ADHESIVE INTESTINAL OBSTRUCTION

THESIS

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By
ALAA EL-DIN ABDEL REHIM MANSOUR
M. B., B. Ch.

Supervised By

Prof. Dr. MOHAMMED SAMEH ZAKI
Prof. of General Surgery

Dr. REDA MAHMOUD MOUSTAFA
Lecturer of General Surgery

Faculty of Medicine
Ain Shams University

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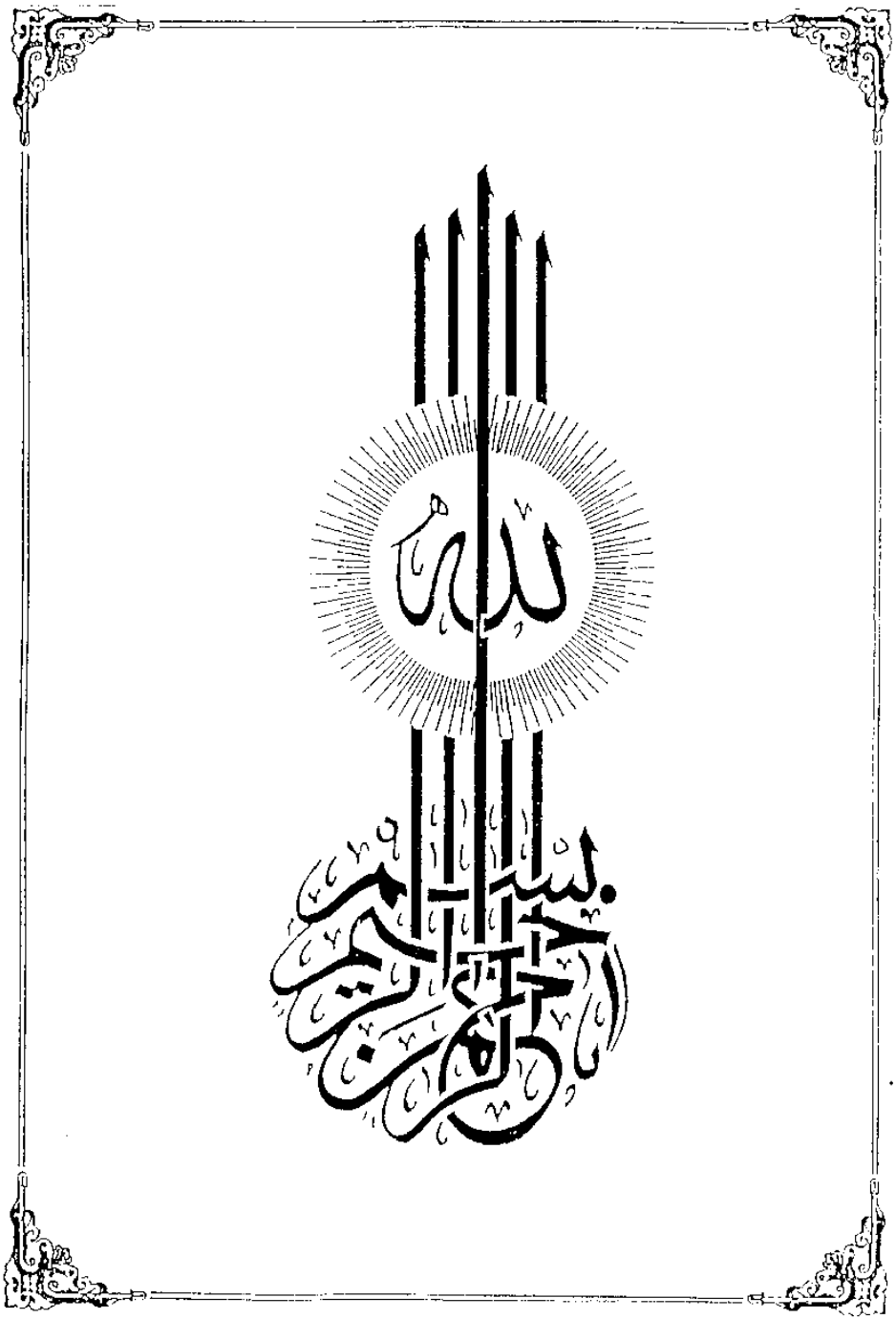
«وقل رب زدني علما»

صدق الله العظيم



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INTRODUCTION

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Obstruction of the small intestine is one of the most common surgical emergencies and comprises approximately 20 % of all acute surgical admissions. The mortality rate is still disturbingly high, although it has fallen from the 60 % of four decades ago to approximately IO %, if all types of obstruction are considered. Three factors are responsible for the lower mortality rate; intestinal decompression, increased understanding of the fluid and electrolyte problems involved, and the use of antibiotics (Macbeth, I977).

Noer (I963) defined acute intestinal obstruction as any condition associated with failure in forward progress of intestinal contents. He also stated that intestinal obstruction is never a primary entity, always a secondary disorder, resulting from other primary pathological condition.

One of the major unsolved problems which continues to confront surgeons throughout the world is the management of patients with bowel obstruction secondary to intestinal adhesions. Postoperative adhesive bands account for over than 50% of the patients with small intestinal obstruction. The management of these patients is still controversial (Hofstetter, I98I).

White (I956) described the patient with multiple abdominal scars from previous unsuccessful operations to be one of the most distressing problems in surgery when he returns with recurrent or chronic intestinal obstruction.

Bizer et al. (I98I) reviewed 405 patients with mechanical small bowel obstruction. They reported that the aetiology of obstruction was adhesions in 300 cases (74 %). Mortality rates for patients with acute mechanical intestinal obstruction have been declining since I900. In spite of this decline there is no unanimity of opinion regarding the indications for operative management and the role of conservative therapy. Failure to resolve basic question about the indications for surgery has led to unnecessary surgery in many patients who may have improved without it.

Adhesions can be classified into congenital and acquired. Abdominal adhesions are seldom congenital; they may follow injury or inflammation of the peritoneum and, indeed, adhesions giving rise to intestinal obstruction are nearly always preceded by operation or by a local or diffuse peritoneal inflammation. Man made adhesions are the most common cause of adhesive intestinal obstruction. Success in the treatment of acute intestinal obstruction depends

largely upon early diagnosis, skillful management, and appreciation of the importance of treating the pathological effects of the occlusion just as much as the cause itself. Adhesions had become more and more common, and this, inturn, can be attributed to the enormous increase in the frequency of abdominal surgery.

AIM OF THE WORK

It is the purpose of the present work to find a rational attitude and study the subject of adhesive intestinal obstruction regarding the aetiology, diagnosis, the validity of different methods of prevention, and to assess the merits of various methods of management.

HISTORICAL REVIEW

Sydenham (I676) had been an ardent advocate of opium in the management of acute obstruction. Hyph Owen Thomas (I879) had the impression that bowel obstruction was usually functional rather than mechanical in nature. (Wangensteen, I978).

The true causative agents or factors of peritonitis were unknown until Hunter, in the late decades of the eighteenth century, described three common clinical causes of peritonitis frequently observed to produce adhesion formation. He named the sticky substance holding the bowel surfaces together " gluten ". (Boys, I942).

In the eighteenth century, French surgeons had successfully operated for strangulated hernia with advanced intestinal gangrene. Even so, the surgery of acute intestinal obstruction, as of most other acute lesions of the abdomen, lagged badly. Percutaneous intestinal puncture, an eighteenth century innovation, concerning which Mensching (I756) was enthusiastic, continued to be popular for more than a century. The patients eventually died of starvation and continued obstruction. Greves (I884) lent operative intervention a strong forward thrust. He had treated a patient for five days with taxis, enemas, and intestinal insufflation, without success. Then he called a local surgeon, Mr. Puphe, who operated under antiseptic precaution and divided a band obstructing

the ileum, with recovery of the patient. (Wangensteen,I978).

In I802 Bichat published the first famous work on peritonitis with its resulting adhesions which revolutionised the concept of intra-abdominal disease in general and of peritoneal disease in particular. From I800 to I870, due to the increasing incidence of autopsy examinations and improvements in the microscope, not only was gross peritonitis established as the essential pathologic process producing peritoneal adhesions, but also the common clinical causes of peritonitis were discovered and recorded. The pathologists, in the period from I870 to I900, demonstrated the pathologic events in the formation of adhesions and observed that such adherence are generally caused by one of the four cardinal types of inflammation (traumatic, bacterial, thermal, chemical). In I887 Weigert developed a specific stain for Hunter's "gluten"which was thereafter known as "fibrin". (Boys,I942).

Throughout most of the nineteenth century,metalic mercury was recommended as a helpful agent in bypass the obstructive lesion in the bowel. However, the method had its limitations. (Wangensteen, I978).

Operative lysis of adhesions was first proposed and practical to some extent during the early and middle of the I9 th century. One of the earlier references to such

The fact that no satisfactory substance or operative technique that would prevent peritoneal adhesions was known led Noble to develop his method for producing controlled adhesions. Although first described in I937, this method was not widely noted until I949 when Lord, Howes, and Jolliffe described its use in three patients. (Connolly and Smith, I960).

Tools to cope more effectively with bowel obstruction problems have been gradually evolving over the past four decades. It is possible to recognise most varieties of acute intestinal obstruction early enough to salvage the patient from the threat of a disorder that a few decades ago commended a forbidding mortality. (Wangensteen,I978).

CLASSIFICATION