DIFFERENTIAL AND INVESTIGATIVE ASPECTS OF DEMENIA

ESSAY

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By

Mohammd Mansour Abd El Hafez

M.B., B.Ch.

Supervised By

Prof. Dr. Youssef Aly Abu Zeid
Professor of
Neurology & Psychiatry
Faculty of Medicine
Ain Shams University

Prof. Dr. M. Anwer Etribi
Assist. Professor of
Neurology & Psychiatry
Faculty of Medicine
Ain Shams University

Ain Shams University
Faculty of Medicine
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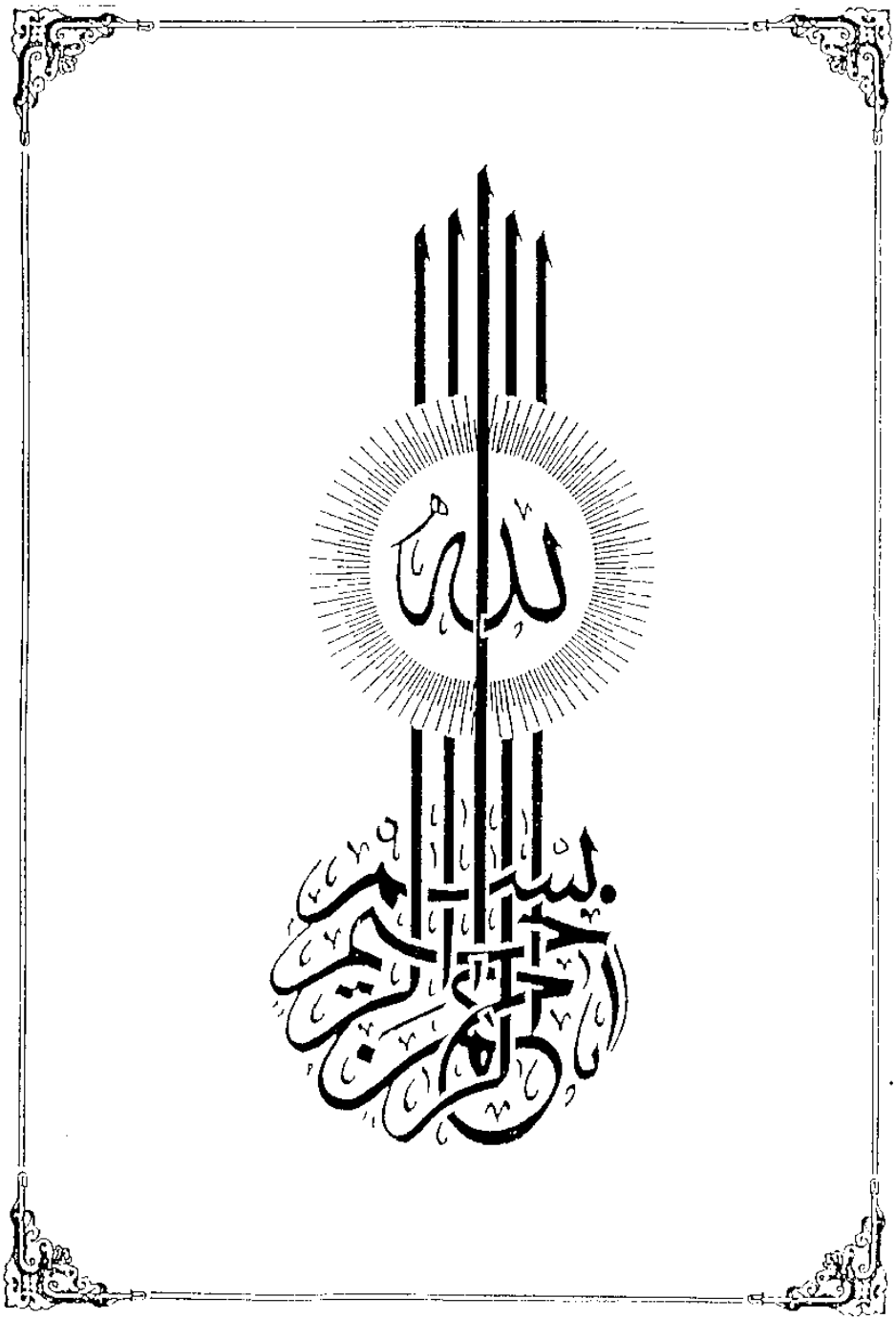
بسم الله الرحمن الرحيم

سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم

صدق الله العظيم

سورة البقرة آية « ٣٢ »



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Dedicated to my family,

Nabila, Nehal and Nirvana

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List of abbreviations

ACh	Acetyl Choline
AD	Alzheimer's Disease
AEP	Auditory Evoked Potentials
BEAM	Brain Electrical Activity Mapping
CCK	Cholecystokinin
C.EEG	Computerized electroencephalogram
CMR_{glu}	Cerebral Metabolic Rate for glucose
DAT	Disease Alzheimer's type
EP	Evoked Potentials
FDG	2 fluro-2-deoxy-D-glucose
MID	Multi-infarction dementia
MRI	Magnetic resonance Image
NA	Noradrenaline
NMR	Nuclear Magnetic Resonance
OER	Oxygen Extraction Ratio
PET	Positron Emission Tomography
PVD	Probable vascular dementia
$rCMR_{glu}$	regional Cerebral Metabolic Rate for glucose
SDAT	Senile disease Alzheimer's type
SEP	Somatosensory evoked potentials
SPECT	Single photon emission computed tomography
VD	Vascular dementia
VEP	Visual evoked potentials
WAIS	Wechsler Adult Intelligence Scale

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AND AIM OF THE WORK

INTRODUCTION

The term dementia, stem from the latin "de" (from or out of) and "mens" (mind), thus to be demented means literally to be out of one's mind.

Lipowski, (1980) defined dementia as the organic brain syndrom characterized by an acquired decreasement of intellectual abilities sufficiently severe to impair social or occupational performance or both, a full developed case features impairment of memory, abstract thinking and judgment of personality change that is either an accentuation or an alteration of the patient's habitual character traits, the disorder may be progressive, static or reversible and is caused by wide spread cerebral damage or dysfunction.

Bowen and Davison,(1983) suggested the term brain failure instead of dementia which is a major disability where there is a global mental impairment particulary of short term memory with declining self care.

Walton, (1985) in his definition clarified that this usually result from organic disease of the brain and manifesting itself primarily in disorders of

thought and memory and secondary of feeling and conduct. It may be produced by many pathological processes and the clinical picture varies some what according to the previous temperament of the patient, the age of onset, and to the localization, rate of progress, and the nature of the causal pathological change.

Katzman, (1986) recognised dementia as a syndrom characterized by intellectual deterioration occuring in an adult that is severe enough to interfere with occupational or social performance, the functional characteristic is needed to differentiate early dementia from mild changes in memory that occur during normal aging.

Okasha, (1987) insisted on the global deterioration of memory, intellect and judgment together with blunting and impaired control of emotions and added the coarsening of personality with decline in personal habits and standards. He insisted that intellectual impairment is normally the central feature. Though not always the first to appear.

From the review of the different definitions in the last decade, it is apparent that dementia is diffuse deterioration of mental functions, impairing memory, attention, thinking, personality and judgment, enough

to interferes with social and occupational activities. The clinical picture varies. The variations depend on previous temperament and location of pathology. The syndrome of dementia is due to organic disease. The etiologies are variable.

Aim of the work:

This work has been carried out so as to review the literature with the aim to clarify different clinical characteristic and laboratory investigations which help in diagnosis of different types of dementia.

It also includes a discussion for the selection of the most appropriate way to investigate such disorders aiming to treat treatable types and to determine the prognosis in untreatable cases.

EPIDEMIOLOGY

EPIDEMIOLOGY OF DEMENTIA

Desecriptive epidemiologic studies demonstrate that the risk of dementia in general and of Alzheimer's disease in particulsr increasing with advancing age and the risk appear to be slightly greater among women (Schoenberg, 1986). There is no firm epidemiologic evidence to suggest that Alzheimer's disease represents two distinct conditions. Demographic projections indicate that the number of affected individual is expected to grow as the elderly segment of our population increases (Wells, 1985 and Schoenberg, 1986).

Analytical epidemiologic studies have yielded a number of postive finding, including an excess of dementia, Down's syndrom, and Lymphoma in the relatives of index cases of Alzheimer's disease, and a greater than expected frequency of head trauma and thyroid disease among those with Alzheimer's disease. Results have not been consistent from study to study and await further confirmation. It is hoped that findings of future analytic investigations will provide much needed information required for the development of rational programs of treatment and prevention of this major health problem (Schoenberg, 1986).

Because dementia is a syndrome that occurs most often in old age, it is possible to get some idea of its prevalence from several community studies devoted to the health of the elderly. In these studies, carried out mainly in northern Europe, a prevalence of severe dementia between 1.3 and 6.2 percent has been found in persons over age 65; a prevalence of milder dementia between 2.6 and 15.4 percent was found in the same population. Moreover, the prevalence has been found to increase strikingly with increasing age within this elderly population. A 4- to 7-fold increase in prevalence of dementia has been reported from the group aged 70 to 79 to the group aged 80 years and older(Wells, 1985).

Schoenberg et al., (1985) studied the prevalence of severe dementia among different racial groups residing in the same community. They founded: for either sex, the prevalence ratios of all severe dementia and clinically diagnosed severe senile dementia of the Alzheimer's type were at least as large among blacks as among whites. For either race, the corrosponding prevalence ratios were greater in females. For each race and sex, the corrosponding prevalence ratio increased with advancing age.

AETIOLOGY & CLASSIFICATION