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# ANALYSIS OF PALLIATIVE NURSING CARE FOR POST-OP CRANIOTOMY A/I SPONTANEOUS INTRACEREBRAL HEMORRHAGE (ICH) PATIENTS WITH PAIN MANAGEMENT INTERVENTION IN THE ICU OF ROYAL PRIMA HOSPITAL MEDAN IN 2026

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**Abstract**
Intracerebral Hemorrhage (ICH) is a critical neurological condition with a high mortality rate that often requires craniotomy and intensive care in the ICU. Post-craniotomy patients generally experience acute pain that can worsen neurological conditions if not optimally managed. This study aims to analyze palliative nursing care in post-op craniotomy patients due to spontaneous intracerebral hemorrhage with pain management interventions in the ICU of Royal Prima Medan Hospital in 2026. The study used a case study method with a nursing process approach. The study population was post-op craniotomy patients with ICH in the ICU, with a sample of one 56-year-old female patient. Data collection was carried out through observation, physical examination, family interviews, and medical record documentation. The pain assessment instrument used the Critical Care Pain Observation Tool (CPOT), while data analysis was conducted descriptively. The results showed a decrease in CPOT pain scores from 7 to 5 after the administration of pharmacological and non-pharmacological pain management interventions. Patients also showed more stable hemodynamic conditions and a reduced response to the ventilator. The conclusion of the study shows that palliative nursing care with a focus on pain management is effective in helping to increase comfort and support the stability of the condition of post-craniotomy patients with ICH in the ICU.

**Keywords:** Acute Pain, Craniotomy, Intensive Care Unit, Intracerebral Hemorrhage, Palliative Nursing

## INTRODUCTION

Intracerebral hemorrhage (ICH) is a type of hemorrhagic stroke that occurs due to spontaneous bleeding into brain tissue due to rupture of a cerebral blood vessel. This condition is a neurological emergency with high mortality and morbidity rates, requiring prompt and appropriate treatment. According to the World Health Organization (WHO), hemorrhagic stroke accounts for approximately 15% of all stroke cases worldwide and carries a high risk of death, especially in the acute phase.

Increased intracranial pressure due to bleeding can lead to decreased consciousness, cerebral edema, impaired cerebral perfusion, and even brain herniation. In certain circumstances, patients require a craniotomy to reduce intracranial pressure and drain the hematoma. Post-craniotomy patients are generally treated in the Intensive Care Unit (ICU) because they require intensive neurological and hemodynamic monitoring.

Acute pain is one of the main problems often experienced by post-craniotomy patients. Pain can be caused by surgical trauma, tissue damage, and post-operative inflammation. Untreated pain can increase blood pressure, heart rate, and intracranial pressure, thereby worsening the patient's neurological condition.

Palliative care for critically ill patients aims to improve their quality of life by managing pain and other symptoms of distress. A palliative approach is not only provided for terminally ill patients, but also for patients with critical illnesses, such as post-craniotomy ICH, who require optimal comfort management.

Based on observations at Royal Prima Medan Hospital, patients with post-op craniotomy conditions due to spontaneous intracerebral hemorrhage were found to experience acute pain and decreased consciousness. Therefore, the author is interested in analyzing palliative nursing care for patients with post-op craniotomy A/I spontaneous intracerebral hemorrhage (ICH) with pain management interventions in the ICU of Royal Prima Medan Hospital in 2026.

## METHOD

The research method used was a case study with a nursing process approach. The study was conducted in the ICU of Royal Prima Hospital, Medan in April 2026. The subject was a 56-year-old female patient with a medical diagnosis of post-op craniotomy A/I spontaneous intracerebral hemorrhage (ICH).

Data collection was conducted through interviews with the patient's family, observation of the patient's condition, physical examination, and medical record documentation. The nursing process approach included assessment, establishing a nursing diagnosis, formulating interventions, implementing actions, and evaluating nursing care.

The Critical Care Pain Observation Tool (CPOT) was used as a pain assessment instrument because the patient was experiencing decreased consciousness and was on a ventilator. Data analysis was conducted descriptively based on the patient's response to the nursing interventions provided.

## RESULTS AND DISCUSSION

Mrs. Y, 56 years old, was admitted to the ICU of Royal Prima Medan Hospital on April 2, 2026, with a medical diagnosis of post-op craniotomy A/I spontaneous intracerebral hemorrhage (ICH). The patient experienced a sudden loss of consciousness accompanied by a history of hypertension. During the assessment, the patient was in post-operative condition, with a ventilator, ETT, NGT, and urinary catheter installed.

Physical examination revealed a blood pressure of 182/100 mmHg, pulse rate of 84 beats/minute, respiration rate of 22 breaths/minute, temperature of 36.5°C, and GCS score of 7 (E2V1M4). Neurological examination revealed a withdrawal response to pain, isochoric pupils, and a positive light reflex.

A head CT scan revealed intracerebral hemorrhage in the right temporoparietal lobe, accompanied by cerebral edema and left subfalcine herniation. Laboratory tests revealed hemoglobin of 10.5 g/dL, pH 7.209, PCO2 70.4 mmHg, and blood sugar of 419 mg/dL.

A pain assessment using the CPOT showed a pain scale of 7, which is considered severe. The patient appeared restless and struggled with the ventilator during repositioning.

### Nursing Diagnosis

The nursing diagnoses established for the patient are:

1. Acute pain related to physical injuring agents is characterized by post op craniotomy.
2. The risk of ineffective cerebral perfusion is related to increased intracranial pressure.

3. The risk of infection is related to the effects of invasive procedures characterized by the presence of post-craniotomy surgical wounds.
4. Activity intolerance related to immobilization and bed rest.

## Nursing Interventions and Implementation

The main interventions and implementations in patients are focused on pain management, neurological stabilization, prevention of complications, and increasing patient comfort.

**1. Pain Management**

The interventions carried out included identifying the pain scale using CPOT, observing nonverbal pain responses, providing a 30° semi-Fowler position, reducing environmental stimuli, facilitating rest, and collaborating on administering analgesics such as ketorolac and fentanyl.

In addition, a non-pharmacological approach is carried out in the form of therapeutic touch, supportive communication, and creating a calm environment to help reduce the patient's pain response.

**2. Risk of Ineffective Cerebral Perfusion**

Intervention is carried out by monitoring signs of increased intracranial pressure, monitoring vital signs, monitoring fluid intake-output, maintaining the head-up position, and collaborating on providing antihypertensive and diuretic therapy.

**3. Risk of Infection**

Nurses monitor for signs of infection, maintain aseptic techniques, perform hand hygiene, limit the number of visitors, and collaborate on administering antibiotics.

**4. Activity Intolerance**

Interventions are carried out through passive ROM exercises, observing signs of fatigue, maintaining bed rest, and collaborating with nutritionists regarding the patient's nutritional needs.

## Nursing Evaluation

After several days of nursing interventions, the pain scale decreased from a CPOT of 7 to 5. The patient appeared calmer and her response to the ventilator decreased. Her vital signs also showed a more stable condition, although she still required intensive monitoring.

The risk of ineffective cerebral perfusion has not been fully resolved, but no significant signs of increased intracranial pressure were observed during observation. The risk of infection still requires ongoing monitoring because the patient is still using invasive devices.

## Discussion

Acute pain in post-craniotomy patients occurs due to tissue damage and the release of inflammatory mediators after surgery. This condition is consistent with the theory that post-craniotomy patients often experience acute pain due to surgical trauma and nociceptor stimulation.

The implementation of both pharmacological and non-pharmacological pain management interventions has shown positive results in reducing patient pain intensity. The 30° semi-Fowler position helps improve cerebral venous drainage and reduces intracranial pressure, thereby improving patient comfort.

A palliative approach to critical care helps improve patients' quality of life by managing distressing symptoms and providing comfort during ICU care. Intensive neurological and hemodynamic monitoring is essential to prevent further complications in patients with post-craniotomy ICH.

## CONCLUSION

This study shows that the implementation of palliative nursing care in post-op craniotomy patients due to spontaneous intracerebral hemorrhage (ICH) in the ICU can help reduce pain intensity and improve patient comfort. Interventions provided comprehensively through observational, therapeutic, collaborative, and non-pharmacological approaches have been proven to provide a positive response to the patient's condition, marked by a decrease in the CPOT pain score from 7 to 5, a reduced response against the ventilator, and a more stable hemodynamic condition. Pain management through the administration of analgesics, a 30° semi-Fowler position, reducing environmental stimuli, and supportive communication are important parts in maintaining the neurological stability of post-craniotomy patients. The palliative approach in critical care also has practical implications for ICU nursing services because it can improve the quality of life of patients by controlling symptoms of distress and increasing comfort during the intensive care period.

This study has limitations because it only used a case study method on a single patient, so the results cannot be generalized to all post-craniotomy patients with ICH. Furthermore, the relatively short observation period prevented optimal long-term evaluation of the effectiveness of palliative interventions. Therefore, further research is recommended using a larger sample size, a more comprehensive study design, and a longer observation period to obtain a more in-depth picture of the effectiveness of palliative nursing interventions. Future research could also develop a combination of pharmacological and nonpharmacological interventions to improve pain management in critically ill neurological patients.

## BIBLIOGRAPHY

Dewi, A. A., Fikriyanti, & Jufrizal. (2023). Asuhan keperawatan post craniotomy evakuasi intracerebral hemorrhage (ICH) di intensive care unit: Studi kasus. *Jurnal Gawat Darurat*, 5(2), 45–52.

Gould, J., Patel, S., & Gendreau, J. (2026). The utilization of palliative care for patients with intracerebral hemorrhage: A narrative review. *American Journal of Hospice and Palliative Medicine*.

Greenberg, S. M., Ziai, Cordonnier & Selim, M.H. (2022). Guideline for the Management of Patients With Spontaneous Intracerebral Hemorrhage. Stroke, 53(7), e282–e361.

Haq, R. K., Ismail, S., & Erawati, M. (2024). Studi eksplorasi manajemen nyeri pada pasien post operasi dengan ventilasi mekanik. *Jurnal Perawat Indonesia*, 8(1), 55–63.

Humaira, P., & Halimuddin. (2025). Asuhan keperawatan pasien acute respiratory failure on ventilasi mekanik et causa post craniotomy evakuasi intracerebral hemorrhage di ruang ICU. *Indonesian Journal of Multidisciplinary Science*, 3(1), 12–20.

Kementerian Kesehatan Republik Indonesia. (2020). Profil Kesehatan Indonesia Tahun 2020. Jakarta: Kemenkes RI.

Putri, N. K. R. A., Heri, M., & Astuti, L. S. (2026). Analisis asuhan keperawatan pada pasien post craniotomy dengan masalah keperawatan nyeri akut terhadap pemberian guided imagery di ruang ICU. *Jurnal Keperawatan Terkini*, 4(1), 22–30.

Riskesdas. (2018). Hasil Utama Riset Kesehatan Dasar Tahun 2018. Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kementerian RI.

World Health Organization. (2021). Global Health Estimates: Stroke and Cerebrovascular Disease Mortality. Geneva: WHO.