ENTERIC CAMPYLOBACTERIOSIS

Thesis
Submitted for partial fulfilment of
M.D. Degree
In Clinical and Chemical Pathology

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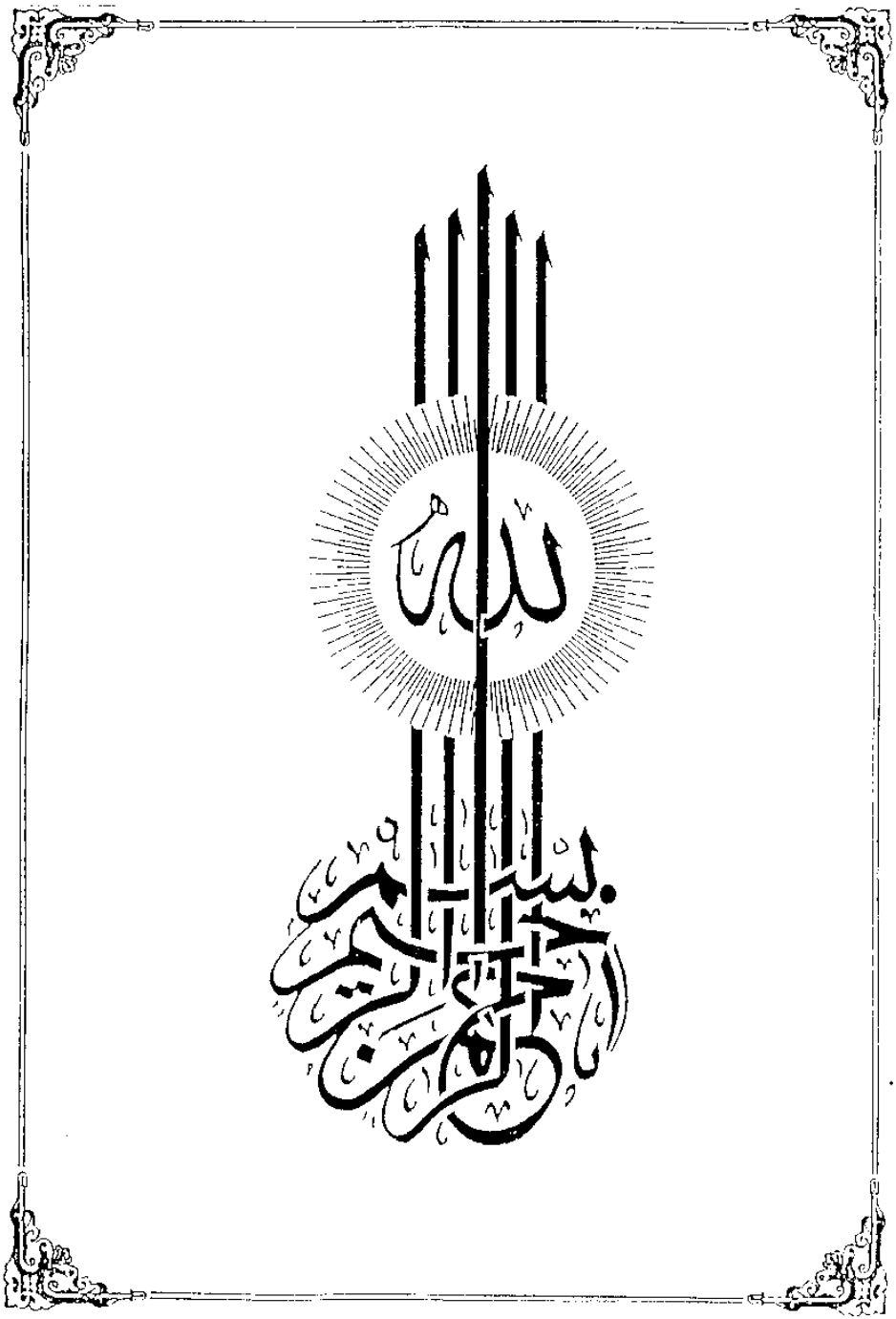
1991

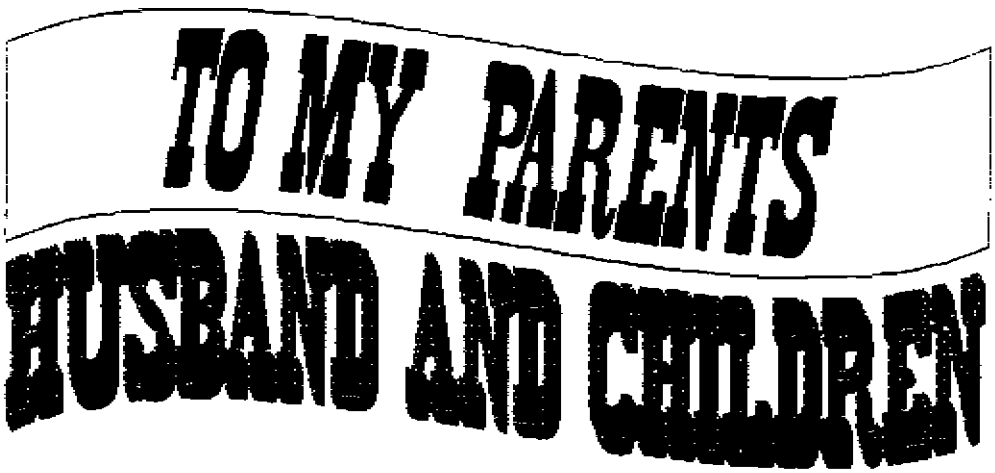
بسم الله الرحمن الرحيم

سبحانك لا علم لنا إلا ما علمتنا
إنك أنت العليم الحكيم

صدق الله العظيم

سورة البقرة آية ٣٢





ACKNOWLEDGEMENT

My gratitude and thanks should be submitted to God for his kind support to me.

I wish to express my sincere gratitude and thanks to Prof. Dr. **ISLAH HASSAN EL-FALAKY**, Professor of Clinical Pathology, Ain Shams University, for her constructive supervision, guidance, honest assisstance and sympathetic help.

I'm greatly indebted to Prof. Dr. **Ibrahim Khalil Ali**, Professor of Clinical Pathology, Ain Shams University, for his generous help, supervision and honest guidance.

My deepest thanks and gratefulness to Prof. Dr. **Mohamed Mansour Ragheb**, Professor of Surgery, Ain Shams University, for his useful advice and guidance.

I'm deeply grateful to Dr. **Hadia Hussein Baseem**, Lecturer of Clinical Pathology, Ain Shams University, for her valuable help, advice and guidance.

I'm greatly indebted to Dr. **Helmy El-Ghor**, Lecturer of Surgery, Ain Shams University, for his help in the completion of this work.

Last but not least, this person can not be forgotten who save a lot, my husband, Dr. Zakaria Abu El-Waffa.

I wish to thank every one who give me a hand to bring this work to the light.

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INTRODUCTION

The current interest in bacteria belonging to the genus campylobacter started with the establishment of a causal relationship with acute diarrheal disease. Two closely related species in this genus; campylobacter jejuni and campylobacter coli, were recognised as important agents of diarrhea in both developed and developing countries (Butzler and Skirrow, 1979).

Campylobacter jejuni has become recognised as one of the most common enteric pathogens throughout the world (Blaser and Reller, 1981). Such organism which is a major cause of gasteroenteritis in humans has been currently being isolated as frequently as Salmonella and shigella species (Martin et al., 1984). Moreover, in southern Sweden, campylobacter jejuni and campylobacter coli are more common causes of bacterial diarrhea than salmonella, shigella and yersinia enterocolitica together (Walder and Forsgren, 1982). In a collaborative study involving eight-hospitals in the United states conducted during (1980), the overall isolation of campylobacter jejuni from fecal specimens was greater than that for salmonella and shigella species (Koneman et al., 1983).

Campylobacter coli is not encountered as frequently as campylobacter jejuni as a cause of human enteric disease (Martin et al., 1984).

The increased use of selective media is an important factor in making these organisms the most frequently identified bacterial cause of diarrhea (Jones et al., 1980).

Campylobacter enteritis is an acute self-limiting disease which is clinically similar to other types of acute infective diarrhea (Karmali and Fleming, 1979). While the most common symptom is diarrhea, coincident abdominal pain and the appearance of blood in the feces may lead to hospital admission and sometimes to even laparotomy (Jones et al., 1980). The pain is periumbilical and crampy and may antedate other symptoms or may persist after the return of normal stool. It may simulate appendicitis, mesentric adenitis, intussusception and visceral perforation (Skirrow, 1977).

Recent reports emphasize the existence of an appendicitis mimicking syndrome caused by campylobacter infection. Clinical features may be indistinguishable from acute appendicitis, especially if abdominal pain is the major complaint and diarrhea is mild or absent (Puylaert et al., 1988). Acute abdomen is most often seen in young adults and elder children (Mertens and De Smet, 1979).

Aim of the work

This work is aimed to study the incidence of campylobacter enteritis* in patients suffering from diarrhea or acute abdomen who are suspected to have acute appendicitis.

Identification of the organism will be done by different methods of isolation, biochemical reactions and serological identification. A trial for serodiagnosis of the patients' sera by different serological methods will be done.

REVIEW OF LITERATURE

HISTORICAL ASPECTS:

The name campylobacter is derived from the Greek campylo, meaning "curved" and Bacter, meaning "rods" (Retting, 1979).

The organisms now classified in the genus campylobacter were a problem for veterinarians for many years. A "vibrio" was reported as the cause of abortion in sheep in (1909) and in cattle in (1913). A "spirillum" was isolated from aborted calves in (1918), and later the organism was named vibrio fetus by Smith and Taylor (1919) (Hebert et al., 1983).

The organism presently classified as campylobacter jejuni was discovered in (1931) by Jones et al. as the causative agent of dysentery in cattle. Twenty six years lapsed before King (1957) described a group of microaerophilic, motile curved rods isolated from the blood of children with acute dysentery and she designated the organisms "related vibrios". King mentioned that the vibrio isolated might be closely related to the organism described as vibrio jejuni by Jones et al. in (1931) and that the organism might be more important as a cause of childhood diarrhea of unknown etiology than realized (Koneman et al., 1983).

In (1963), Sebald and veron proposed the genus campylobacter and in (1973), Veron and Chatelain

reclassified vibrio fetus as campylobacter fetus and the related vibrios as campylobacter jejuni and campylobacter coli (Hebert et al., 1983).

Indeed before (1973), campylobacter was not considered as an important cause of human disease. This organism is now recognised as one of the most common causes of infectious diarrhea (Ryan et al., 1984).