International Journal of Healthcare Sciences ISSN 2348-5728 (Online)
Vol. 3, Issue 2, pp: (244-246), Month: October 2015 - March 2016, Available at: www.researchpublish.com

Delirium Following Psychological Stress

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Abstract: **We are reporting a 62-year old man who had two short episodes of delirium 4-years apart; both were precipitated by sad news and preceded by signs and symptoms of psychological stress. No history of psychiatric problems, dementia, illicit drug abuse, or alcohol use. Physical examination showed controlled hypertension and diabetes but no other significant findings. The patient condition remarkably improved few hours after oral olanzapine. The finding may indicate the need to include formal mental status assessment tool in older patients with suspected mental status change, irrespective of the presence of classical underlying and precipitating factors of delirium.**

Keywords: **Delirium, Psychological Stress, Saudi Arabia.**

1. INTRODUCTION

Delirium is a sudden and severe decline in the brain function characterized by acute change in cognitive function and disturbance of consciousness [1]. Delirium can be a costly disease with prolonged hospitalizations, increased mortality, and reduced ability to function independently [2]. The pathophysiological mechanisms of delirium is not fully understood, but it has been linked to imbalance of several neurotransmitters such as acetylcholine and dopamine [3]. Although delirium is seen among approximately 10% to 30% of hospitalized patients and demented elder population, it only affects only 1% to 2% of elder non-selected population without dementia [4]. The etiology of delirium is probably multifactorial, with complex interplay of predisposing and precipitating factors [5]. Delirium has been linked to underlying comorbidity such as severe dementia, frailty, advanced cancer, chronic alcohol use, multiple sensory impairments, and organ failure [1, 5, 6]. We are here describing a rare case of delirium precipitated by psychological stressful conditions.

2. CASE REPORT

A 62-year old man was admitted to the medical department with one-week complaint of insomnia associated with low mood, chest tightness, decreased appetite and in-home self-isolation. The complaint was preceded by a sad news of what was recognized later as a wrong diagnosis of gastric disease associated with abdominal pain. Medical history showed a long standing diabetes treated with insulin and oral anti-diabetic medications (metformin), chronic hypertension treated with lisinopril and amlodipine, and hyperlipidemia treated with simvastatin and aspirin. No history of psychiatric problems, dementia, illicit drug abuse, or alcohol use. Additionally, his son described his father personality as perfectionist who cannot easily express his feeling to others. Physical examination did not show significant findings with normal blood pressure (130/80 mmHg) and other vital signs. Laboratory examination showed normal complete blood count, electrolytes, fasting blood glucose (120 mg\dL), glycosylated hemoglobin (7.3%), lipid profile (LDL cholesterol of l94 mg/dL), and hepatic and renal functions. The patient was prescribed oral lorazepam 2mg twice a day for insomnia. However, the patient condition did not improve after 3 days of lorazepam treatment. Additionally, the patients gradually became more uncooperative and aggressive with nurses, with poor attention, low concentration, disorientation to time, person and place, apathetic, and having visual hallucination. Psychiatric consultation was then requested. The patient was found to have poor cognitive function as indicated by having 12 out of 30 points on the mini-mental state examination (MMSE). On the other hand, no significant findings were detected after repeating vital signs and the above laboratory examinations as well as doing additional investigations including urine analysis, brain computed tomography (CT) and

electrocardiography (ECG). The patient was diagnosed with delirium and was started on oral olanzapine 2.5 mg twice a day. This was quickly (within 9 hours) followed by remarkable improvement of the patient condition and retaining of cognitive function as indicated by having 27 out of 30 points on MMSE. The patient was discharged after 4 days of olanzapine treatment with only his pre-admission medications.

The patient had 4 years free of delirium when had the same condition repeated by another precipitating factor. The patient developed mild depressive symptoms after sad financial news regarding his business. Approximately 2 weeks later, the patient became disoriented to time, person and place with abnormal behavior, aggression towards family members, and poor attention and concentration. The patient was then admitted to the medical department. Medical history, physical examination and laboratory investigations showed no evidence of acute/new medical conditions. However, the patient had poor cognitive function (13 out of 30 points on the MMSE). The patient condition remarkably improved 6 hours after the first dose of oral olanzapine (2.5 mg twice a day for a week). The patient was discharged after a week with an advice to have a clinic psychiatric visit for potential long-term antidepressant use and cognitive behavioral therapy.

3. DISCUSSION

We are reporting an elder patient who had two short episodes of delirium 4-years apart; both were precipitated by sad news and preceded by signs and symptoms of psychological stress. To our knowledge, such precipitating factor has never reported in relation the development of delirium. Several other precipitating factors have been described in relation to delirium such as immobilization, over-sedation, ICU stay, surgery, infection, sleep deprivation, and use of certain psychoactive medications such as benzodiazepines [5, 6]. The conditions that probably made our patient susceptible to delirium were the chronic comorbidity (hypertension, diabetes, and hyperlipidemia), multiple medications (at least 6 medications per day), and older age.

The diagnosis of delirium in our patient was delayed in the first episode as the patient had no history of dementia and lack classical precipitating conditions such as surgery, pain, infection, and psychoactive medications. Similarly, it has been reported that the diagnosis of delirium is frequently delayed or missed because of the of lack of peculiar signs and symptoms, attribution of symptoms to associated multiple comorbidity, and the fluctuating course [7]. The under-diagnosis of delirium combined with its rare development among patients without dementia may explain at least partially its low prevalence in non-hospitalized patients and at primary care clinics [4, 8].

Our patient quickly and remarkably responded to olanzapine without side effects and without residue. Consistent with our finding, atypical antipsychotics have been used successfully to reduce the duration of delirium, with less side effects linked to olanzapine compared with other members of the group [5, 7, 9]. The quick response of our patient to atypical antipsychotics may reflect the lack of multiple uncontrolled predisposing or precipitating conditions that would otherwise need longer duration of hospitalization to control. Additionally, it was found that the prognosis of delirium is much better in patients without dementia compared to those with dementia [4].

In conclusion, we are reporting a rare presentation of delirium after psychological stress. The presentation of delirium without previous history of dementia and without classical precipitating factors may indicate the need to consider revising our diagnostic protocols to include formal mental status assessment tool in older patients with suspected mental status change [7].

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