An Essay On :

FEVER OF UNKNOWN ORIGIN

T H E S I S

Submitted For Partial Fullfilment Of

M. Sc. Degree (Ped.)

BY

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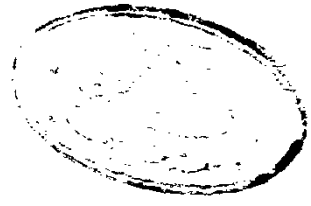
M. B. B, ch.



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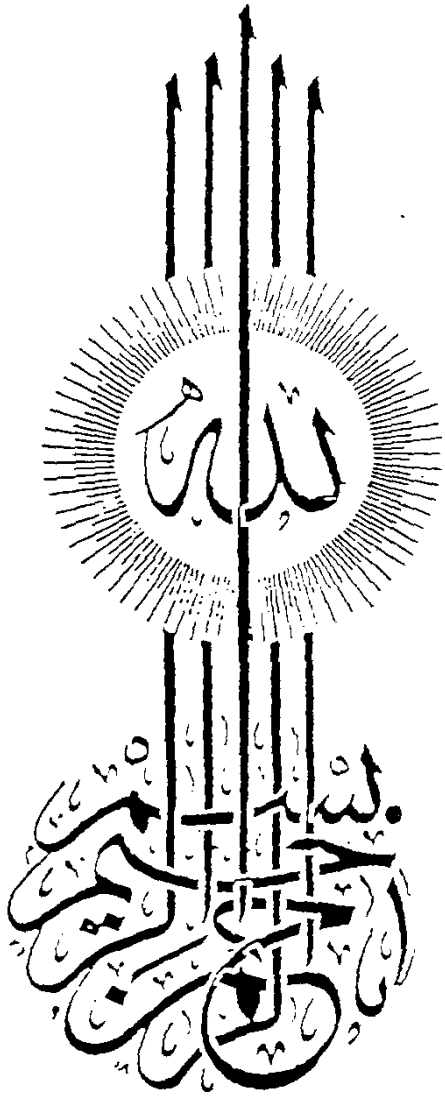

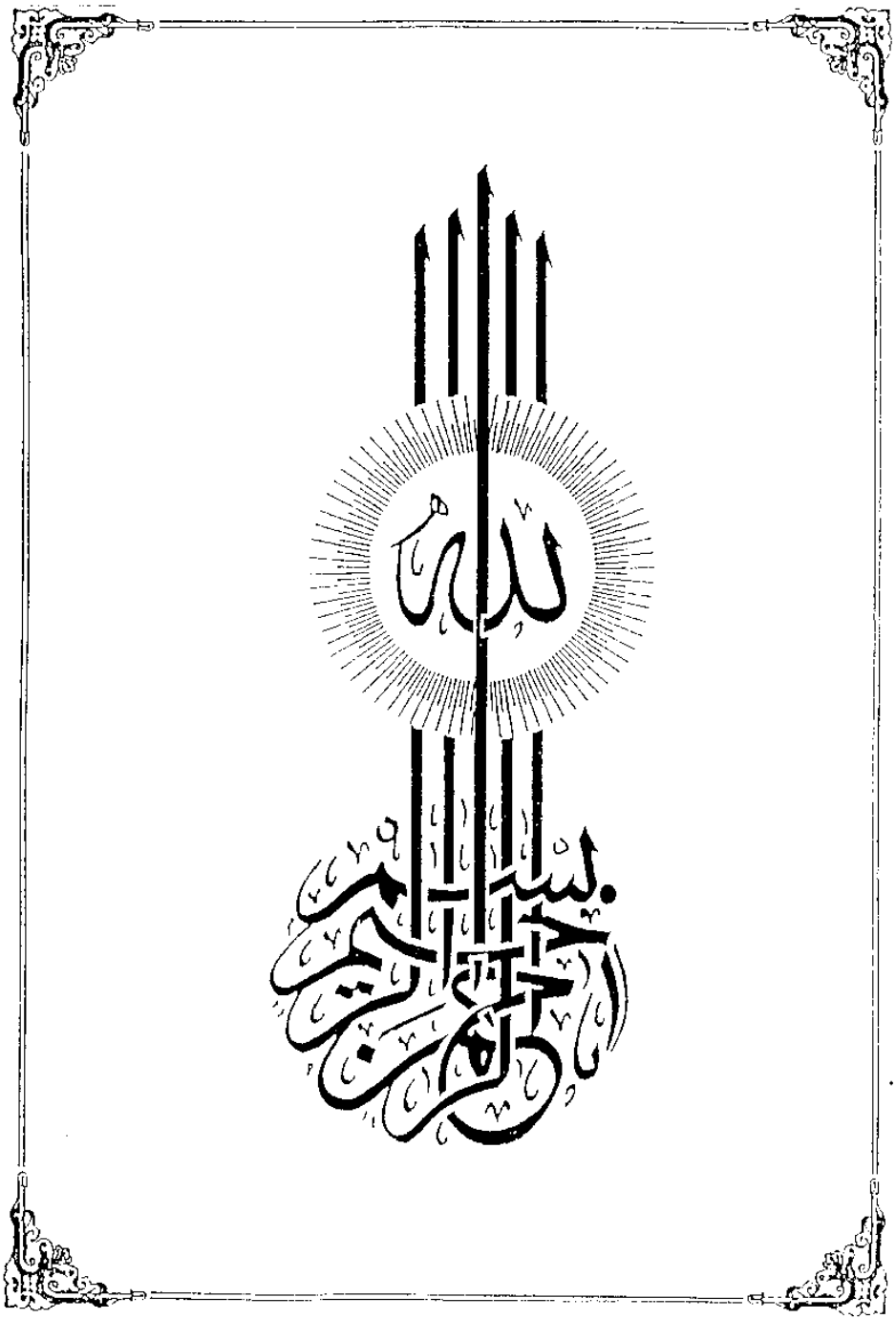

A C K N O W L E D G E M E N T

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C O N T E N T S

INTRODUCTION

I N T R O D U C T I O N

Fever is both the most ancient and the most widely recognized hallmark of disease . It remains an important physical sign of illness and in pediatric practise accounts for innumerable telephone calls to the physician and at least 30 % of all visits (Pizzo , 1975) .

In most instances it is due to a readily identifiable cause however at times patients with fever represent the most challenging diagnostic problems in pediatric practise (Mc Clung, 1972).

Several FUO studies on adults mostly had been published from Egypt (EL - Rooby, 1959; Mahran, 73 and Hassan, 1974) and abroad (Petersdrof, 1961, Sheon,1963, Applebaum1967) (Shawky et al 1980).

The first well documented study on FUO in Egypt was started in 1971 in Abbassia fever hospital, Cairo during the period 1971 - 1973 comprising 129 F U O patients .

Infections were the commonest cause of fever is this study (60 %) and still the commoneat till now (Abdel-wahhab, 1978) .

The aim of this work is to throw light on the most propable and suspected causes of FUO and how can we approach

to the diagnosis of such prolonged fever .

We are dealing in this essay with F U O as an entity and not as individual causes; so details about each individual disease is not broadly discussed .

D E F I N I T I O N

D E F E N I T I O N O F F U O

No consistent definition for the diagnosis of fever of unknown origin (F U O) has been established, many physicians apply the term to any febrile patient admitted to the hospital without apparent diagnosis, some prefer to reserve the use of the term for patients with, documented fever of more than 1 week's duration, fever also documented in hospital; and no apparent diagnosis after an investigation of 1 week in hospital (Feigin, 1979) .

Petersdorf - and Beson (1961) considered the follwing criteria for F U O , the illness must have lasted 3 weeks or more, the temerature must have been higher than (38.3°c) several times; and the diagnosis must still be uncertain after a week of hospital investigation (Petersdorf, 1961).

Sheon (1963) defined F U O as any febrile condition with a temperature higher than 38.9°c , present for at least 3 weeks and the diagnosis is not established after complete history, physical examination, complete blood count, urine analysis and X- Ray chest (Sheon and Van Omen 1963).

The undetermined or obscure fever is defined by Mc Clung as any febrile illness remaining undiagnosed for longer than 3 weeks inspite of active outpatient evaluation

or for longer than 1 week inspite of in-patient diagnostic effort, the temperature is higher than 38.9°c on multiple occasions and measured rectally (Mc Clung 1972) .

F U O is defined by Pizzo (1975) as illness of unrecognized cause with a rectal temperature higher than 38.9°c on 4 occasions for at least 2 weeks period. (Pizzo, 1975) .

F U O is considered in many studies as fever continues unabated and no cause can be found after physical examination and diagnostic studies including a complete blood count (CBC), urinalysis and chest X-Ray (Chusid, 1982).

P A T H O P H Y S I O L O G Y

PATHOPHYSIOLOGICAL VIEW

I - NORMAL BODY TEMPERATURE :

The term body temperature refers to the temperature of deeper structure, usually the skin has a lower temperature than the depths of the body and this provides a temperature gradient which leads to heat loss from the depths to the surface of the body and then to the environment (Zaki,1979).

The core temperature (rectal temperature) of normal healthy resting individual ranging between 36.2°c and 37.8°c (Dinarello, 1978) . Oral temperature are generally about 0.4°c below those taken rectally (cone, 1969) .

During the first 2 years of life there is usually no significant diurnal variation in body temperature, between the ages of 6 months and 2 years there may be some flactuation as such as 0.6°c, in children between the ages of 2 and 6 years the diurnal variation may be as much as 0.9°c, children above this age the variation may be as much as 1.1°c . (Kaplan, 1982) .

II - TEMPERATURE REGULATING MECHANISMS

Man is homeothermal i.e he maintains his body temperature constant in spite of wide variation in enviromental temperature, the reflex and semireflex thermoregulatory response, including autonomic, Somatic, endocrine and behavioral changes are included in the following simple table,

Table (1) Temperature regulating mechanisms(Ganong,1979).

Mechanisms activated by Cold .	Heat production	Heat loss
	shivering, hunger, increased voluntary activity and increased secretion of nor-epinephrine and epinephrine .	Cutaneous vaso constriction, curling up and horripilation .
Mechanisms activated by Heat .	Heat loss	Heat production
	Cutaneous vasodilatation, sweating and increased respiration .	Anorexia, apathy and inertia .

The reflex responses activated by cold are controlled from the posterior hypothalamus, Those activated by warmth are primarily controlled from the anterior hypothalamus . Stimulation of the anterior hypothalamus causes cutaneous vasodilatation and sweating, and lesion in this region causes hyperthermia with rectal temperature sometimes reaching 43°c (Ganong,1977) .