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التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بالرسالة صفحات

لم ترد بالأصـــل

بعض الوثائق الأصلية تالفة

P300 auditory Event-Related potentials in Normal Adults and Geriatric population

Thesis submitted in partial fulfillment of M.D degree in Audiology

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بسم الله الرحمن الرحيم

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INTRODUCTION & RATIONALE

Introduction and Rationale

P300 is an endogenous component of the late evoked response to visual, somatosensory or auditory task-relevant stimuli. This event-related potential closely reflects cognitive functions such as stimulus discrimination and processing as well as attention capabilities **(Kugler et al., 1996).**

It was originally thought that P300 was cortical in origin. However, research employing the "odd-ball" paradigm and measuring intracranial brain activity with multicontact electrodes has implicated subcortical brain structures, such as hippocampal formation and amygdala **(Halgren et al., 1980;Wood & McCarthy, 1984)**

The auditory P300 can be obtained with number of task relevant stimuli. The most common of which is the tonal "odd-ball" paradigm that consists of detecting rare occurrences of a target tone embedded in a series of more frequently occurring standard tones. The information supplied to the subject with the occurrence of the relevant target tone produces the large positive going component with about 300 msec latency **(Sutten et al., 1965 and Polich, 1996).**

As the task is not a difficult one and requires minimal subject cooperation. Thus, P300 could be relevant for clinicians in evaluating central auditory processing. This is particularly

important in patients who cannot perform adequately on tasks that depend on memory of verbal materials, or those which are more complex than the covert counting of tones **(Musiek, 1992).**

Cognition can be grossly evaluated by means of Minimental Status Test (Six-Item Orientation-Memory-Concentration test). This simple test discriminates between, mild, moderate and severe cognitive defects **(Kugler et al., 1996). Howard et al. (1985) and Polich et al. (1983)** studied the correlation between P300 measures with short-term memory skills. They found increased amplitude and decreased latency correlated with better short-term memory skills.

Since the number of people aged over 65 is expected to be the fast growing segment of population by the middle of the next century. It has been suggested that the memory deficits observed in the elderly are due to deficiencies at the time of information acquisition, and in the process of encoding **(Anderer et al., 1996).** One of the most common uses of P300 is to assess the neurophysiological basis that underlie changes which take place during normal and physiologic aging setting **(Gracia et al., 1996).**

Individual P300 measures depends very critically on subject's age **(Polich &Kok, 1995).** So it is necessary to