بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Doppler guided haemorrhoidal artery ligation in the management of symptomatic hemorrhoids.

Thesis

Submitted for Partial Fulfillment of the Master Degree in General Surgery

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List of Abbreviations

Abb.	Full term
DDD	Distal doppler-guided dearterialization
ET	Endothelin
HAL	Haemorrhoidal artery ligation
MMP	Matrix metalloproteinases
NGAL	Neutrophil gelatinase-associated lipocalin
NSAID	Nonsteroidal anti-inflammatory drugs
PPH	Procedure for prolapse and hemorrhoids
THD	Trans hemorrhoidal dearterialization
SRV	Superior rectal vein
MRV	Middle rectal vein
RAR	Recto-anal repair
RBL	Rubber band ligation
PPH	Procedure for prolapsed and hemorrhoids
MMH	Miligan Morgan hemorrhoidectomy
HALO	Hemorrhoidal artery ligation operation
DGHAL	Doppler guided hemorrhoidal artery ligation

INTRODUCTION

The word ‘hemorrhoid’ is derived from the Greek haimorrhoos, meaning flowing of blood (haima equals blood, rhoos equals flowing). The word ‘pile’ comes from the Latin ‘pila’ meaning ball or pill. The cause of hemorrhoidal disease is unknown. The prevalence of hemorrhoidal disease varies from 4% of the general population to 36.4% in general practice. The annual rate of office visits for hemorrhoidal disease is 12 for every 1000 patients in the United States, its prevalence is similar between the sexes, and increases with age until the seventh decade ***(Johanson and Sonnenberg, 1991).***

Numerous theories, concerning the pathogenesis of hemorrhoids have been proposed but the exact mechanism remains elusive. Constipation and straining were once accepted as the major cause of hemorrhoidal disease but this is considered to be a gross oversimplification. Straining excessively to pass a bowel movement is a common practice described by patients with hemorrhoidal disease ***(Loder et al., 1994).***

Clinically, classification of hemorrhoids is described as four distinct ‘degrees’ depending on the extent of prolapse. First-degree hemorrhoids are anal cushions that do not descend below the dentate line on straining, but may develop symptoms of bleeding. Second-degree hemorrhoids are when anal cushions protrude below the dentate line on straining, but retract automatically when the straining ceases. Third-degree

hemorrhoids are when the anal cushions descend below the anal verge on straining or defecation and remain prolapsed until they are digitally replaced. Fourth-degree hemorrhoids are a term used by some to describe anal cushions permanently outside the anal verge ***(Dozois and Pemberton, 2006).***

Hemorrhoidal disease can give rise to varying degrees of bleeding, anal swelling, pain, discomfort, discharge, and pruritus. Bleeding is the most common presenting complaint. Hemorrhoids in themselves rarely cause anal pain unless there is thrombosis. Diagnosis of internal hemorrhoids is usually based on symptoms, which include painless bleeding or prolapse. Bleeding is described as bright red spotting on toilet paper or dripping in the toilet bowl and normally occurs at the end of defecation and is separate from the stool ***(Dozois and Pemberton, 2006).***

Whilst hemorrhodiectomy has been the mainstay of surgical treatment, more recently other approaches have been employed including ligasure hemorrhoidectomy, stapled hemorrhoidopexy, and Doppler-guided hemorrhoidal artery ligation. Post procedural pain a disease recurrence remain the most challenging problems in the treatment of haemorrhoids. ***(Tiernan et al., 2012).***

AIM OF THE WORK

To evaluate the effectiveness and clinical outcome of doppler guided hemorrhoidal artery ligation in management of symptomatic hemorrhoids as regard pain, bleeding and recurrence.

REVIEW OF LITERATURE

Applied Anatomy of Anal Canal and Hemorrhoids:

The anatomical anal canal extends from the level of the valves of Morgagni (dentate line) to the anal margin. For surgical purposes, the anal canal may be regarded as that portion of the terminal intestine which extends from the level where the rectum passes through the pelvic visceral aperture- the anorectal ring-to the the anal margin. This concept of the anal canal is more apposite for surgical purposes and as the anorectal ring is above the valves of Morgagni, the surgical anal canal is longer than its anatomical counterpart ***(Milligan et al., 1934).***

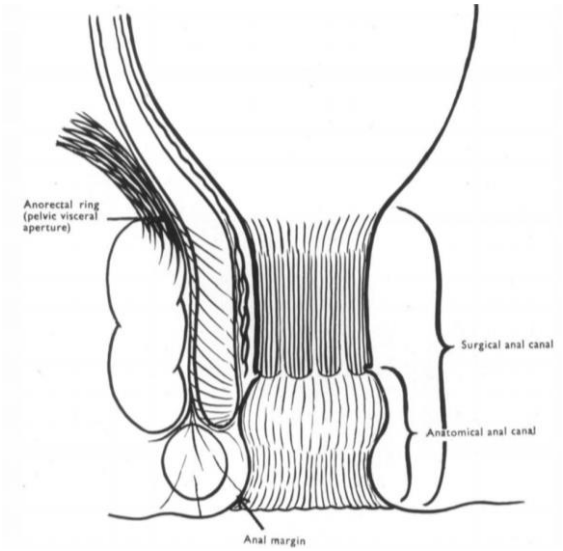

Figure (1): The surgical and anatomical anal canals ***(Milligan et al., 1934)***.