CHANGES OF STRESS HORMONES AFTER ACUTE CEREBRO-VASCULAR STROKE

Thesis
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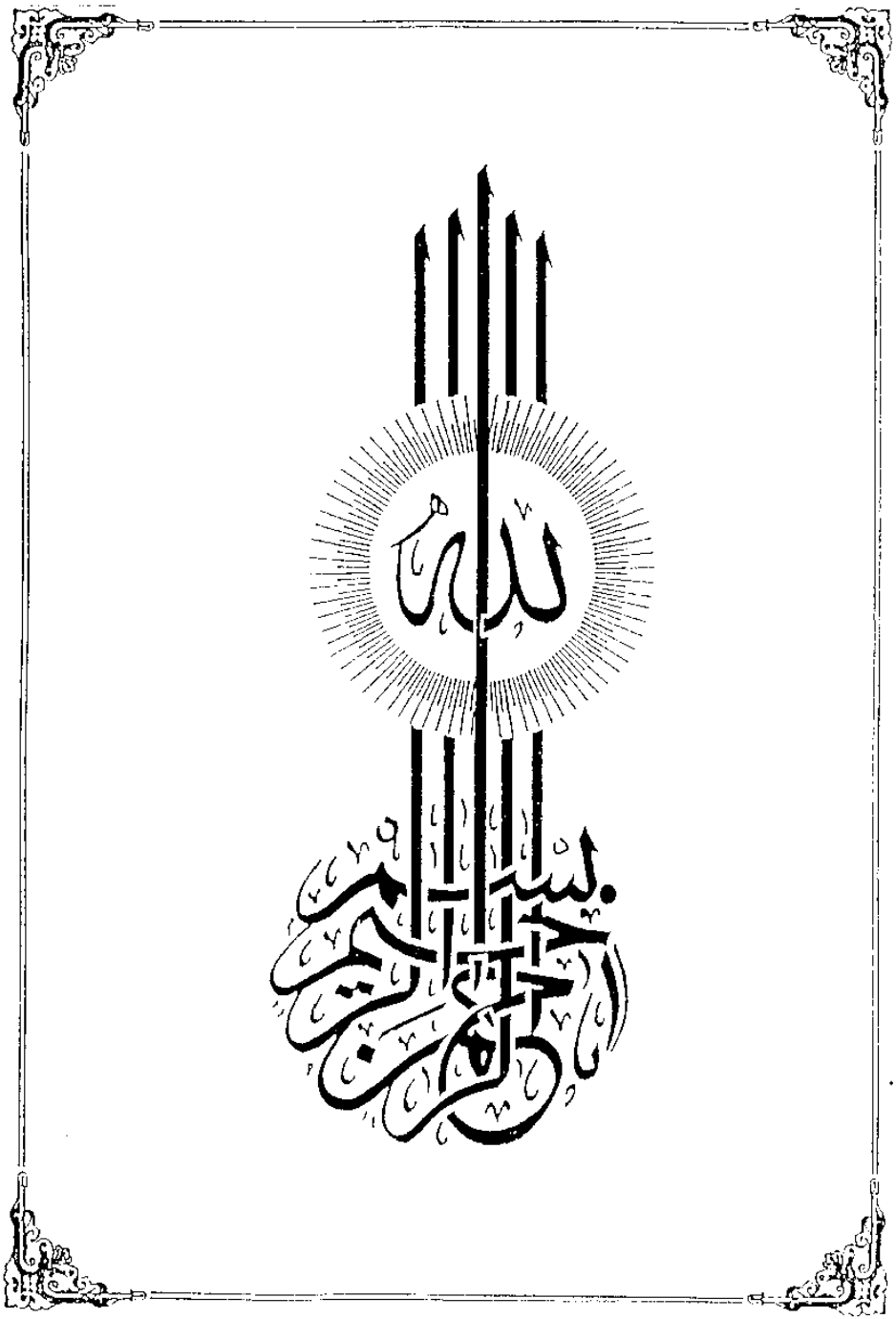

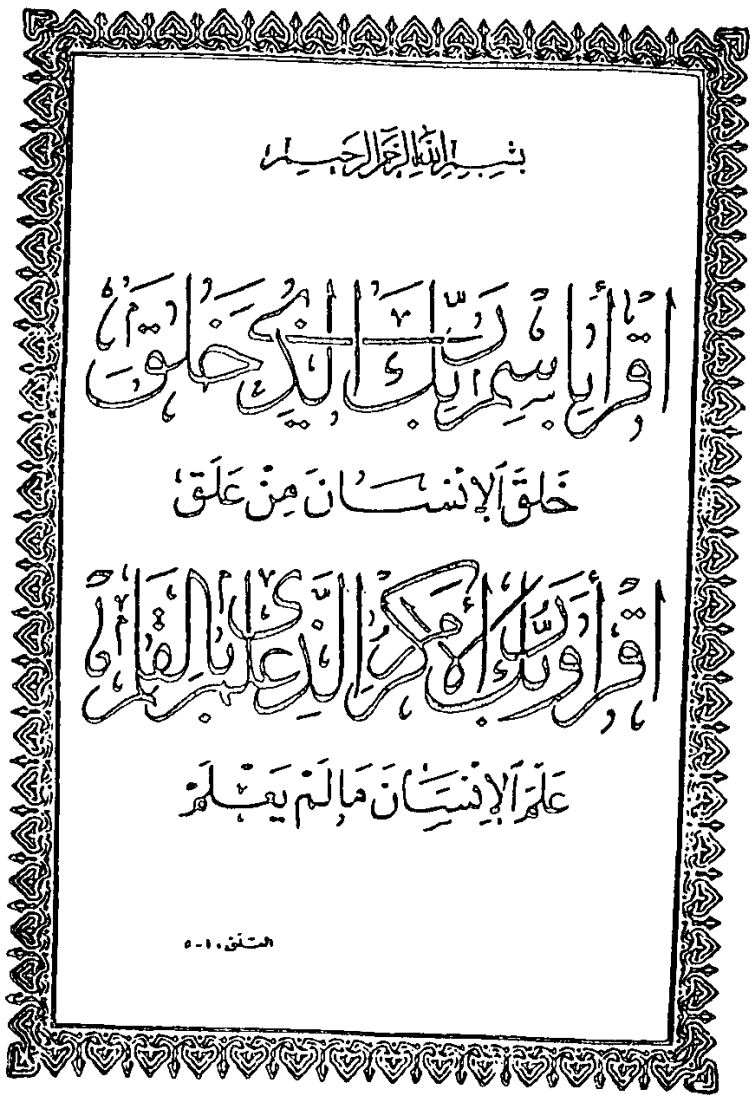
بسم الله الرحمن الرحيم

اقرأ باسم ربك الذي خلق

خلق الإنسان من علق

اقرأ وربك الأكرم الذي علم بالقلم

علم الإنسان ما لم يعلم

العلق ١-٥

* To My Parents
* To My Wife
* To My Teachers
throughout my life

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INTRODUCTION

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Stroke is one of the leading causes of death and the most important cause of disability in the peoples living in their own home.

The prognosis of acute strokes regarding mortality and morbidity is largely determined at the onset by the nature of the stroke whether ischaemic or haemorrhagic, the size of cerebral insult and the site of damage. However, acute strokes are often accompanied by extra-cranial complications involving many systems including the cardiovascular system, respiratory system, the kidneys, endocrinal and immune system.

Increased activity of the hypothalamic-pituitary- adrenal axis as well as of the sympatho-adrenal system is commonly seen in various forms of acute stress including acute stroke **(Feible et al., 1977 and Fassbender et al., 1994).**

Increased plasma and urinary cortisol levels indicating activation of the adrenal gland after stroke have been found to be associated with high mortality rate and poor outcome (Fassbendu et al., 1994) and also reported to be associated with the confusion and disorientation accurring in patients with acute stroke.

Norepinephrine is another important hormone involved in the stress axis. The level of norepinephrine was reported to be high in patient with acute stroke and this was thought to be

responsible for the extra-cranial complications **(Tracy et al., 1994).**

It has been suggested that hyperglycaemia in acute stroke may be secondary to stress because some have found a poor outcome particularly in non diabetic patients with hyperglycaemia and have concluded that increased glucose level reflects a stress response in patients with stroke **(Candilise et al., 1985 and Fopkooten et al., 1993).**

Activation of the stress axis leads to a number of complications involving the central nervous system as confusional states and disorientation causing elevated blood pressure, coronary spasm and cardiac arrhythmias, the body metabolism causing hyperglycaemia and electrolyte imbalance, the gastrointestinal tract causing gastric bleeding.

The role of stress hormones in causing these extra cranial complications needs to be thoroughly investigated and assessed in order to suggest additional strategies aiming to improve the outcome of stroke patients.