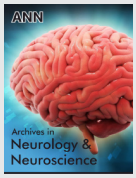

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Review Article

Significance of General Practitioners and Nurses Diagnostic Skills in Managing Delirium in Elderly Patients

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Abstract

Delirium consists of a specific impairment of consciousness which occurs in elderly patients due to the physiological deterioration of adaptive abilities and adverse effects of various stimuli. The incidence of delirium varies between reviewed populations and may be underestimated due to diagnostic difficulties, the specificity of geriatric conditions and insufficient knowledge among healthcare providers. Delirium is often confused with the behavioral and psychological symptoms of dementia (BPSD), depression and disorders secondary to "geriatric giants" or somatic illnesses. The diagnostic criteria of delirium are listed by the authors of ICD-10 and DSM classifications. For general practitioners and nurses, proper diagnosis of delirium in elderly patients is a challenging process. Diagnosing delirium by non-qualified healthcare providers is facilitated by numerous psychometric and specialist tools and scales. The most common are: CAM – the Confusion Assessment Method, MDAS – the Memorial Delirium Assessment Scale; DOSS – the Delirium Observation Screening Scale and the recently verified tool 4AT–the rapid assessment test for delirium. Proper diagnosis of delirium warrants optimization of care and stress reduction by formal and informal caregivers.

Keywords: Delirium; Dementia; Management of delirium; Assessment tools for delirium

Introduction

Delirium consists of specific impairment of consciousness, which occurs in elderly patients due to the deterioration of adaptive abilities and adverse effects of various stimuli. Delirium worsens the outcome of care of patients, who are hospitalized, stay in different medical institutions or at home [1-6]. Healthcare providers should be familiar with the predisposing factors, diagnostic criteria and methods of managing delirium to be able to provide better prevention and treatment of the elderly. This will also lead to a reduction in burdens on health and social care providers [7,8]. Efficient and proper diagnosis of delirium in elderly patients is a challenge for general practitioners and nurses. The incidence of delirium may be underestimated due to diagnostic difficulties, the specificity of geriatric conditions and insufficient knowledge among healthcare providers [6].

Discussion

Attempts to estimate the incidence of delirium lead to varying results, depending on what population is being analyzed. The incidence of delirium vary also depends on the diagnostic criteria which have been used [5,6]. In the general geriatric population, the incidence of delirium does not exceed 2%. According to the recent meta-analysis, the incidence of delirium in patients on geriatric and intern wards is 10-31% [6]. It is estimated that the incidence of delirium among patients in intensive care units, on cardiac surgery and orthopedics wards is respectively 82%, 46% and 51%. About 8-17% patients in emergency departments and 22% elderly patients of nursing homes were diagnosed with delirium [6].

Delirium is often confused with the behavioral and psychological symptoms of dementia (BPSD), depression and disorders secondary to "geriatric giants" or somatic illnesses. The fundamental characteristics of delirium are: a sudden beginning and impairment of cognitive functions such as fresh memory disturbances, confusion, or disorientation. Varying symptom intensity in time is typical.

The diagnostic criteria of delirium are listed by the authors of the ICD-10 and DSM classifications. Differences in the sensitivity and

specificity between the ICD-10 and DMS-IV criteria was observed in trials to estimate the effectiveness and clinical applicability of those criteria. Applying dementia diagnostic criteria requires specialist knowledge and experience, therefore it should be used by psychiatrists and qualified doctors of other specializations [8-10].

Diagnosing delirium with those criteria is challenging for healthcare providers, commonly working with elderly patients as it is time-consuming and requires special interaction between the patient and healthcare provider. Therefore, it is often impossible in emergency states or during a hospital stay. The medical history and documentation provided by caregivers confirms the presence of "geriatric giants": depression, dementia, hearing or sight impairment, significant deterioration of physical performance, malnutrition, injuries, and urinary incontinence. Each of these conditions may lead to delirium.

Delirium may occur at every age, nevertheless, the incidence is greater in patients over 60 years old. The risk factors include male sex, concomitant diseases and polypharmacy (receiving many drugs at one time), depression, a history of delirium, stroke or other neurological condition and a history of alcohol abuse.

Delirium may be caused by surgery, acute coronary syndrome, head injuries, proximal femur fracture or immobilization [11]. Delirium predisposing factors include: medications with anticholinergic agents, opioids, benzodiazepines, non-benzodiazepine hypnotics, dihydropyridines (e.g. nifedipine), antihistamine agents and presumably also with H2 agonists, tricyclic antidepressants, medications used in Parkinson disease treatment, steroids, diuretics and NSAIDs.

Other factors which may cause delirium are urinary tract infections, pneumonia, diverticulitis, respiratory distress (hypoxia, hypercapnia), urinary retention and catheterization, renal diseases, constipation and stool retention, undiagnosed or untreated pain, metabolic disorders such as hypoglycemia, dehydration or hyponatremia [11].

Predisposing factors also include stressful situations such as changing the environment, moving to the child's house or a nursing home, hospitalization, communication problems caused by language barriers or speech difficulties due to neurological impairment.

The diagnosis of delirium by non-qualified healthcare providers is facilitated by numerous psychometric and specialist tools and scales [12-15]. The most common are: CAM – Confusion Assessment Method commonly used in ICU and surgical wards [16]; MDAS – Memorial Delirium Assessment Scale [17]; DOSS – Delirium Observation Screening Scale [18-20] and the recently verified tool 4AT – the rapid assessment test for delirium [21,22]. It easy to check that the forms of all enumerated scales can be found in appropriate Internet websites.

Trials have shown the usefulness of the 4AT test in emergency departments and during first contact with an elderly patient, as performing this test requires no special training and takes only 2 minutes. In just 4 steps healthcare providers evaluate: 1) alertness; 2) numbers of mistakes during the Abbreviated Mental Test; 3) attention with the Months Backwards Test and 4) a significant change or fluctuation in alertness, cognition or other mental function over the last 2 weeks and still evident in the last 24 hours. A result ≥ 4 points is diagnostic of possible delirium with or without cognitive impairment. Proper diagnosis of delirium warrants optimization of care and stress reduction by formal and informal caregivers.

Conclusion

The awareness of delirium as a distinct disease, independent from dementia, among the population is low [10]. Therefore, the diagnosis of delirium is infrequent. Family caregivers equate delirium with dementia or psychical disorders. Up to 70% of patients who underwent delirium, remembers the episode and feels fear and embarrassment for that reason [10]. Taking into account the facts mentioned above in this article and the experience of qualified healthcare providers – doctors and nurses, along with family caregivers, it is possible to significantly improve the effectiveness of care of elderly patients in hospitals and nursing homes affected by delirium. They will therefore be able to quickly react to patients' behavioral changes.

Our article lists the minimum amount of knowledge necessary for every healthcare provider. Our purpose is to emphasize the education of healthcare providers in diagnostic methods, including the recently verified 4AT test and the principles of preventing delirium along with management of this condition.

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Conflict of Interest

No conflict of interest.

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