Delirium

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Delirium
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What is your topic?
Delirium
A syndrome characterized by the acute onset of a combination of disturbance of consciousness and change in cognition over a short period of time (American Psychiatric Association, 2013; Arumugam et al., 2017; Wilson et al., 2020).

Why Delirium?
Delirium is a severe neuropsychiatric syndrome presenting with altered attention and arousal, and symptoms of psychosis (American Psychiatric Association, 2015; Wilson et al., 2020).

Symptoms associated with delirium vary from patient to patient, but often lead to disturbances in cognitive function (Brennan et al., 2017).

In the intensive care unit setting, delirium may be caused by various factors and may persist for weeks to months (Wilson et al., 2020).

Delirium is found to be more prevalent in the hospitalized adult population (Gibb et al., 2020; Wilson et al., 2020; Marchetti, 2015; Smith et al., 2017; Watt et al., 2018).

Average prevalence of 23%.

Prevalence of 20% in patients undergoing major surgery.

High prevalence of 50–70% in mechanically ventilated patients in the adult critical care population.

Signs & Symptoms
• Sudden acute change in attention and cognition without evidence of pre-existing neurological or cognitive conditions or disorders (Wilson et al., 2020).
• Disordered responsiveness and arousal (Wilson et al., 2020).
• Severe agitation or hyper-agitation (Wilson et al., 2020).
• Hallucinations or delusions (Wilson et al., 2020).
• Altered mood and psychosis (Wilson et al., 2020).
• Decreased mental functioning (Wilson et al., 2020).
• Acute confusion (Slooter et al., 2020).

Underlying Pathophysiology
There are multiple causes of delirium. The most common causes are (Girard et al., 2010):
• Hypoxia
• Inflammation
• Hypoglycemia
• Sedation use
• Anticholinergic use

Delirium may be triggered by multiple stressors. The most common stressors are (Wilson et al., 2020):
• Seizure
• Stroke
• Severe shock states

The development of delirium is credited towards evidence of the brain’s inability to adapt to acute stressors which results in (Wilson et al., 2020):
• Inflammatory changes in the brain
• Changes in the development of glial cells
• Changes in the vasculature of the brain

Risk Factors
• The risk of developing delirium may also be contributed to predisposing factors (Velayati et al., 2010; Persico et al., 2016; Wilson et al., 2020):
  • Advanced age.
  • Impairments in cognition (e.g., dementia, cognitive delay,developmental delay)
  • Degree of cognitive impairment
  • Intracranial hemorrhage
  • Acute injury, nutritional deficits (e.g., frailty)
  • Major organ disease
  • Mental health impairments
  • Alcohol use
  • Multiple comorbidities
  • Vision and hearing impairments
  • Depression or other mental health disorders
  • History of delirium

Significance
If left untreated, delirium may lead to long-term cognitive consequences.

After the occurrence of delirium, cognitive deficits are comparable to the deficits found after traumatic brain injury, Alzheimer’s disease, and dementia in the elderly (Marcantonio, 2013; Persico et al., 2016).

In critical care patients who experience delirium, increased neural injury and atrophy of the hippocampus occurs in the brains (Wilson et al., 2020).

The brain requires significant oxygen requirements and proper oxygenation of the brain may decrease incidence of risk factors leading to the development of delirium (Wilson et al., 2020).

Complications
• The duration of delirium is often associated with a decreased quality of life as a result of impairments to cognition (Wilson et al., 2020).
• Short-term effects resulting from changes in cognition include (Wilson et al., 2020):
  • Falls
  • Aspiration pneumonia
  • Distress
• Long-term effects resulting from changes in cognition include (Wilson et al., 2020):
  • Functional disability
  • Worsening mental health
  • Significant neuropsychiatric function

Treatment
• Treatment of delirium is approached through a multidimensional method. Treatment of delirium is completed through addressing the symptoms associated with delirium (Wilson et al., 2020).
• Treatment can be divided into non-pharmacological and pharmacological approaches (Slooter et al., 2020). A non-pharmacological approach is the use of the ABCDEF bundle (Wilson et al., 2020).
• A non-pharmacological approach is one of the most effective means of treatment (Wilson et al., 2020).

Nursing Considerations
• Management of delirium is addressed by considering multiple triggers leading to the development of the syndrome (Scottish Intercollegiate Guidelines Network, 2019).
• Early identification and proper assessment of delirium is crucial.
• Treatment of symptoms associated with delirium.
• Prevention of delirium by early identification and frequent patient assessments.
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