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بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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بالرسالة صفحات

لم ترد بالأصل

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بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا

إلا ما علمتنا

إنك

أنت العليم الحكيم

صدق الله العظيم

Dedicated

To

- **The memory of my father**
- **My dear mother**
- **My dear wife**
- **My lovely kids**

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Contents

Introduction

Anorectal motility disorders are one of the most important subjects in the whole field of the gastrointestinal tract motility because they can disrupt the life style.
The anorectal function depends on the complex interrelation of sensory and motor function, which is coordinated within the central nervous system.
The diagnosis of function disorders of the anorectum, incontinence and constipation requires combination of a careful history, physical examination and the use of special diagnostic techniques like radiographic studies, neurophysiological studies of pelvic floor striated muscle and pudendal nerve latencies, electromyography, endosonography and anorectal manometry.

The anorectal manometry is a non invasive, safe and useful procedure for exploring anorectal function in severe cases, it is an index of the resistance of the sphincters to the passage of faeces **(Stabile, 1994)** and provide a far more indicator of anal sphincters tone than can be achieved by digital examination **(Coller, 1987).**

The anal endosonography is very effective and accurate method in the study of the morphology and in evaluating the damage to the anal sphincters also it is not painful and acceptable to the patient.
(Emblem, 1994).

The Electromyography is useful in the study of the function of the pelvic floor; it is helpful in evaluating the extent of the damage to the muscles caused by traumatic events (**Stabile, 1994**).

Benign anorectal diseases {hemorrhoids, anal fissure, rectal prolapse, incontinence, and constipation.} are the basic element of this essay.

In the hemorrhoids there is high anal pressure due to the increased activity of internal anal sphincter and this supported by the anal manometry where in this patient the anal pressure is reduced after dilatation or haemorrhoidectomy, but the haemorrhoidal disease patient can be classified into two main groups, the high manometric findings group and the normal or low manometric findings group (**Arabi, 1977**) where the group which has high manometric findings will be served very good if additional sphincterotomy was done while the group of low manometric findings may be in harm if they face manual dilatation or sphincterotomy.
(Schuster, 1982).

In anal fissure there is high anal pressure due to the associated sphincter spasm where the preoperative manometric study of anal pressure in cases

of hemorrhoids and fissure will help in {1} choosing the type of operation (fissurectomy alone or combined with sphincterotomy) and in {2} determining the extent of sphincterotomy to avoid the disabling postoperative complication, where the postoperative soiling and incontinence were more apparent in patients with high reduction of their anal pressure after the operation mainly in whom sphincterotomy was done , but as the spasm is not a constant finding in anal fissure and in hemorrhoids so incision of the internal sphincter in a patient with normal tone or in a patient with deficient striated muscle may lead to fecal soiling (**Notaras,1971**) and this show the importance of the preoperative anorectal manometric study (**Pescatori,1988**) .

The fecal incontinence is a disabling problem, which may be attributed to a mechanical defect in the muscle, inadequate innervations of the sphincter mechanism or idiopathic causes, where the manometric study can differentiate between mechanical & neurogenic defects and the results can be confirmed by transanal ultrasound, electromyography anal study and also by nerve conduction studies of the pudendal and spinal nerves to diagnose the neurogenic cause.

In the rectal prolapse with incontinence there is lower resting anal pressure than prolapse with continence preoperative anal pressures study are of predictive value in identifying patients who are likely to remain incontinent after rectopexy (**Keighley, 1993**).

In the constipation the causes may be * defective fecal propulsion due to dysmotility of the colon, rectum or whole gut or * defective fecal expulsion i.e. obstructed defecation where the anal manometry and EMG studies of the sphincter, pelvic floor muscle will help much in the diagnosis and aid the management.

From the above we can know the importance of studying of anorectal pressure in determining the line of treatment in the benign anorectal diseases.

Aim of the Essay

To evaluate the importance of the anorectal motility disorders study in the management of the benign anorectal diseases. Also we will shed some light on the anorectal manometric studies and anal endosonography for proper selection of operation needed in patients with hemorrhoids, anal fissure, anal incontinence, rectal prolapse and constipation.

Historical background of the anorectal research

The history of anorectal research can be divided into three periods:

In the first period Galen (129-200 A.D.) described the anatomy of the anal sphincter and its role in continence and defecation, in 1543 Vesalius and the artist John Calcar of cline published the first illustration of anorectal anatomy.

In the second period, manometry studies gave much information on anorectal function, beginning with the demonstration of the rectoanal reflex; by Gowers in 1877. In 1895, Lang ley and Anderson found that stimulation of the lumbar sympathetic nerves in the cat caused relaxation of the rectum and contraction of the internal anal sphincter.
In 1940, White et al refined the method of using their colonmetrogram in patients with lesions of the brain, spinal cord and sacral nerves, they found that compliance of the colon and rectum depended on the level of the lesion**(Rasmussen, 1994)**.
Goligher and Hughes in 1951 examined the rectal and colonic sensation using air filled balloon and they found that rectal sensibility was mediated by the parasympathetic system while colonic sensibility was mediated by sympathetic system.

The third period of anorectal research started with the introduction of electromyography needles into the anal sphincter. This period began in 1953 when Floyed and Walls were the first to report a systematic electromyographic study of the external anal sphincter activity in humans.

In the last 45 years, many refinements of the manometric and electromyographic techniques have ensued, studying a large number of healthy subjects and a wide variety of patients with anorectal disorders. These have shed new light on anorectal function **(Rasmussen, 1994).**

SURGICAL ANATOMY