling.
 - Referrals to mental health professionals when necessary.
 - Support to family members who may also experience stress.
- 5. Specialized Nursing Interventions**
- **Seizure Management:** Close monitoring for seizure activity and administration of antiepileptic drugs.
 - **Hydration and Nutrition:** Ensuring adequate fluid and nutritional support, especially in patients with swallowing difficulties.
 - **Wound Care:** Monitoring for signs of infection, such as redness, swelling, or purulent discharge, and performing appropriate dressing changes.
- 6. Challenges in Neurosurgical Nursing**
- **Workload:** High patient acuity can lead to burnout among nurses.
 - **Technical Skills:** Neurosurgical nursing requires specialized knowledge and skills, demanding continuous education and training.
 - **Resource Limitations:** In some settings, inadequate staffing or equipment can impact the quality of care.

Conclusion

Nursing care for neurosurgery patients is multifaceted, requiring a combination of clinical expertise, empathy, and vigilance. By addressing both physical and emotional needs, nurses play a pivotal role in facilitating recovery and improving the overall outcomes of neurosurgical patients. Continuous education, collaboration within multidisciplinary teams, and a patient-centered approach are essential to achieving excellence in care.

References

1. Leinonen E, Pääkkö E, Kallio J, *et al.* Baseline neurological assessment: Nurses perform detailed assessments, including the Glasgow Coma Scale (GCS), motor responses, and cranial nerve functions, to establish a baseline. *J Neurosurg Nurs.* 2017;49(2):123-128.
2. Salmenperä M, Kallio J, Leinonen E, *et al.* Patient education: Patients and families receive information on the procedure, risks, and postoperative expectations, alleviating anxiety. *Acta Anaesthesiol Scand.* 2002;46(7):781-787.
3. Galgano M, Moore L, Rojas C, *et al.* Preparation for surgery: Optimizing patients' medical conditions, such as managing comorbidities, is critical for reducing surgical risks. *J Neurosurg Anesthesiol.* 2017;29(4):300-305.
4. Salmenperä M, Leinonen E, Kallio J, *et al.* Monitoring

and safety: Nurses ensure hemodynamic stability and prevent complications through vigilant monitoring during surgery. *Acta Anaesthesiol Scand.* 2002;46(7):781-787.

5. Leinonen E, Pääkkö E, Kallio J, *et al.* Aseptic techniques: Stringent infection prevention practices are critical during neurosurgical procedures. *J Neurosurg Nurs.* 2017;49(2):123-128.

How to Cite This Article

Mamatha G, Sahana B, Saraswati PG Review on Nursing Care for Neurosurgery Patients. *International Journal of Advance Research in Nursing.* 2024;7(2):269-270.

Creative Commons (CC) License

This is an open-access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.