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Management of Postoperative Delirium in Elderly: A Narrative Literature Review

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A B S T R A C T

Postoperative delirium can occur in people undergoing surgery at any age but is more common in older people. The causes of postoperative delirium are not fully understood but are thought to be related to the side effects of anesthetic drugs, stress from surgery, and hormonal and biochemical changes in the body due to surgery. This literature review aimed to describe the management of postoperative delirium in the inpatient age. One of the factors that influence the occurrence of postoperative delirium is systemic inflammation that occurs due to physiological stress and local inflammation that occurs during surgery. Systemic inflammation can trigger an exaggerated immune response in the body, producing proinflammatory cytokines that can affect brain and nerve function. Postoperative management of patients with delirium must be based on the underlying cause and the symptoms experienced by the patient. Once delirium symptoms are under control, patients should be recovered with appropriate rehabilitation and treatment, including physical therapy and occupational therapy, to help improve their physical and cognitive function. In conclusion, the management of postoperative delirium aims to reduce delirium symptoms and restore the patient's cognitive function as quickly as possible so that the patient can recover optimally and avoid more serious complications.

1. Introduction

Postoperative delirium is a medical condition that occurs after a person has had surgery. This condition is characterized by conscious and cognitive disturbances, such as confusion, disorientation, and hallucinations.[1,2] Postoperative delirium can occur in people undergoing surgery at any age but is more common in older people. The causes of postoperative delirium are not fully understood but are thought to be related to the side effects of anesthetic drugs, stress from surgery, and hormonal and biochemical changes in the body due to surgery.[3-5] Several risk factors that can increase the likelihood of postoperative delirium include advanced age, history of cognitive disease, and other chronic diseases. Postoperative delirium can lead to serious complications, such as increasing the risk of falls, prolonging hospitalization, and worsening the patient's prognosis.[6] This literature review aimed to describe the management of postoperative delirium inpatient the elderly.

Pathophysiology of postoperative delirium

The pathophysiology of postoperative delirium is still not fully understood but is thought to involve several factors that contribute to the development of the condition. One of the factors that influence the occurrence of postoperative delirium is systemic inflammation that occurs due to physiological stress and local inflammation that occurs during surgery.[7,8] Systemic inflammation can trigger an exaggerated

immune response in the body, producing proinflammatory cytokines that can affect brain and nerve function. These cytokines can impair the permeability of the blood-brain barrier and trigger neuronal damage and reduced blood flow to the brain, all of which can lead to delirium. In addition, oxidative damage is also thought to play a role in the occurrence of postoperative delirium.[9,10] During surgery, there is a higher-than-normal production of free radicals, which can cause oxidative damage to cell membranes and body tissues. This can trigger inflammation and disrupt brain function, leading to delirium.

Another risk factor that can influence the occurrence of postoperative delirium is an imbalance of neurotransmitters in the brain, including decreased levels of acetylcholine, dopamine, and serotonin.[11] This imbalance can influence nerve function, interfere with signal transmission, and affect perception, emotion, and cognition, thus causing delirium. In many cases, postoperative delirium is caused by a combination of the above factors, all of which can affect brain function and lead to behavioral and cognitive changes in patients after surgery.

Postoperative delirium with patient morbidity and mortality

Postoperative delirium can have a significant impact on patient morbidity and mortality. Patients who develop postoperative delirium are at higher risk for complications and prolonged hospitalization, which can increase treatment costs and worsen their prognosis.[12] Some of the complications associated with postoperative delirium include increased risk of falls, infection, physical weakness, and increased duration of hospitalization. In addition, patients who experience postoperative delirium are likely to experience a long-term decline in cognitive function, which can affect their overall quality of life.[13,14]

In addition, postoperative delirium can also increase the risk of mortality in patients. Several studies have shown that patients who experience postoperative delirium have a higher mortality rate within a year after surgery. One proposed explanation is that postoperative delirium can exacerbate an underlying medical condition, such as heart disease or stroke, which can increase the risk of death. Therefore, prompt and appropriate management of postoperative delirium is essential to reduce the risk of complications and improve patient outcomes.[15] Prevention of delirium through good management of risk factors and appropriate patient care can help reduce the frequency and impact of postoperative delirium.

Management of postoperative delirium

Postoperative management of patients with delirium must be based on the underlying cause and the symptoms experienced by the patient.[4,9] The aim is to reduce the symptoms of delirium and restore the patient's cognitive function as quickly as possible so that the patient can recover optimally and avoid more serious complications. Postoperative management of delirium patients begins with risk identification and management. The first step in postoperative management is to identify and address the risk factors that may precipitate delirium in the patient. Risk factors such as advanced age, prior cognitive impairment, heart disease, and nutritional deficiencies must be considered and managed accordingly. Some drugs used in postoperative patients can trigger delirium. Therefore, drug management must be carried out carefully and closely supervised by a doctor or pharmacist.

Non-pharmacological therapies such as music therapy, reminiscence therapy, and art therapy can help reduce delirium symptoms and improve the patient's cognitive function.[8,9] If the symptoms of delirium are severe or bother the patient, pharmacologic therapy may be necessary. Medications such as benzodiazepines, antipsychotics, and sedatives can help reduce the symptoms of delirium in patients. Psychosocial support such as family support, counseling, and palliative care can help patients deal with delirium symptoms and improve their quality of life.[15] Once delirium symptoms are under control, patients should be recovered with appropriate

rehabilitation and treatment, including physical therapy and occupational therapy, to help improve their physical and cognitive function.

2. Conclusion

Management of postoperative delirium aims to reduce the symptoms of delirium and restore the patient's cognitive function as soon as possible so that the patient can recover optimally and avoid more serious complications.

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