بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Prophylactic Use of Haloperidol versus Atypical Antipsychotics (Quetiapine) in Prophylaxis against ICU Delirium in High Risk Patients

Thesis

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List of Abbreviations

Abb.	Full term
5HT1A	Serotonin 5HT1A receptor antagonist.
APA	American Psychiatric Association.
APACHE II	The Acute physiology and chronic health evaluation II
APOE	apolipoprotein E.
ASE	Attention screening examination.
AUC	Area under the curve
CAM-ICU	Confusion Assessment Method for the ICU.
Cmax	Maximum or peak serum concentration that adrug achieves after has been administered and before adminsteration of asecond dose.
D1,2,3,4 receptor	Dopamine 1,2,3,4 receptor
DHF	decompansated heart failure.
DKA	Diabetic keto acidosis.
DRS	Delirium Rating Scale
DSM	Diagnostic and Statistical Manual of Mental Disorders.
ECG	Electrocardiography.
EEG	Electroencephalography.
EPS	Extrapyramidal symptoms
ER	Extended release.
GABA	γ-aminobutyric acid.
GCS	Glascow coma score.
GnrHA	Gonadotropin releasing hormone
H1receptor	Histamine 1 receptor antagonist
ICDSC	Intensive Care Delirium Screening Checklist
ICU	Intensive care unit
RCTS	Randamised Controlled Trials.

List of Abbreviations Cont...

Abb.	Full term
IQR	Interquartile range
LAT1	Large neutral amino acid transporter type 1.
LOS	Length of stay.
MACh	Muscarinic acetylcholine receptor antagonist.
NMS	Neuroleptis malignant syndrome
PRE-DELIRIC	Prediction of Delirium in ICU patients.
RASS	Richmond Agitation-Sedation Scale.
RF	Respiratory failure.
SAS	Sedation-Agitation Scale
SCCM	Society of Critical Care Medicine.
T max	Time taken to reach maximum concentration

INTRODUCTION

Delirium is defined as acute brain dysfunction featured by disturbances of attention, awareness and cognition with a fluctuating course caused by an underlying medical condition ***(APA, 2013),*** occurs frequently in the intensive care unit, is associated with impaired patient outcome, and substantially increases healthcare costs**.** Given these deleterious consequences, delirium prevention is crucia***l (Salluh et al., 2015)***.

The prevalence of delirium reported in medical and surgical ICU has varied from 20% to 80%, depending upon severity of illness observed and diagnostic methods used.

Mechanisms involved in the development of delirium, are thought related to neurotransmitters imbalances (an excess of dopamine or depletion of acetyl choline), inflammation and Impaired oxidative metabolism ***(Ely et al., 2001).***

Multiple factors contribute to the development of delirium, including preexisting cognitive dysfunction, alcohol, drug withdrawal, sedative use, inadequate sleep, painful procedures, infection and shock state ***(Ouimet et al., 2007).***

Delirium preventive measures are important for all ICU patients. However a delirium prediction model may facilitate early recognition of the patients who may benefit the most from delirium prevention**.** Non pharmacologic reduction strategies

and medication-based strategies may be most relevant for patients who have an increased risk of developing delirium ***(Mistraletti et al., 2012)***.

Various pharmacologic agents (such as Antipsychoyics, acetylcholinestrase inhibitors, sleep-wake cycle regulators, and others) have been assessed for potential roles in delirium prevention ***(Inouye, 2006).***

In this study Halopredol and Qutapiene used as preventive measures for prophylaxis of ICU delirium in high risk patients.

Halopridol is a typical antipsychotic medication. Halopridol is used in the treatment of schizophrenia, mania in bibolar disorder, delirium, agitation, acute psychosis and hallucinations in alcohol withdrawal. Despite limitations due to adverse events, including QT prolongation with the potential to trigger ventricular tachycardia, hypotension and extrapyramidal side effects ***(Milbrandt et al., 2005).***

Quetiapine is an atypical antipsychotic drug used in treating schizophrenia, mania, depression and acute delirium outside the ICU ***(Maze et al., 2001).***

Quetiapine like other anti-psychotics inhibits communication between nerves of the brain. It does this by blocking receptors on the nerves for neurotransmitters and chemicals that nerves use to communicate with each other. It is

thought that its beneficial effect is due to blocking of the dopamine type 2 (D2) and serotonin type 2 (5-HT2) receptors so it is associated with lower ratings of agitation, shorter duration of delirium and Increased likelihood of discharge to home or rehabilitation ***(Kim et al., 2003).***

Quetiapine has few extrapyramidal side effects or anticholinergic symptoms, a short half-life and is mildly sedating ***(Kasliwal et al., 2010).***

Aim of the Work

The aim of study is to compare the efficacy and safety of Quetiapine in prophylaxis against ICU delirium in high risk patient with that of haloperidol.