RETROSPECTIVE STUDY OF MENINGITIS IN THE LAST FIVE YEARS IN ABBASSIA FEVER HOSPITAL

THESIS

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BY

MOHAMED GALAL EL HARIDY
M.B., B. Ch.

SUPERVISORS

Prof. Dr. MOHAMED ALI MADWAR
Prof. of Tropical Medicine
Faculty of Medicine,
Ain Shams University

Dr. MOHAMED FAWZY MONTASER
Assit. Prof. of Tropical Medicine
Faculty of Medicine,
Ain Shams University

AIN SHAMS UNIVERSITY
FACULTY OF MEDICINE
TROPICAL MEDICINE DEPARTMENT
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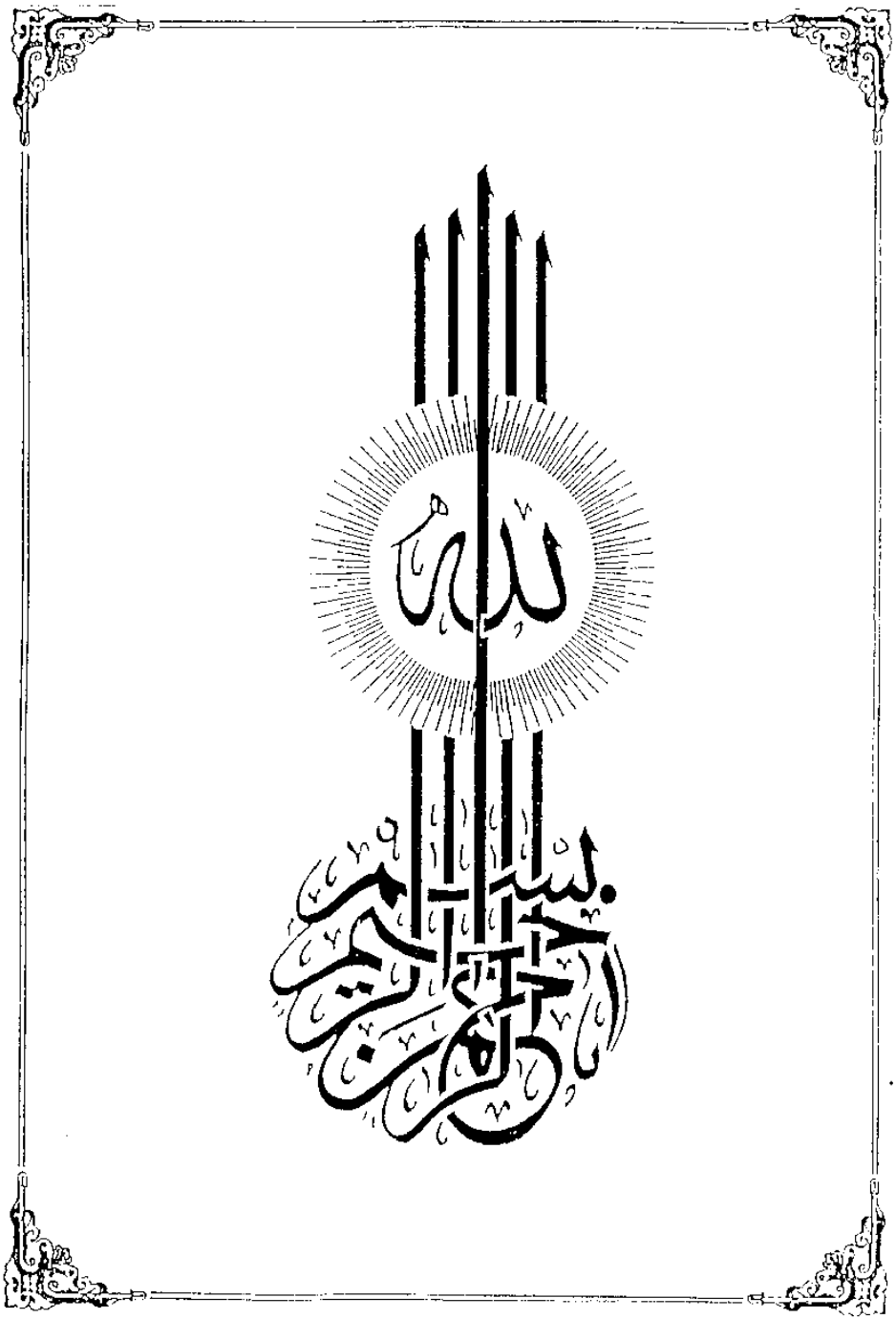

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INTRODUCTION

In the Arab Republic of Egypt, in spite of the improvement of the Socio-environmental conditions of the population and the extensive network of public health services, yet some infectious diseases are still common such as meningitis.

Records from Abbassia Fever Hospital which is the biggest fever hospital in the Arab Republic of Egypt, comprising 1500 beds, show that meningitis is more or less of a repeated occurance.

Bacterial meningitis still presents a life threatening problem especially in children.

THE AIM OF THE WORK

The aim of this study is to trace the spread and compare the incidence of meningitis in the last five years in Abbassia Fever Hospital. The established and recent methods of rapid diagnosis, also the various lines of treatment will be analysed.

MATERIAL AND METHODS

Retrospective study on patients with meningitis in Abbassia Fever Hospital in the last five years, will be carried out.

Analysis of data and the incidence of meningitis from 1980 to 1984 in Abbassia Fever Hospital will be carried out.

MENINGITIS

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Meningitis is an inflammation of the arachnoid, the Pia mater and the interventing cerebrospinal fluid. The inflammatory process extends throughout the subarachnoid space about the brain and spinal cord and regularly involves the ventricles (Swartz , 1985).

Though north of the classical Trans-African " Meningitis belt " ,Egypt experiences a sizable incidence of acute bacterial meningitis (Miner and Edman, 19/8).

Meningitis can be caused by almost any infectious agent but most commonly are due to pyogenic bacteria, viruses, spirochetes and Fungi and rarely protozoal. (Swartz , 1985).

Three organisms are accounted for the majority of reported cases of acute bacterial meningitis which are ;

1- Neisseria meningitides

2- Streptococcus pneumoniae

3- Haemophilus influenzae.

(Minner and Edman, 1978).

Wistreich and Lecktman (1980) classified meningitis into the following :

1- Pachy meningitis:

Inflammation of the dura mater.

2- Leptomeningitis :

Inflammation of the pia mater and the arachnoid of the brain and spinal cord.

The first of these conditions is a localized infection and practically every case results from a direct extension of an infection located in the surrounding tissues. Usually inflammation of the dura mater occurs as a complication of infected skull fractures or as a related manifestation. The dura appears to limit the infection and prevent involvement of the leptomeninges.

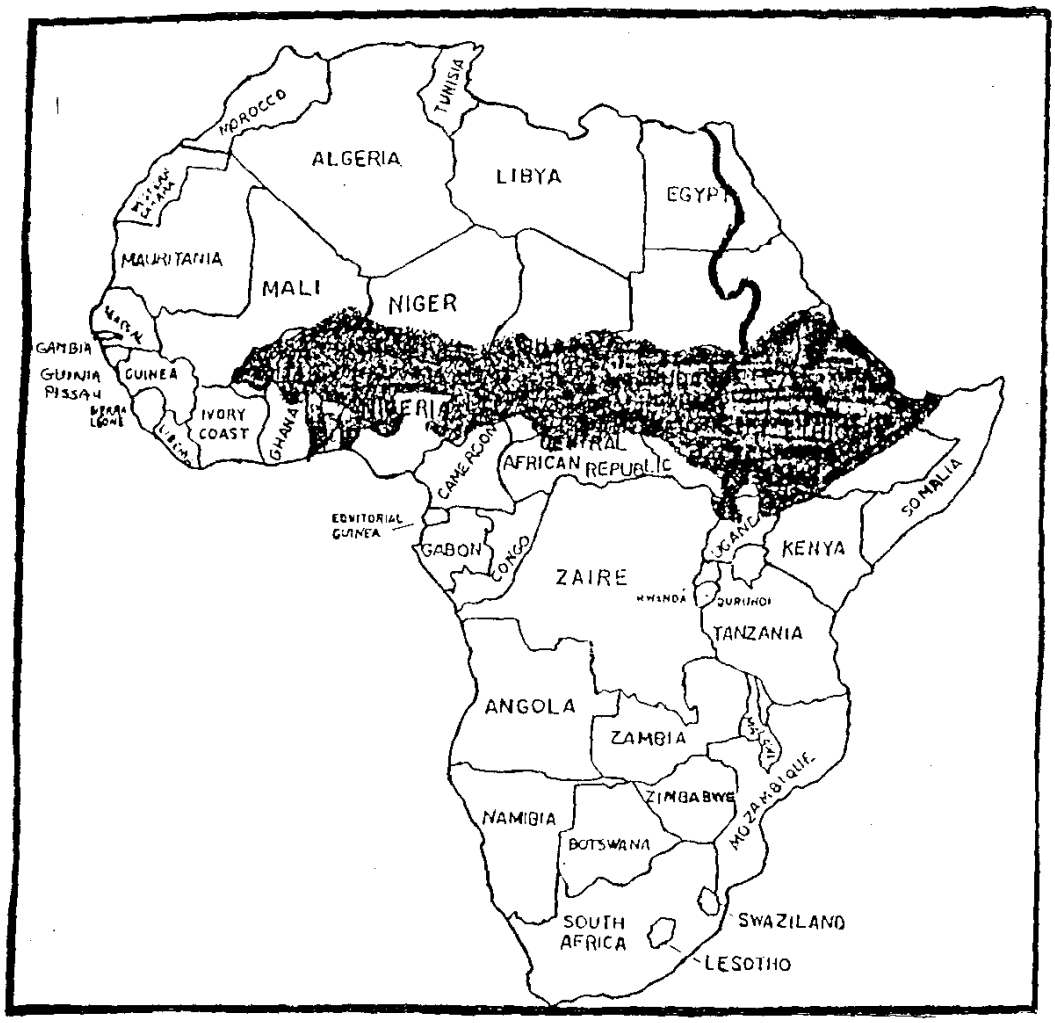
Although the infection may be effectively localized by the dura, it may spread to the leptomeninges of the brain by means of infected veins.

Leptomeningitis can be classified according to Braude (1981) :

1- Purulent bacterial meningitis.

2- Tuberculous meningitis.

3- Viral meningitis.



Africas " Meningitis Belt ".

From Tropical and Geographical Medicine P. 759 (1985)

ACUTE BACTERIAL MENINGITIS

ACUTE BACTERIAL MENINGITIS

(PURULENT MENINGITIS)

Purulent meningitis is an acute life threating illness caused by invading bacteria that elicit an inflammatory response in the meninges (Pia and arachnoid).

The incidence of meningitis varies inversely with the age.

In order to manage this condition, rapid diagnosis and early institution of specific antibiotic therapy are essential. Despite the availability of effective antimicrobial agents, the case fatality rate of bacterial meningitis is approximately 15% (Hoffman, 1981).

Routes of infection:

Inflammation of leptomeninges occurs due to the following :

1) Direct extension of disease from primary foci of infection located in other parts of the body (ear, paranasal sinuses, osteomyelitic foci in the skull). (Adams and Petersdorf , 1977).

2) By means of blood stream (Hematogenous route). Microorganisms present in the circulation of the individual possess a great difficulty in entering

the central nervous system because of the so called blood brain barrier. Unless some form of injury e.g. head trauma or other condition occur which could alter the permeability of the barrier, organisms are unable to penetrate (Wistreich and Lecktman , 1980).

3) Infection can be introduced through the injection of contaminated solution , such as local anaesthetics, into cerebrospinal fluid.However once infectious agents gain entrance to the brain and the adjacent meninges, the invasion and the destruction of the nervous tissue can proceed rapidly (Wistreich and Lecktman , 1980).

Etiology of Purulent Meningitis (Hoffman , 1981)

Common causative agents :

1- Neisseria meningitides:

2- Diplococcus pneumoniae

3- Hoemophilus influenzae.

Uncommon causative agents :

- Listeria monocytogenesé.
- Staphylococcus.
- Beta-haemolytic streptococcus.

- Pasteurella multocida.
- Escherichia coli.
- Other gram negative bacilli.

Other rare causes :

- Proteus mirabilis.
- Clostridium Welchii.
- Neisseria catarrhalis.