Evaluation of Laparoscopic Single Anastmosis Gastric Bypass for Morbid Obese Patients

Thesis

Submitted for partial fulfillment of M.D. Degree of General Surgery

By

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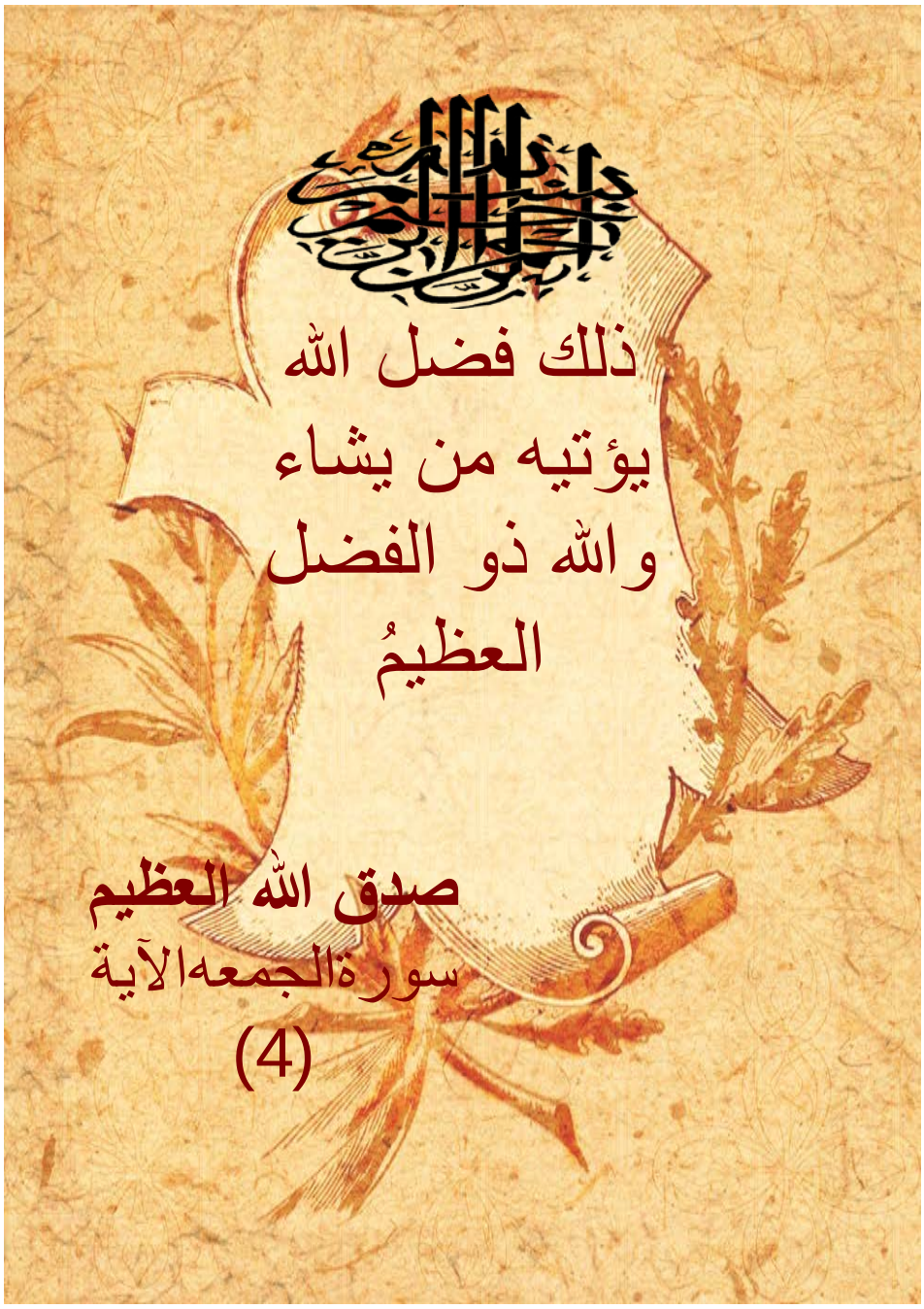
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دراسة لتقييم تصغير المعدة وتوصيلهابالصائم بمنظار البطن الجراحى كطريقةجراحية لعلاج السمنة المفرطة

رسالة

توطئة للحصول على درجة الدكتوراة فىالجراحة العامة

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List of Abbreviations

BMC :	**Bone mineral content**
BMD :	**Bone mineral density**
BMI :	**Body mass index**
BPD :	**Biliopancreatic diversion**
BPD-DS :	**Biliopancreatic diversion with duodenal switch**
CHD :	**Coronary heart diseases**
CT :	**Computed tomography**
D2O :	**Deuterium oxide**
DEXA :	**Dual energy X-ray absorptiometry**
DVT :	**Deep venous thrombosis**
ERCP :	**Endoscopic retrograde cholangiopancreatogrpahy**
EWL :	**Expected weight loss**
FFM :	**Fat free mass**
FM :	**Fat mass**
GBP :	**Gastric bypass**
GLP-1 :	**Glucagon link peptide-1**
HDL-C :	**High density lipoprotein cholesterol**
IGS :	**Implantable gastric stimulator**
IWQoL:	**Impact of Weight on Quality of Life**
LCD :	**Low calorie diets**
LDL-C:	**Low density lipoprotein cholesterol**
LMGB:	**Laparoscopic Mini- gastric bypass**
LRYGBP :	**Laparoscopic Roux-en-Y gastric bypass**

List of Abbreviations

MRI :	Magnetic resonance imaging
NHLBI :	**National Heart, Lung and Blood Institute**
NIDDM :	**Non insulin dependent diabetes mellitus**
NOTES :	**Natural orifice transluminal endoscopic surgery**
NSAID :	**Non steroidalanti inflammatory drugs**
OGTT :	**Oral glucose tolerance test**
OSA :	**Obstructive sleep apnea**
PCOS :	**Polycystic ovary syndrome**
PVN :	**Paraventricular nucleus**
RYGBP :	**Roux-en-Y gastric bypass**
SFT :	**Skinfold thickness**
TBW :	**Total body water**
VAS :	**Visual analogue scale**
VBG :	**Vertical banded gastroplasty**
VLCD :	**Very low calorie diets**
VMN :	**Ventromedial nucleus**
WHO :	**World health organization**

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INTRODUCTION

Obesity is a pan-endemic health problem in both developed and developing countries. Obesity, and in particular morbid obesity (defined as a body mass index [BMI] > 40 kg/m2), leads to a high incidence of complications and a decrease in life expectancy, especially among younger adults***(Fontaine et al.,2003).***

Obeisty is a major risk factor for type 2 diabetes (T2D), hypertension, dyslipidemia, atherosclerosis, heart failure, cancer, liver disease, obstructive sleep apnea, infertility, degenerative joint disease, depression, and dementia ***(Whitmer et al.,2008).***

Among severely obese patients, bariatric operations causeprofound, sustained weight loss, ameliorating virtually all obesity-related comorbidities and reducing long-term mortality***(Buchwald et al., 2007).***

Laparoscopic mini-gastric bypass (LMGBP), first reported byRutledge, was proposed as a simple and effective treatment of morbid obesity ***(Rutledge, 2001)***.

Rutledge et al. reported improvement or resolution of gastro-oesophageal reflux in 85 % of patients, shortness of breath in 96 % of patients, diabetes in 83 % of patients, sleep apnoea in 87 % of patients, hypertension in 80 % of patients,

hypercholesterolaemia in 89 % of patients, and urinary incontinence in 82% of patients ***(Rutledge and Walsh, 2005).***

At the same time, this procedure has its own unique advantages.It is an attractive bariatric procedure compared to the gold standard Roux-en-Y gastric bypass (RYGB) with one less anastomosis. Many thousands of these procedures have now been performed by different surgeons who believe it is a better alternative to RYGB due to shorter operative time, fewer sites for anastomotic leaks and internal herniation, shorter learning curve, ease of reversibility and revision with equivalent results in terms of weight loss and co-morbidity resolution ***(Lee et al., 2012)***.

The operation consists primarily of a long linear lesser-curvaturegastric tube with gastroenterostomy 180–200 cm distal tothe duodenojejunal junction (Ligament of Treitz). It has rightly been described as a modification of Mason's loop gastric bypass, but with a longer lesser curvature tube ***(Wang et al., 2005)***.

The most notorious controversy concerning the disadvantage of LMGB was with postoperative esophagitis and gastritis caused by bile reflux the prejudice was from old Mason's loop gastric bypass with up to 70 % of annoying bilious vomiting and gastritis reported ***(Carbajo et al., 2010)***.

Symptomatic reflux has indeed not been reported to be amajor problem after MGB. Carbajo et al. studied reflux with 24 pH and manometry in conjunction with endoscopy at 12 and 18 months after surgery in their first 20 patients, and the results were normal in all. Rutledge reported significant improvement (85 %) in reflux-related symptoms in his series ***(Carbajo et al., 2005)***.

The rate of marginal ulcer after the MGB has been 2%. This is relatively low when compared to other operations.12-14 The factors associated with the development of marginal ulcer include stapleline dehiscence, pouch size, pouch orientation, postoperative mucosal ischemia, nonsteroidal anti inflammatory drugs and H. pylori infection. By dividing the lesser curvature pouch, gastrogastric fistulas virtually do not occur after the MGB ***(Carbajo et al., 2010)***.