POST OPERATIVE FEVER

ESSAY

Submitted For Partial Fulfillment Of

The M.Sc. Degree in

(UROLOGY)

BY

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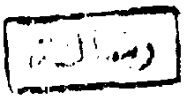

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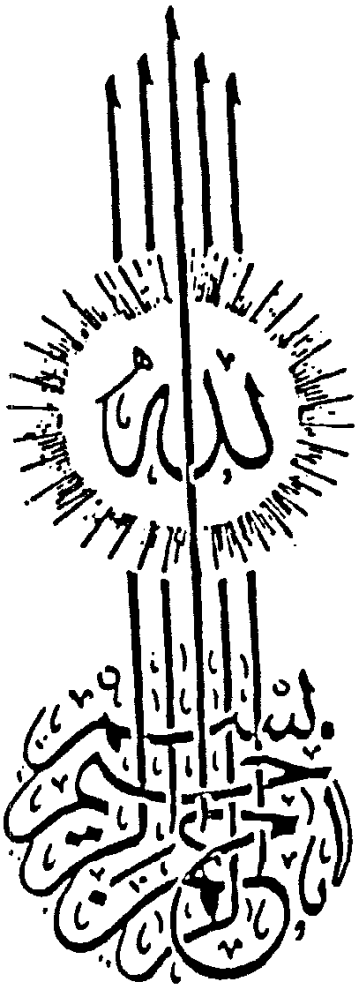

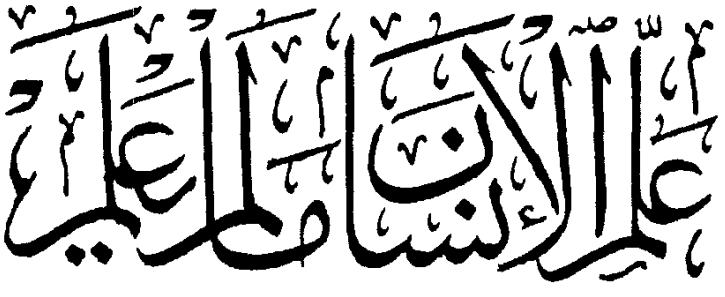

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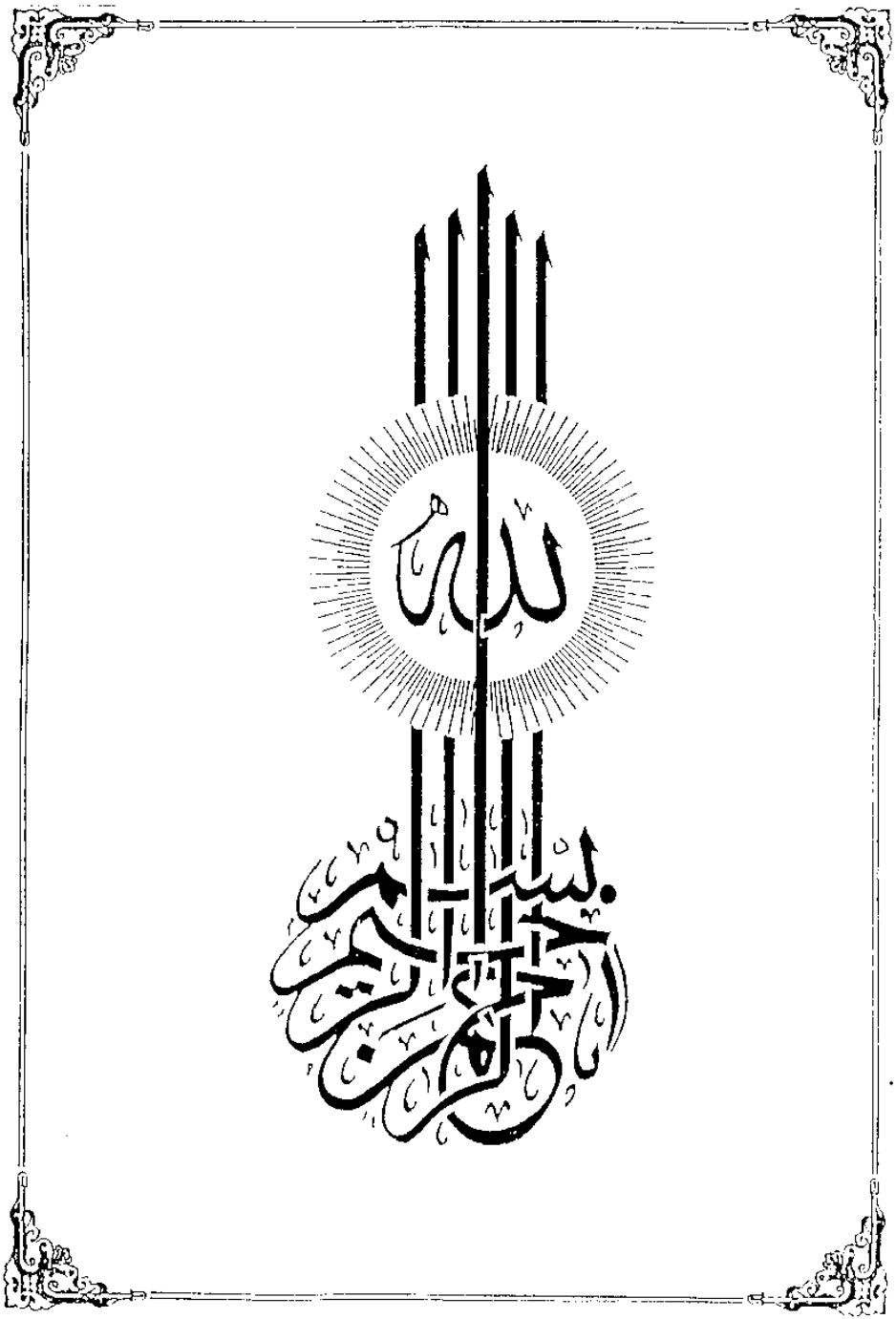

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CHAPTER 1

INTRODUCTION

INTRODUCTION

Any surgical procedure performed on the patients subjects to the risk of post operative (P.O.) fever.

For centuries; fever has been recognized as a characteristic sign of infection. However, fever may also be due to such non-infectious causes as tumour, durg, and anethesia.

Infections following operations (Extra urinary operations and urinary operations) are an all too common complications in surgical patients. These infections vary drammatically from trouble some wound infection to intraperitoneal sepsis.

Infections are a major cause of P.O. morbidity and mortality Reduction in morbidity and mortality in patients with P.O. fever can be achieved by early detection, diagnosis and detenitive treatment of infectious and non infectious causes.

CHAPTER 2

AIM OF THE WORK

AIM OF WORK

This work is a trial to evaluate the pathophysiology of fever , the causes of post-operative (P.O.) fever follwing various operations (extra-urinary operations and urinary operations) , detection , diagnosis , preventive and defentive treatment .

CHAPTER 3

THE PATHOPHYSIOLOGY OF FEVER

THE NORMAL BODY TEMPERATURE

According to walter and Israel (1979) and Thomas J. Marrie (1985), fever has been recognised since ancient times, however measurements of body temperature were not made till comperatively recently. Reliable clinical thermometers became available in the 17th century , but it was not until the 19th century that they were used to any extent.

BODY TEMPERATURE:-

Is usually measured with the thermometer placed under the tongue or else in the axilla, groin; or rectum, of these readings obtained from the axilla and groin show the widest variation, and are generally regarded as being least reliable (Walter and Israel 1979). Measuring the urine temperature has also been advocated , and it aproximates to the rectal temperature (Fox R.H .1971).

NORMAL BASAL BODY TEMPERATURE:-

Is generally accepted to be 37° C (98.6° F)*, determined orally. The "normal" figure for any given time of day varies among individuals . So, the normal oral temperature rang is 36° to 37.8° C (96.8°-100° F); rectal temperature are approximately 0.6° C (1° F) higer (Eugen L. speck. 1986) .Axillary temperatures are up to 1.0° C below blood heat(Martin.J.Wood. 1984).

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* CENTIGRADE AND FAHRENHEIT SCALES:-

- To convert fahrenheit to centigrade:- °C = (°F -32)x5/9
- To convert centigrade to fahrenheit:- °F = (°C x9/5)+32

DIURNAL VARIATION:-

Walter and Israel (1979) stated that the maximum temperature is generally attained at 6 p.m., while it is at its lowest at 3 a.m. This daily rhythm is consistent for each individual and is independent of the environment (Martin J. wood,1988).

According to Thomas J. Marrie (1985), changes in daily body temperature vary with age and sex; maximal temperature tends to be lower in elderly persons than in young adults; young women have greater fluctuation from morning to evening than do young men. Many women have peak daily temperature of 37.8 ^{o} C during the two weeks prior to start of menstruation.

BODY TEMPERATURE REGULATING MECHANISMS

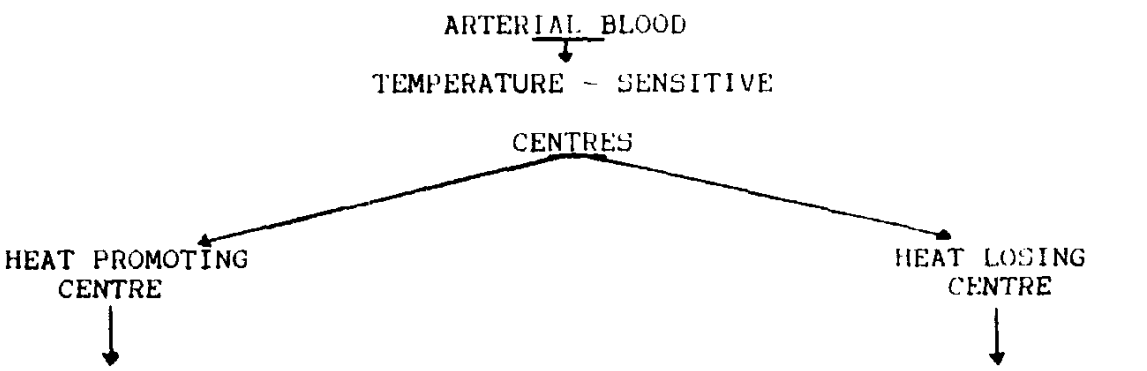
Walter and Israel (1979) summarized the mechanisms that regulate body temperature (see fig 1). The authors stated that these mechanisms came into play in response to impulses from the temperature-sensitive receptors which are situated both centrally within the nervous system (the hypothalamus) and peripherally, mainly in the skin, as follows :-

-A- THE CENTRAL RECEPTORS :- situated in the anterior hypothalamus in the preoptic area,is a group of nerve cells that are sensitive to the temperature of the arterial blood reaching them; there are two main areas:-

-1- AN ANTERIOR HEAT LOSING CENTRE, which when stimulated leads to changes in the remainder of the body, causing increased heat loss.

-2- A POSTERIOR HEAT PROMOTING CENTRE, which when stimulated leads to increased heat production and conservation..

-B- THE PERIPHERAL RECEPTORS :- mainly in the skin. The peripheral receptors are of greatest importance when the body's temperature falls. Impulses then pass to the posterior centre in the hypothalamus and lead to conservation of heat.



Cutaneous vasoconstriction

Increased metabolism via adrenals and sympathetic activity.

Increased muscle tone

Shivering

Cutaneous vasodilatation

No adrenal stimulation

Sweating

Increased cutaneous vasodilatation

FIG. (1)

Diagram to illustrate the principal heat regulating mechanisms (Walter and Israel, 1979).