Effect of Delirium on 3 months Mortality Among Hospitalized Elderly Patients

Thesis

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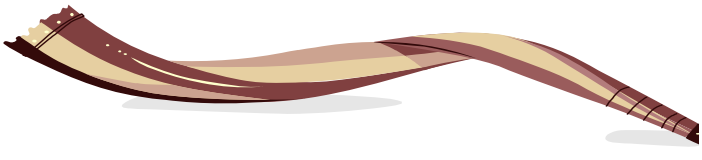

Hend Fawzy Mahmoud

List of Abbreviations

5-HT…… 5-hydroxytryptamine

ASE…… Attention Screening Examination

CAM …… Confusion assessment method

CRP …… C-Reactive protein

DRS…… Delirium Rating Scale

DSI…… Delirium Rating Scale

DSM-IV…… Diagnostic and Statistical Manual of Mental

HelP…… Hospital elder life Program

IFN-δ…… Interferon-δ

IGF-I…… Insulin-like growth factor-I

IL-6…… Interleukin- 6

MMSE…… Mini-Mental State Examination

RASS…… Richmond Agitation Sedation Scale

SPECT…… Single-photon emission CT

TNF-α…… Tumor necrosis factor α

UTI…… Urinary tract infection

Introduction

Delirium has been defined as fluctuation in the level of consciousness, attention and cognition of acute onset, over hours to days. Sometimes accompanied by delusions and hallucinations ***(American Psychiatric Association, 1994)***.

Delirium is common among older patients in acute care hospitals. At time of admission to a hospital, 10%-20% of older adults meet the diagnostic criteria for delirium, and another 25%-60% develop delirium during the course of their hospitalization ***(Inouye et al., 1999; McCusker et al., 2001).*** Despite this high prevalence of delirium an estimated 32%-67% of cases go unrecognized on general medical units ***(Inouye, 1994)***.

Delirium is associated with increased morbidity and mortality, greater use of hospital resources, increased rates of nursing home placement on discharge, and longer hospital stays ***(Cole et al., 1998).*** Also it increases risk of dementia ***(Lindesay et al., 1990).*** And has poor functional outcome ***(Pompei et al., 1994).***

Mortality outcome of delirium is variable ranging from 14.5% - 37% ***(Siddiqi et al.,2006).*** The estimated 3-month mortality among hospitalized elderly patients with delirium ranges from 23% to 33% and the 1-year mortality may be as high as 50% ***(Kaplan et al.,1998).***

There are various tools to diagnose delirium including three valid and reliable diagnostic instruments; the confusion assessment method, the delirium rating scale revised and the delirium symptom interview. The first two instruments are easy to use in most clinical settings ***(Cole, 2004).*** The confusion assessment method (CAM) was originally developed in 1988-1990, to identify delirium quickly and accurately in both clinical and research settings, Since its development, the confusion assessment method has become the most widely used instrument for detection of delirium world-wide, had a sensitivity of 94%-100%, specificity of 90%-95% and high interobserver.

Reliability, the confusion assessment method criteria agree more closely with the current DSM-IV criteria than they did with the previous DSM-III R criteria ***(Inouye et al., 1990).***

Aim of the Work

Aim of the work is to study the effect of delirium on 3-months mortality among hospitalized elderly patients compared to matched control.

Definition and Prevalence of Delirium

Definition:

Delirium has been defined as fluctuation in the level of consciousness, attention and cognition of acute onset, over hours to days, sometimes accompanied by delusions and hallucinations ***(American Psychiatric Association, 1994)***.

Prevalence of delirium:

Delirium is common among older patients in acute care hospitals. At time of admission to a hospital, 10%-20% of older adults meet the diagnostic criteria for delirium, and another 25%-60% develop delirium during the course of their hospitalization ***(Inouye et al., 1999; McCusker et al., 2001).*** Despite this high prevalence of delirium an estimated 32%-67% of cases go unrecognized on general medical units ***(Inouye, 1994)***.

Fong et al. (2009) emphasized that the overall prevalence of delirium in the community in elderly is Just 1–2%, but in the setting of general hospital admission this number increases to 14–24% ***(Inouye, 1998).*** The incidence of delirium arising during a hospital stay ranges from 6% to as high as 56 % ***(Inouye, 1998)*** and this incidence is even higher when more specialized populations are considered, including those in postoperative, intensive-care, subacute and palliative care settings ***(Girard et al., 2008).*** Postoperative delirium occurs in 15–53% of surgical patients over the age of 65 years

(Inouye, 2006) and among elderly patients admitted to an intensive care unit (ICU) the delirium incidence can reach 70–87% ***(Pisani et al.,2003)***.

Clinical Features of Delirium

Prodromal phase:

When the onset is more gradual the patient may develop mild transient symptoms such as fatigue, decreased concentration, irritability, restlessness, anxiety or depression. There may be mild cognitive impairment, perceptual disturbances, or hypersensitivity to light and sound. Commonly there is daytime somnolence or a sleep disturbance. The disturbance may be limited to this mild prodromal phase or progress to a more florid picture ***(Cole, 2004).***

Acute onset and fluctuating course:

The symptoms of delirium usually develop over hours to days, although onset may be abrupt. Symptoms may be intermittent with unpredictable fluctuation and are often worse at night. During lucid intervals the patient may function at a normal level and These fluctuations may be observable during the course of a single clinical interview or over the course of one or more days ***(Cole, 2004).***

Inattention

Delirium is associated with difficulty focusing attention e.g. being easily distractible or having difficulty keeping track of what was being said ***(Inouye, 2006).***

Disorientation:

Disorientation is most commonly manifested by mistakes in time, place and sometimes person ***(Cole, 2004).***

Disorders of thought:

Abnormalities in the form and content of thinking are prominent. The organization and utilization of information are impaired. The patient may be unable to make appropriate decisions, perform simple tasks or maintain self care. Judgment and insight may be poor, abstract thinking is often diminished ***(Cole, 2004).***

Disturbance of consciousness:

According to DSM IV criteria for diagnosing delirium disturbance of consciousness is defined as reduced clarity of awareness with reduced ability to focus, sustain or shift attention ***(American Psychiatric Association., 1994)***.

This Disturbance is ranging between consciousness and unconsciousness and is considered as a cardinal feature of delirium ***(Cole, 2004).***

Disorders of language:

Speech may be tangential, circumstantial, poorly organized, slowed or slurred, with word finding difficulties and paraphasias ***(Cole, 2004).***

Impairment of memory:

There are disturbances of registration and recent and remote memory disturbances.There may be a tendency to mistake the unfamiliar for the familiar ***(Cole, 2004).***