

DELIRIUM IN THE ELDERLY: EARLY IDENTIFICATION, TREATMENT AND INTERDISCIPLINARY APPROACH

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Abstract: Delirium, according to DSM-5, is a syndrome characterized by a disturbance in attention and consciousness, which develops rapidly and is associated with underlying medical conditions, intoxication or withdrawal. Risk factors include preexisting neuropathologies, polypharmacy, infections, dehydration, immobility, hospitalizations, malnutrition, use of indwelling catheters, and advanced age. The integrative review, covering articles from 2014 to 2024 in Portuguese and English, was carried out in June 2024 through platforms such as PubMed, UpToDate and Google Scholar. Delirium in the elderly leads to prolonged hospitalizations, functional and cognitive decline, and increased mortality. Early identification and treatment are crucial to prevent complications. An interdisciplinary approach includes the management of psychomotor changes, pain control, adequate nutrition, improvement of mobility, prevention of skin lesions and pharmacological treatment when necessary. Non-pharmacological strategies such as normalizing the circadian rhythm and cognitive stimulation are essential for recovery.

Keywords: Delirium, elderly

INTRODUCTION

Delirium is defined, according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) of the American Psychiatric Association, as a disturbance of attention and consciousness, which develops over a short period of time (from hours to days), which tends to fluctuate throughout the day, and is underlying a medical condition, intoxication or substance withdrawal. Thus, delirium is understood as a serious disturbance of mental function, in which the patient often finds himself with reduced ability to concentrate, altered memory, mental confusion and altered perception of the environment. This disorder is very common

in the elderly, especially those hospitalized in healthcare institutions or suffering from an infection, which can be demonstrated in studies that observed high rates of delirium in intensive care units (ICUs, 70%), emergency departments (10%), palliative care units (42%), and post-acute care setting (16%). Given this scenario, it is necessary to point out that delirium is multifactorial and the risk components are classified into those that make the patient vulnerable to developing the disorder and those that actually precipitate the disease. The most common factors identified as predisposing are underlying brain diseases, such as dementia, previous stroke and Parkinson's disease. The precipitating factors, in turn, are numerous and variable, the most common being polypharmacy (mainly in the presence of psychoactive drugs), infection, dehydration, immobilization, malnutrition, use of urinary catheters. (FRANCIS, 2023).

METHODOLOGY

The methodology used was a bibliographic review, research was carried out in June and articles were selected in Portuguese and English using the descriptors "delirium", "elderly" and "elderly" in databases from the Virtual Library, UpToDate and Scielo. 09 articles related to the topic were analyzed, and initially the research was restricted from 2018 to 2024, but was expanded to 2014 to 2024 due to low availability of material on the subject.

GOAL

This work aimed to analyze the concept, epidemiology, predisposing and precipitating factors, diagnosis and treatment of elderly patients with delirium.

DISCUSSION

The pathology of delirium is not fully understood. However, this condition is the result of a variety of pathogenic mechanisms combined with susceptibility to precipitating factors. It can be characterized as a disorder of cognition and consciousness that can be subdivided into hyperactive, hypoactive and mixed. Its prevalence is higher in the elderly, especially those who are hospitalized and/or those seriously compromised by surgical intervention. Modern evidence suggests that several traumatic, chemical, metabolic and inflammatory factors can contribute to the development of delirium, establishing a multifactorial character (FONG, T., 2011). These factors lead to several synaptic changes, interrupting neurotransmission and causing this disorder, which is manifested by fluctuations in consciousness and global behavioral changes. Therefore, anticholinergic drugs, cerebral hypoperfusion and oxidative stress are examples of factors that are closely related to the origin of delirium, leading to sequelae in the processes of cognition and attention.

Therefore, there is concrete evidence that leads to the conclusion that these various factors sensitize the individual and make them conducive to the development of this condition.

Similarly, in inflammatory and traumatic processes, several pro-inflammatory cytokines are released, in which these substances are capable of modifying the metabolism of synthesis and degradation of various neurotransmitters such as acetylcholine, dopamine, serotonin and norepinephrine and, thus, there is interruption of the neural communication mechanism and may result in the manifestation of this condition (KUKREJA, 2015).

The clinical manifestations of delirium vary from individual to individual, but represent a

major brain dysfunction. Therefore, a good examination of the patient's mental state is essential to make the diagnosis and identify the underlying cause, so that there is adequate treatment and avoid complications related to delirium (SADOCK & KAPLAN, 2017).

The mental state examination refers to the evaluation of a survey of the patient's functions and capabilities, understanding their signs and symptoms. In this sense, in the case of delirium, several characteristics that can be assessed in this exam are compromised, such as: cognition, consciousness, attention, orientation (both autopsychic and allopsychic), memory and thought formation (SADOCK & KAPLAN, 2017).

The main characteristics of delirium include: reduced level of consciousness; change in attention, which may include difficulty concentrating, maintaining attention, or switching between tasks; impairment in other areas of cognitive function, such as orientation (especially in relation to time and space) and memory loss. Furthermore, patients with delirium may demonstrate disorganization in thinking (such as tangential speech), distortions in the area of sensorial perception (such as illusions and hallucinations), as well as excessive or reduced psychomotor activity, disturbances in the sleep-wake cycle, and sudden changes in their emotional state. (SADOCK & KAPLAN, 2017).

Delirium normally has an acute onset, however in elderly patients the onset of symptoms may be more indefinite, with clinical presentations that precede the symptoms of delirium itself, such as: irritability, insomnia, nightmares and decreased concentration (FABBRI, 2013, p.256 -263).

In general, the changes found in the mental status examination of patients with delirium can vary greatly, with the most common presentation in older patients being a relatively silent and withdrawn state that

is often confused with depression or a more hypoactive state. However, elderly patients may also present more hyperactive symptoms, such as psychomotor agitation and restlessness (FRANCIS, 2023).

Initially, the diagnosis can be made through clinical analysis of the patient, based on the Statistical Diagnostic Manual (DSM) and the criteria of the International Classification of Diseases (ICD). (KUKREJA, 2015).

To evaluate patients in a state of delirium, doctors and nurses can use the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU), Nursing Delirium Screening Scale, DRS-R-98, Screening Checklist of Delirium in the Intensive Care Unit (ICDSC) and the Single Question on Delirium, in addition to later being able to employ a psychiatrist for confirmation. Furthermore, to identify the severity of the condition, the best options available are the Revised Delirium Assessment Scale and the Memorial Delirium Assessment Scale. (KUKREJA, 2015).

Within the scope of the patient's clinical analysis, it is necessary to observe the acute change in cognitive function, evaluate changes in mental state and collect the history of intercurrent illnesses (previous pathological history), which includes medication changes, use of substances and specifically abstinence from alcohol use. Furthermore, it is essential to eliminate other conditions such as Alzheimer's, depression and other psychotic disorders that are associated with hallucinations (auditory and/or visual), such as schizophrenia. As part of the motor findings, flapping and tremor are present. During the neurological examination, specific neurological signs must be sought that raise the suspicion of an acute cerebrovascular event or subdural hematoma. (FONG, 2011).

In summary, for a general diagnosis there must be some disturbance of consciousness, such as the ability to focus or change attention; change in cognition in relation

to the patient's normality, such as memory deficit, disorientation (allopsychic and/or self-psychic) and that is not correlated with

the existence of some stage of dementia; restlessness that lasts for hours or days with alternation within the same day (FONG,2011).

Differential diagnosis test	
CAM	It requires the presence of an acute onset and fluctuating course, lack of attention and disorganized thinking or loss of consciousness, based on DSM-III-R criteria.
CAM-ICU	It involves acute change in mental state, fluctuating changes in mental state, lack of attention (quantified by audiovisual test), disorganized thinking or change in level of consciousness, requiring the patient with eye opening to be spontaneous or called.
Drs-R98	Severity of the condition through a 16-item scale, including 13 severity items and 3 diagnostic items.
Confusion Scale: NEECHAM	It can range from 0 (minimum function) to 30 (normal function) <i>Delirium</i> ≤ 24 points
	Subscale I - from 0 to 14 points, used to assess cognitive status and performance skill.
	Subscale II – from 0 to 10 points, assesses observed behavior and performance ability
	Subscale III – from 0 to 16 points, assesses vital functions.
Cognitive test for Delirium	It can be used with patients unable to speak or write, it assesses orientation, attention, memory, comprehension and vigilance, mainly with visual and auditory modalities. Each individual domain is scored from 0 to 6, in 2-point increments, except for comprehension, which is scored in 1-point increments.

In relation to the differential diagnosis with other diseases and conditions, it is possible to highlight conditions such as Alzheimer's, depression, psychotic disorders, acute cerebrovascular events and subdural hematoma. (FONG, 2011). Dementia, on the other hand, stands out together on several occasions. It is correlated in a more complex way, in which delirium can be used as a marker for the development of dementia, as delirium eventually occurs in patients with dementia. Furthermore, when present, a history of acute cognitive decline and changes throughout the day, these are characteristics suggestive of delirium.

It is worth noting that it is important to eliminate vascular dementia caused by a stroke, which is gradual and insidious. (MEIRA, UNIFESP/UPM), (SADOCK & KAPLAN, 2017).

Regarding the differentiation between Schizophrenia and depression, in general, hallucinations and delusions of schizophrenic patients are better organized and without altering their level of consciousness.

Those with hypoactive symptoms must be differentiated from depression. In this sense, it may be useful to use an electroencephalogram (EEG) for such differentiation in both cases. (SADOCK & KAPLAN, 2017).

TREATMENT

Delirium is an acute and possibly reversible syndrome that mainly affects the geriatric population, and to understand the appropriate treatment, it is essential that the risk factors are first understood, including the pre-existence of neuropathologies (dementia, previous stroke, Parkinson's and Alzheimer's disease), polypharmacy, infection, dehydration, immobility, hospitalization in hospital units, malnutrition, use of indwelling urinary catheters and advanced age.

Before starting treatment, it is necessary to understand which psychoactive medications cause delirium, and among them are those that affect brain nerve cells such as opioids, including morphine and meperidine; sedatives such as benzodiazepines and sleeping pills; antipsychotics and antidepressants. In

addition to medications with anticholinergic effects such as antihistamines and those that reduce blood pressure (antihypertensives, including beta blockers), corticosteroids, digoxin and certain medications used to treat heart disease and muscle relaxants (HUANG, 2023).

PHARMACOLOGICAL TREATMENT

To treat risk factors, pharmacological pain management is necessary, preferably with non-opioid analgesics that can treat mild to moderate pain and sometimes severe pain such as paracetamol and aspirin, as well as ibuprofen, ketoprofen and naproxen (WATSON, 2022); avoid polypharmacy, a very common condition in the elderly due to mental confusion caused by aging and iatrogenic illnesses; prolonged and unnecessary use of probes and catheters; encourage the elderly not to be confined to bed; supplement thiamine, as the elderly are more sensitive to vitamin B1 deficiency, which is essential for the nervous system, with its lack responsible for worsening delirium due to nervous and brain changes (JOHNSON et al., 2022); reassure and guide patients; and treat the effects underlying delirium, such as metabolic encephalopathy, toxicity due to medications, alcohol and sedative withdrawal (MEIRA, UNIFESP/UPM).

For pharmacological treatment, antipsychotic and benzodiazepine medications are generally used, although they are still neither ideal nor specific for treating delirium. This is because antipsychotics, which are prescribed more frequently, can prolong or worsen agitation, in addition to some having anticholinergic effects that can cause confusion, blurred vision, constipation, dry mouth, dizziness, tinnitus, difficulty starting and continuing to urinate, and loss of bladder control; The most recent antipsychotics - risperidone, olanzapine and quetiapine - have fewer side effects compared

to older ones, such as Haloperidol (PAGE & CASARIN, 2014).

The other pharmacological measure is through benzodiazepines, such as Lorazepam, whose main use is related to cases of delirium due to the withdrawal of a sedative or alcohol. This happens because it can generate, especially in older patients, confusion, drowsiness and worsening of delirium (MEIRA, UNIFESP/UPM).

NON-PHARMACOLOGICAL TREATMENT

There is a great restriction on the drug treatment of delirium, therefore, in this context, non-pharmacological measures proved to be useful and desirable. Thus, changing routine and also changing the environment, in the case of hospital admissions, can generate mental confusion in the elderly, in addition to the fact that procedures to check vital signs alter the circadian cycle and contribute to the development or worsening of the psychiatric condition.

Therefore, some measures are important, such as keeping the hospital room well-lit during the day and at night keeping the place in dim light with minimal noise and, if possible, handling the patient between midnight and six in the morning, to that there be awareness of time and correct establishment of the normal circadian cycle; take photographs and familiar objects, as well as hold conversations about recent events; leave your watch visible and walk in your wheelchair through the corridors or in specific places for this purpose. In the absence of family members, the presence of an interdisciplinary team is once again essential - doctor, physiotherapists and occupational therapists, nurses, psychologists and social workers and the importance of psychotherapy for improving the patient's mental condition. (HUANG, 2023).

In general, diagnosis and immediate

treatment prevent permanent brain damage and can result in a complete recovery, as delirium is a possibly reversible syndrome and, therefore, it is so important to be aware of the clinical manifestations.

CONCLUSION

Delirium is characterized by disturbance of mental function; therefore, the patient may present behavioral changes, changes in levels of consciousness, concentration and perception of the environment.

After that, the condition can last from hours to days, being completely resolved or generating sequelae that can persist for weeks or even years. In this sense, the improvement time is directly proportional to the duration of the condition. The same phenomenon is observed in relation to age, the older the patient and the longer they remain in delirium, the longer the condition tends to take to dissipate. Among the main sequelae are

cognitive dysfunctions, such as brain atrophy, dysfunction of the blood-brain barrier, thus making the patient more vulnerable to neurotoxins, in addition to being able to lead to impairment in cholinergic neurotransmission pathways.

Furthermore, it is a condition that is usually associated with agitation, disorientation, lethargy, drowsiness and loss of mobility. Furthermore, it leads to an increase in the number and duration of hospitalizations, increasing the risk of acquiring hospital-acquired infections and increasing mortality, especially when associated with other comorbidities. Therefore, measures are necessary for patient management, using symptomatic drugs, such as antipsychotics, and specific non-drug actions. Therefore, awareness, early diagnosis and effective treatment are essential to ensure the best possible care for patients affected by this condition.

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