CASE REPORT

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A Challenging Hypoactive Delirium Case with Multiple Etiological Considerations

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Abstract

Delirium is a common clinical syndrome characterized by disturbed consciousness, cognitive function or perception. It is associated with poor outcomes, unless prevented and treated urgently. Hypoactive delirium is more common and is associated with poor prognosis because it is less frequently recognized. Typically, the causes of delirium are multifactorial. The aim of this case report was to draw attention to the fact that both hypoactive delirium itself and, more importantly, the underlying multiple causes may be overlooked in older adults.

Keywords: Delirium, hypoactive delirium, older adults

Introduction

Delirium is a common geriatric syndrome affecting many older patients not only admitted into acute medical wards but also in the community. Delirium is defined as a non-specific organic brain syndrome in which disturbances of consciousness is associated with attention, perception, memory, psychomotor-activation, mood, and disturbances in sleep-wake cycle. Although delirium is the most common mental state disorder, it is overlooked by clinicians. It remains unrecognized in about 60% of older adults (1). Although many clinicians suggest that patients with delirium are agitated, hyperactive delirium represents only 25% of the cases (2). The hypoactive delirium is more common than hyperactive delirium and is also associated with poor prognosis as it is potentially less frequently recognized or dismissed (3). Herein, we present a geriatric patient with multiple factors causing hypoactive delirium.

Case presentation

Eighty-eight year old female patient was admitted to the İstanbul University Hospital, Clinic of Geriatrics with the symptoms of somnolence, and deterioration of general condition. The patient had a history of diabetes mellitus, hypertension, depression and atrial fibrillation. She had an ischemic cerebrovascular accident in 2012, and in 2015. She was admitted to cardiology department with the symptom of syncope in 2015, and a pacemaker was implanted after the detection of 14 seconds lasting pause on the monitorization device. She has no dementia or mild cognitive impairment before admission to the hospital. While she was active and independent in activities of daily living and living with her caregiver and, for the last 1 month there was a decrease in her interest towards her surroundings and sleepiness. Her complaints were loss of appetite, and cough after fluid intake and thus there was a decrease in fluid intake. The comprehensive geriatric evaluation revealed that she had urinary and fecal incontinence for a week, and had a malnutrition risk, and she had no falls. Her prescribed daily medicines were amiodarone 200 mg 1x1, repaglinide 1 mg 2x 1/2, losartan 50 mg 1x1, rivaroxaban 15 mg 1x1, escitalopram 10 mg 1x1, and pantoprazole 1x1.

On physical examination, disorientation in time, place and person were detected. Eyes were spontaneously closed and open with audible stimulus, as in previous examinations muscle strength was 2/5 in the right lower extremity and 3/5 in the right upper extremity. Crepitant rales were detected in the left

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lung. We reviewed the possible factors that may have caused delirium in our case. The examinations were planned based on differential diagnoses.

Laboratory tests at hospital admission were Hb=9.5 g/dL, Hct=30%, MCV=79 fl, Leukocyte=8700 mm^3, Neutrophil=6500/mm^3, Lymphocyte=1600/mm^3, Platelet=314000/mm^3, Glu=139 mg/dL, HbA1c=5.8%, Urea=68 mg/dL, Cre=1.4 mg/dL (Baseline serum creatinin=1.0 mg/dL), GFR (CKD-EPI)=33.46 mL/min, Na=134 mmol/L, K=5 mmol/L, Ca=8.9 mg/dL, Alb=3.45 mg/dL, P=3.2 mg/dL, CRP=69 mg/L (0-5), Sedim=60 mm/hr, Fe=17, TIBC=228, Ferritin=120 ng/mL, TSH=3.17 mIU/L. Electrocardiogram showed no significant abnormalitiy, Pulmonary infiltrates were observed in the left lower lobe on Chest radiography.

Hypoactive delirium was diagnosed using the Confusion assessment method. Predisposing factors for delirium were considered as older age, polypharmacy, frailty determined by FRAIL scale, and aspiration pneumonia, dehydration and acute renal failure were considered as the precipitating factors. Antibiotherapy was administered for aspiration pneumonia. Fluid replacement therapy was started for dehydration-associated acute kidney injury. Oral antidiabetic medication was discontinued because the oral intake was poor, and the blood glucose levels were lower at follow-up. Parenteral feeding started. A decrease was detected in acute phase reactants, and the creatine levels reached to baseline value in the second day of the treatment. However, no regression was detected in the hypoactive delirium status. To exclude cranial pathologies cranial computed tomography was performed. A hypodense effusion view consistent with chronic subdural hemorrhage on the left fronto-parieto-occipital area with a diameter of 3.5 cm on the widest area was detected (Figure 1). Approximately 13 mm shifts to the right were detected in the midline structures. 31x49 mm hypodense area was detected in the right temporoparietal area (right MCA irrigation area). Emergent surgery was recommended. Subdural hematoma drainage was performed through a burr hole. The general condition improved after surgery. The orientation in time, place and person returned to normal. She had a better appetite, and oral intake improved.

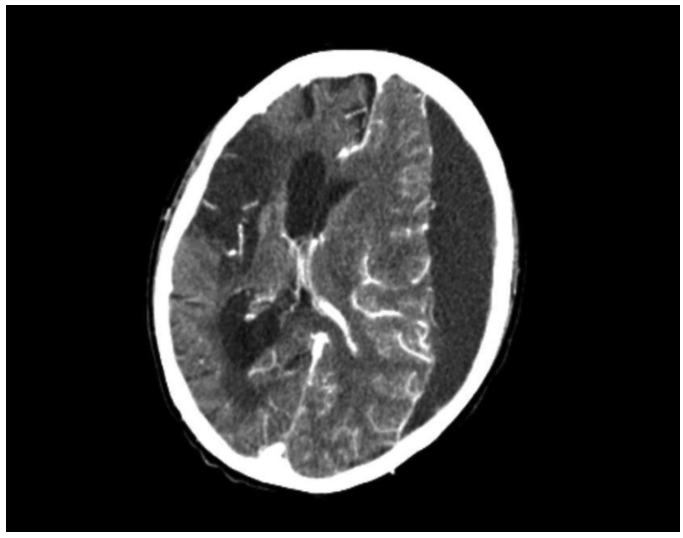

Figure 1. A hypodense effusion view consistent with chronic subdural hemorrhage on the left fronto-parieto-occipital area with a diameter of 3.5 cm on the widest area

Discussion

The available data for the incidence and prevalence of delirium varied. Studies showed that 14% to 24% of older adults will have delirium on admission to hospital and up to 56% will develop delirium during their hospital stay (4). The prevalence of delirium in the community is 1-2% among the general population aged over 55 years, and up to 14% in those over 85 years. The incidence among nursing home residents surpasses 60% (5). The index of suspicion in older adults should be higher, unlike in younger people, a symptom in older adults may have multiple causes. Delirium is also known to be typically multifactorial (4). Clinicians investigating the underlying cause of delirium must be aware of the possibility of occult or atypical presentations of many diseases in older adults. Risk factors for delirium are classified in two groups as the predisposing and precipitating factors. Older age, dementia, depression, functional disabilities, polypharmacy, malnutrition, frailty, poor vision and hearing, laboratory abnormalities and a high burden of coexisting conditions are the common predisposing factors. The most commonly reported precipitating factors are the drugs (especially sedative hypnotic agents, anticholinergic agents, steroids and antibiotics), surgery, pain, constipation, fecal impaction, urinary retention, immobilization, infections, acute illness, and acute exacerbation of chronic illness. As in our case, there are so many factors that can cause delirium. We might consider that escitalopram may have caused hyponatremia, amiodarone may have caused hypothyroidism or hyperthyroidism and rivaroxaban may have caused bleeding. Another point that should be considered in delirium is infections in older adults. The first symptom may be delirium before the emergence of the localizing symptoms in the older adults. Another factor that can cause delirium is the metabolic disorders such as acute renal failure, and electrolyte imbalances due to decreased appetite, and fluid intake. The patient with a history of diabetes may have developed delirium due to possible hypoglycemia or hyperglycemia. Finally, central nervous system pathologies such as cerebrovascular ischemia or bleeding may have caused delirium.

Conclusion

We presented a geriatric patient with multiple factors causing hypoactive delirium. As seen in our case, delirium is typically

multifactorial. It should be noted that, both hypoactive delirium and, more importantly, many underlying causes may be overlooked in older adults. All possible predisposing and precipitating factors should be reviewed and promptly intervened in patients diagnosed with delirium.

Ethics

Informed Consent: Informed consent was obtained from the patient.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Concept: M.A.K., Design: G.B., Data Collection or Processing: T.E., B.İ., Analysis or Interpretation: G.B., Literature Search: T.E., M.A.K., Writing: T.E., G.B.

Conflict of Interest: No conflict of interest was declared by the authors.

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