



DELIRIUM UNRAVELED: A NARRATIVE REVIEW ON ITS MULTIFACETED NATURE AND DIAGNOSTIC CHALLENGES

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ABSTRACT

Delirium is a complex medical condition that poses challenges for healthcare professionals. While no single intervention completely prevents delirium, non-pharmacological approaches targeting modifiable risk factors show promise in reducing its incidence. These interventions include orientation protocols, cognitive stimulation, sleep facilitation, early mobilization, and the use of assistive devices. Delirium management requires a comprehensive approach, involving early recognition, multidisciplinary assessment, non-pharmacological interventions, family involvement, and judicious use of pharmacotherapy when necessary. Regular reassessment and tailoring of treatment, integration of palliative care, and ongoing education for healthcare providers are vital components. The long-term impact of delirium on older adults' health is significant, leading to extended hospital stays, cognitive decline, increased mortality, and institutionalization. Addressing delirium with prevention, early intervention, and evidence-based practices is crucial for improving outcomes in vulnerable populations, especially those with pre-existing conditions like Alzheimer's Disease.

KEYWORDS : Delirium Management, Preventive Strategies, Cognitive Impairment, Pharmacological Interventions, Health Impact.

INTRODUCTION

Delirium, characterized by acute confusion and altered cognitive functioning, poses significant challenges to medical professionals and researchers due to its multifaceted nature and complex diagnostic criteria. This narrative review aims to comprehensively explore the diverse dimensions of delirium, shedding light on its epidemiology, pathophysiology, risk factors, and clinical manifestations. By synthesizing existing literature, this article delves into distinct subtypes of delirium and their associated etiologies, highlighting the varying degrees of symptom severity and outcomes. Moreover, the evolving diagnostic criteria are discussed, emphasizing the importance of early detection and accurate assessment. Distinguishing delirium from other cognitive disorders, such as dementia, and investigating the potential impact of polypharmacy on delirium emergence and progression will be scrutinized. Understanding these facets is vital in improving management and developing preventive strategies for this challenging medical condition (1).

METHODS

This narrative review employed a comprehensive literature search using Medical Subject Headings (MeSH) and Descriptors in Health Sciences (DeCS) keywords to access relevant articles from electronic databases. The primary databases included PubMed/MEDLINE, Scopus, Embase, and Web of Science. The search strategy combined keywords such as "delirium," "acute confusion," "cognitive impairment," and "multifaceted nature" along with MeSH/DeCS terms. Inclusion criteria encompassed peer-reviewed articles published between 2000 and the present, written in English or Spanish. Studies addressing delirium's epidemiology, pathophysiology, risk factors, and diagnostic.

poses significant diagnostic and management difficulties for healthcare professionals. Although no single intervention has shown complete efficacy in preventing delirium, non-pharmacological approaches targeting multiple modifiable risk factors offer promise in reducing its incidence. Various factors contribute to or exacerbate delirium in at-risk patients. Interventions aimed at mitigating these risk factors include (2,3):

Orientation Protocols: Implementing orientation protocols with tools like clocks, calendars, and windows with exterior views, along with verbal reorientation, can effectively reduce confusion arising from disorientation in unfamiliar environments (2).

Cognitive Stimulation: Regular visits from family and friends benefit patients with cognitive impairment, while avoiding sensory overstimulation, particularly during nighttime (2).

Facilitating Physiological Sleep: Minimizing medical procedures, including medication administration, during sleep hours is crucial. Reducing nocturnal noise and using earplugs have demonstrated reductions in confusion among patients in intensive care units (2).

Early Mobilization and Minimizing Physical Restraints: Timely initiation of physical and occupational therapy in critically ill patients with limited mobility, along with discontinuation of sedatives, has been associated with fewer delirium days during hospitalization (2).

Assistive Devices for Visual and Auditory Deficits: Implementing aids tailored to patients with sensory impairments can contribute to better orientation and reduce delirium risk (3).

Monitoring and Avoiding Problematic Medications: Careful prescribing and monitoring of medications, such as benzodiazepines, opioids, dihydropyridines, and antihistamines, in high-risk patients can help minimize delirium risk. Early recognition and management of volume depletion, hypoxemia, and infections can help prevent and reduce delirium incidence (3).

Pain Management: Non-opioid analgesics should be preferred whenever possible to minimize delirium risk. Careful consideration of opioids for pain management is necessary, and non-pharmacological interventions can be employed effectively (3).

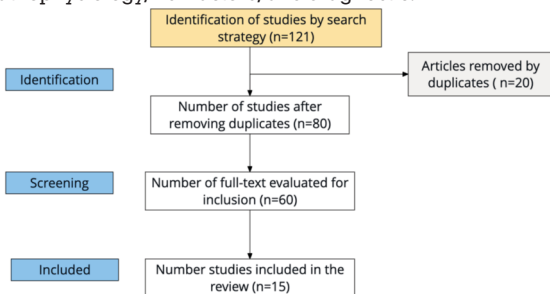


Figure 1. PRISMA.

Multifactorial Approaches for Delirium Prevention

Delirium, a complex and challenging medical condition,

Management of Delirium: A Comprehensive Approach

Delirium is a complex and challenging condition to manage, often requiring a comprehensive and individualized approach.

Early Recognition and Prevention: Recognizing the risk factors and early signs of delirium is essential for timely intervention. Healthcare professionals should be vigilant in assessing vulnerable populations, such as older adults, those with multiple comorbidities, and those undergoing major surgeries. Implementing preventive measures, such as optimizing hydration, promoting mobility, and addressing sensory impairments, can reduce the risk of delirium development (4).

Multidisciplinary Assessment: Delirium management benefits from a collaborative effort involving various healthcare specialists. Besides physicians, geriatricians, nurses, pharmacists, and occupational therapists play crucial roles in evaluating the patient's cognitive status, functional abilities, medication regimens, and underlying medical conditions. Integrating perspectives from multiple disciplines allows for a more comprehensive understanding of the patient's needs (4).

Non-Pharmacological Interventions: Non-pharmacological approaches should form the cornerstone of delirium management. Environmental modifications, such as reducing noise, improving lighting, and maintaining a regular sleep-wake cycle, can contribute to a calmer and more supportive setting for patients with delirium. Engaging patients in cognitive stimulation, reminiscence therapy, and music therapy can help alleviate symptoms and improve cognition (5).

Family Involvement and Education: Engaging the patient's family and caregivers in the treatment process is crucial. Providing education about delirium, its potential causes, and management strategies can empower families to support their loved ones effectively. Family members can also serve as sources of familiarity and comfort, which can help reduce agitation and disorientation (6).

Pharmacological Interventions: When non-pharmacological measures are insufficient or when the patient's agitation poses significant risks, judicious use of pharmacotherapy may be considered. Antipsychotic medications, such as haloperidol or atypical antipsychotics like risperidone or olanzapine, can be cautiously administered at low doses to manage severe agitation or distress. However, it is crucial to weigh the potential benefits against the risks, particularly in patients with pre-existing neurological conditions or those at risk of adverse effects (7).

Haloperidol: Haloperidol is a typical antipsychotic frequently used for the treatment of severe agitation and delirium in critically ill patients. Several studies have demonstrated its efficacy in reducing delirium symptoms and agitation. However, caution is advised due to the risk of extrapyramidal side effects, especially at higher doses (7).

Atypical Antipsychotics (Risperidone, Olanzapine): Atypical antipsychotics have shown promise in managing delirium, with lower risks of extrapyramidal side effects compared to typical antipsychotics. Risperidone and olanzapine are commonly used in delirium treatment, and some studies have demonstrated their effectiveness in reducing agitation and improving symptoms (8).

Quetiapine: Quetiapine is another atypical antipsychotic used to manage delirium, especially in palliative care settings. Limited evidence suggests its potential in reducing agitation and improving delirium symptoms in critically ill patients (8).

Dexmedetomidine: Dexmedetomidine is a sedative agent used in intensive care units (ICUs) and has been studied for its role in managing delirium. It shows promise in reducing the incidence and duration of delirium in mechanically ventilated patients (8).

Benzodiazepines (Lorazepam): Benzodiazepines are generally not recommended as a first-line treatment for delirium due to their potential to worsen confusion and sedation. However, they may be considered in specific cases, such as managing alcohol or sedative withdrawal-related delirium (9).

Regular Reassessment and Tailoring of Treatment: Delirium is a dynamic condition, and patients' needs may change over time. Regular reassessment of symptoms, response to treatment, and potential side effects is essential to adjust therapeutic strategies accordingly. Flexibility in treatment planning ensures that care aligns with the patient's evolving condition (10).

Long-Term Impact of Delirium on the Health of Older Adults
Delirium has a significant impact on the health of older adults. Patients experiencing delirium during hospitalization often face extended hospital stays, functional and cognitive decline, increased mortality, and a higher risk of institutionalization, even after accounting for age, comorbidities, or pre-existing dementia (11).

Mortality Associated with Delirium

The mortality rates associated with delirium are alarmingly high. A meta-analysis of various studies estimated that the mortality at one and six months was approximately 14% and 22%, respectively, among patients with delirium, which was about twice the rate observed in patients without delirium. Despite adjusting for comorbid dementia and other factors, prospective observational studies found that delirium remained an independent marker of mortality at 6 to 12 months after hospitalization (12).

Persistent Cognitive Dysfunction

Delirium's impact on cognitive function is of great concern. Symptoms of delirium may persist for 12 months or more, particularly in patients with pre-existing dementia. Long-term follow-up studies have shown that only one-third of patients who experienced delirium during hospitalization were able to live independently in the community after two years. Another study involving patients undergoing cardiac surgery found that those who experienced delirium were more likely to have a persistent decline in Mini-Mental State Examination (MMSE) scores at six months compared to those without delirium. While the differences were not entirely statistically significant at 12 months, the trend towards sustained cognitive decline persisted (13).

Impact on Patients with Alzheimer's Disease

Episodes of delirium during hospitalization can have particularly severe consequences for patients with Alzheimer's Disease (AD). A study examining hospitalized AD patients found that 56% developed delirium during their hospital stay. Post-hospitalization, those who experienced delirium had twice the rate of cognitive decline in the year following hospitalization compared to those without delirium. This higher rate of cognitive decline was evident up to five years after the hospital stay. Furthermore, AD patients who experienced delirium also had a higher risk of death and institutionalization (14).

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