Delirium

- Sudden Neurologic Worsening
- Effect of perioperative haemodynamic management based on cerebral autoregulation monitored by Cerebral Oximetry Index during carotid endarterectomy: protocol of a randomised trial
- Efficacy of Ramelteon, Suvorexant, and Lemborexant for Delirium Prevention in Hospitalized Patients: A Systematic Review and Meta-Analysis
- Delirium in older adults following traumatic brain injury during the acute stage: Validation of the Chinese version of the confusion assessment method
- Restrictive versus Liberal blood transfusion strategies for patients undergoing orthopedic surgery: a meta-analysis of randomised trials with trial sequential analysis
- Effect of parecoxib on postoperative delirium in patients with hyperlipidemia: a randomized, double-blind, single-center, superiority trial
- Applying an Agile Science Roadmap to Integrate and Evaluate Ethical Frameworks Throughout the Lifecycle and Use of Artificial Intelligence Tools in the Intensive Care Unit
- The 3-Minute Diagnostic Confusion Assessment Method severity score correlates with the Delirium Rating Scale-Revised-98 and with biomarkers of delirium

Delirium, or acute confusional state, itself is not a disease, but rather a clinical syndrome (a set of symptoms).

It is an organically-caused decline from a previously attained baseline level of cognitive function. This disorder is typified by fluctuating course, attentional deficits, and generalized severe disorganization of behavior. It typically involves other cognitive deficits, changes in arousal (hyperactive, hypoactive, or mixed), perceptual deficits, altered sleep-wake cycle, and psychotic features such as hallucinations and delusions.

Epidemiology

Delirium is an acute change in mental status–a neurologic dysfunction in the basic cognitive processes of arousal, awareness, and attention that occurs in up to 25% of medical patients, 50% of neurological patients, 50 % of surgical patients, and 75% of ICU patients [1)]

It is associated with a 10-fold increase in cognitive impairment, triples the rate of in-hospital mortality, and costs $164 billion annually. Delirium acutely affects attention and global cognitive function with fluctuating symptoms caused by underlying organic etiologies.

Etiology

As a syndrome, delirium has multiple potential pathophysiological pathways and can be caused by a multitude of underlying etiologies, including central nervous system (CNS) lesions. Many of the CNS lesions that may cause delirium requires time-sensitive treatments, which highlights the case of delirium as a medical emergency.

Delirium can often be traced to one or more factors. Factors may include a severe or long illness or an imbalance in the body, such as low sodium.

Delirium It may result from an underlying disease, from drugs administered during treatment of that disease in a critical phase, withdrawal from drugs, from a new problem with mentation, or from varying combinations of two or more of these factors.

The disorder also may be caused by certain medicines (Conivaptan, thallium), infection, surgery, or alcohol or drug use or withdrawal.

With Cocaine initial CNS stimulation first manifests as a sense of well-being and euphoria. Sometimes dysphoric agitation results, occasionally with delirium.

Thallium: may produce tremors, leg pains, paresthesias in the hands and feet, polyneuritis in the LE, psychosis, delirium, seizures, encephalopathy.

Hypercalcemia.

Delirium tremens

Delirium tremens.

Postoperative Delirium

see Postoperative Delirium.

Diagnosis

Delirium Diagnosis.

Differential diagnosis

Delirium differential diagnosis

Assessment

Delirium assessment involves the systematic evaluation of an individual's mental status and cognitive function to diagnose and characterize delirium, a temporary and acute disturbance of consciousness

and cognition. Delirium is often characterized by fluctuating symptoms and is typically associated with underlying medical conditions, medication side effects, or substance withdrawal. Accurate assessment is crucial for identifying and addressing delirium promptly. Here are some key components of a delirium assessment:

Clinical History: Gather information on the patient's medical history, including any preexisting cognitive impairments, psychiatric conditions, or substance use. Identifying potential risk factors for delirium, such as advanced age or recent surgery, is important.

Patient Interview: Engage in a direct conversation with the patient to assess their level of consciousness, attention, and cognitive function. Note any disorientation, confusion, or agitation.

Mental Status Examination: Conduct a structured examination to evaluate various cognitive domains, such as orientation (to time, place, and person), attention (e.g., using serial sevens or spelling a word backward), memory, language (e.g., fluency, comprehension), and executive function.

Physical Examination: Conduct a thorough physical examination to identify potential medical causes of delirium, such as infection, organ failure, or medication side effects. This may include vital sign assessment, neurological examination, and auscultation of the heart and lungs.

Assessment of Medications: Review the patient's current medications to identify potential culprits for delirium, such as sedatives, anticholinergic drugs, or opioids. Adjust or discontinue medications as necessary.

Laboratory and Imaging Tests: Depending on clinical suspicion and findings, order appropriate laboratory tests (e.g., complete blood count, metabolic panel, infection markers) and imaging studies (e.g., brain CT or MRI) to rule out underlying medical conditions contributing to delirium.

Delirium Severity Assessment: Use standardized tools like the Confusion Assessment Method (CAM) or the Delirium Rating Scale to assess the severity of delirium and monitor changes over time. These tools often rely on specific criteria such as acute onset, inattention, disorganized thinking, and altered level of consciousness.

Monitoring: Continuously observe and document the patient's behavior and cognitive function, as delirium symptoms can fluctuate throughout the day. Regularly assess the patient's level of consciousness, vital signs, and overall clinical status.

Management and Treatment: Once delirium is identified, address the underlying causes, such as infections, electrolyte imbalances, or medication adjustments. Additionally, consider non-pharmacological interventions to manage delirium, such as maintaining a calm environment, ensuring adequate sleep, and providing sensory aids like glasses or hearing aids.

Follow-up and Reassessment: Continue to monitor the patient's mental status and reevaluate their condition regularly. Delirium should resolve as the underlying cause is treated, and the patient's cognitive function should improve.

Delirium assessment is crucial for providing appropriate care, improving patient outcomes, and ensuring patient safety. Early recognition and management of delirium can reduce complications and promote a faster return to baseline cognitive function. It's important for healthcare professionals to be skilled in delirium assessment, particularly in settings where patients are at higher risk, such as intensive care units or post-operative care.

Appropriate education on delirium for patients and caregivers might help in earlier identification, prevention, and better overall management of delirium [2].

It is necessary for hospitals and funding bodies to develop jointly a model for implementing and funding the prevention of delirium [3].

Outcome

Delirium during critical illness is associated with nearly a 3-fold increased risk of death the following day for patients in the hospital but is not associated withmortality after hospital discharge. This finding appears primarily driven by the hypoactive motoric subtype. The independent relationship between delirium and mortality occurs early during critical illness but does not persist after hospital discharge [4].

Case reports

A 69-year-old patient who developed postoperative delirium in the intensive care unit following aortic valve replacement surgery. The postoperative course was complicated by delirium for which echographic signs of venous congestion on the portal and the renal but also the femoral veins and their resolution correlated with the course of a delirium. The use of common femoral vein Doppler as a simple bedside technique to predict and identify congestive delirium has not been reported before [5].

1)
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