DIFFERENT LINES OF MANAGEMENT OF NON CALCULAR OBSTRUCTIVE JAUNDICE

AN ESSAY

Submitted for Partial Fulfilment of
MASTER DEGREE
in
GENERAL SURGERY

BY

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M.B.B.Ch., 1984

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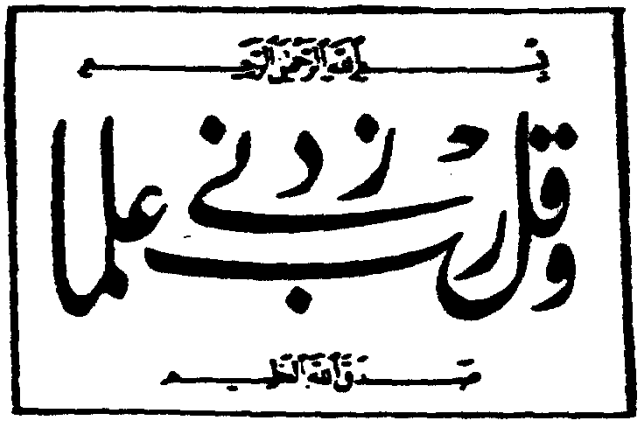
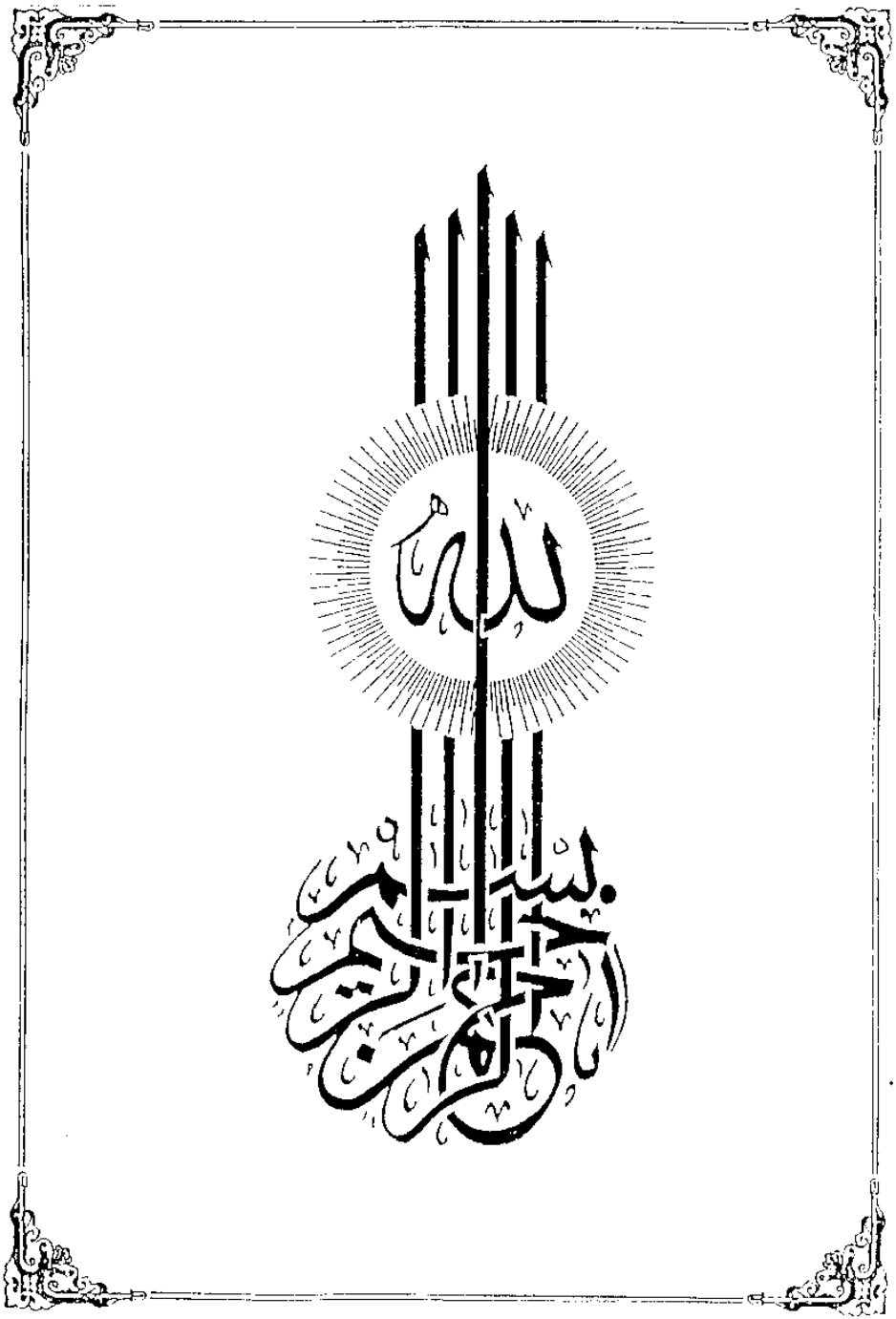
1989





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ACKNOWLEDGEMENT

Thanks for Prof. Dr. ELZARIF ABDEL NABI ALI for this study to be in this final form, so I am greatly honoured to express my gratitude and respect to him for his advise, help and encouragement which enabled me to put this study hoping that it will be of some benifit.

TO MY FATHER

INTRODUCTION

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Jaundice is a syndrome characterized by hyperbilirubinaemia and deposition of bile pigments in the skin and mucous membranes giving a yellow appearance to the patient **(Sherwin, 1984)**.

It is one of the major symptoms and signs encountered during surgical practice. It is differentiated according to the pathological features into three categories; haemolytic, hepatocellular and obstructive jaundice **(Walter and Israel, 1987)**.

Obstructive jaundice as a main category is seen associated with many lesions obstructing the bile flow. These may be intra-hepatic or extrahepatic which is more important from the surgical point of view; and those include calculi, malignant obstruction or benign obstruction. Our study is concerned with the non calcular causes of obstruction either benign or malignant. Biliary malignancies are about 7 percent of the digestive tract tumours **(Tompkin et al., 1981)**. Surgical mortality rate in jaundiced patients range between 4 to 43 percent **(Grieg, 1988)**.

The management of noncalcular causes of obstructive jaundice has been greatly advanced in the last twenty years; every year brings new advocates and facilities.

In this study we are going to discuss the different lines of management of non calcular causes of obstructive jaundice including

the surgical and non surgical approaches. Before this we introduced to this discussion, with a short review to the anatomy, causes and the pathological classification of these causes, and a short account on the different investigating procedures used for the biliary passages.

I hope that this study can help to some degree those who are interested in this subject and I am greatly honoured to express my gratitude to Prof. Dr. Elzarif Abdel Nabi Ali for his kind advise and encouragement that enabled me to put this study.

HISTORICAL REVIEW

I. HISTORICAL REVIEW

Almost from the begining of the recorded time, the liver has been the object of much speculation, study and experimentation. By the ancients it was accorded a position of first importance in bodily function. They thought that, in the liver, the blood is mixed with chyle and from there spread through the entire body **(Child, 1954).**

In ancient Egypt, at approximately 3000B.C. during the period of Imhotep, the God of healing, Papyri recordings describing various maladies including jaundice were found **(Crass, 1987).**

During Hammurabi's rule of ancient Mesopotamia, around 1900 B.C., the priests practiced hepatoscopy, they regarded the liver as the seed of life **(Crass, 1987).**

The biliary system was first recognised in early medical writings, in about 2000 B.C., when the Babylonians described the gallbladder and extrahepatic biliary ducts **(Herman and Vogt, 1987).**

In the Hippocratic period, four conturies B.C., the great civilisation had progressed to viewing the disease,not as a punishment for sins committed but as a deviation from normal state **(Crass, 1987).**

Galen Regarded the liver as the focus of animal heat and as an organ intended for the formation of blood and for the begining of viens **(Child, 1954).** He was the first to write about the storage

function of the gallbladder, and he appeared to be familiar with gallstones and jaundice **(Crass, 1987).**

a few highlights include:

- 1550, Gabriele Fallopio, defined the anatomy of the liver and made the first attempt to correlate its function with that of the biliary system **(Child, 1954).**
- 1654, Francis Glisson, described Gliesson's capsule **(Crass, 1987).**
- 1733, Jeanlouis Petit, described surgical procedures for the drainage of pus and gallstones, he advocated direct incision to the gallbladder if it was adherent to the abdominal wall **(Child, 1854).**
- 1851, Hientz, described bilirubin **(Crass, 1987).**
- 1883, Paul Ehrilich, put his pioneering work on bile, creating clinically relevant laboratory tests **(Crass, 1987).**
- 1892 Naengen, published the concepts of "cholangitis" and "Biliary" **(Crass, 1987).**
- 1905, Franklyn Paine Mall, carefully described the structural unit of the liver **(Crass, 1987).**

The refinement and development of the present operative techniques have been perfected during the past 80 to 100 years by many surgeons **(Crass, 1987).**

Attempts at surgical intervention for the biliary disease were minimal untill shortly before the turn of the twentieth century.

The enlighted interest in biliary surgery about this time resulted in a marked increase in direct attacks on the gallbladder, but a great reluctance for operations on the common duct was still in evidence **(Nora, 1980).**

The major contributions about this time added to a great extent in the evolution of biliary tract surgery; x-ray and vitamin K. Graham and associates developed x-ray method for diagnosing gallbladder disease prior to surgery specieficially oral cholecystography. Vitamin K came into use in the treatment of bleeding problems associated with obstructive jaundice **(Nora, 1980).**

Surgery on the biliary passages:

The first elective cholecystostomy was done by Bobbs in 1867. In 1882, the first published report of an elective cholecystectomy was by Karl Langenbuch. Von Winiwarter, 1882, performed a cholecystojejunostomy for common bile duct obstruction. In 1890, Courvoisier performed the first successful choledochotomy **(Nora, 1980).**

In 1888, Riedel was the first to perform choledochoduodenostomy for common bile duct stones. Sprangel, 1890, performed the first successful choledochoduodenostomy and gave the procedure its name

Langenbuch first suggested, in 1884, that stenosis of the sphincter of Oddi might cause biliary symptoms and first proposed

transduodenal division of the sphincter **(Schwartz, 1987).** Kocher, in 1894, advised suturing the cut edges of the papillotomy describing the operation as "internal choledochostomy" **(Nardi, 1985).**

Florkin, in 1912, described fibrotic stenosis of the common bile duct **(Neoptolomos et al., 1988).** It was untill 1913, when Archibald defined the classic operation of sphincterotomy **(Nardi, 1985).**

In 1926, Del Valle, first described a benign inflammation and fibrosis process of the ampulla of Vater and indicated that it was a factor in producing the stenosis **(Schwartz, 1987).** The concept that the sphincter can be divded, the lower bile duct exposed, done endoscopically was shown to be a feasible and practical proposition by both German and Japanese workers in 1963 **(Chung, 1987).** The first sphincterotomy through the endoscope was performed 6 years after the first endoscopic cannulation of the ampulla by McCune in 1968. In the begining, therapeutic efforts were directed towards calcular disease in the patients unfit for surgery, but success soon encouraged the development of techniques for palliation of nonresectable malignant conditions **(Chung, 1987).** The technique of continuous choledochal catheterisation with nasobiliary tube was first used by Nagai et al. in 1976 **(Wurbs, 1985).** Soehendra and Reyders-Fredrix first described a method to insert a biliary endoprosthesis in 1979, for continuous drainge **(Huibregtse, 1985).**

As regard biliary atresia the first suggestion of surgical treatment as the effective treatment was made by Holmes in 1916. Kasai, in 1974, introduced his procedure as the only possible treatment **(Howard, 1985).**

The original description of a choledochal cyst is usually accridited to the anatomist Vater, in 1748, but the first detailed case was published by Douglas in 1952. Alonso-Lej et al., in 1959, put the most generally used classification of choledochal cysts **(Howard, 1985).**

The pancreas and periampullary region:

The history of pancreatic resection dates to at least 1890, when Codivilla resected adenocarcinoma of the head of the pancreas **(Cooperman, 1985).** Halsted was the first to attempt surgical excision of an ampullary carcinoma, in 1899, when be resected a segment of the second part of the duodenum and part of the pancreas **(Taylor, 1983).**

In 1901, Opie called the attention to the common channel theory as the cause of pancreatitis. Archibald, in 1913, suggested sphincteroplasty as the treatment of pancreatitis **(Schwartz, 1987).** It was untill 1935, that Whipple reported a successful two-stage procedure for radical en-bloc resection of the head of the pancreas and duodenum. In March 1940, Whipple performed the first successful one-stage removal of the head of the pancreas and duodenum with occlusion of the pancreatic stump. **(Taylor, 1983).**

Diagnostic procedures:

Improvements in the diagnostic procedures of the biliary tract diseases gained great steps, so in addition to the utelisation of oral cholecystography and intravenous cholangiography, skilful