ASSESSMENT OF ORAL METRONIDAZOLE IN PAIN MANAGEMENT POST HAEMORRHOIDECTOMY

Thesis

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INTRODUCTION

Haemorrhoids are a very common medical problem. Approximately 50% to 66% of people have problems with haemorrhoids at some point in their lives. ***(Lorenzo-Rivero, 2009)***

Haemorrhoids are normal findings vascular structures in the anal canal although, we used to use the term to refer to the disease resulting from their congestion and swelling. It is hard to evaluate the exact prevalence of haemorrhoids in a certain community as a lot of people suffering from the condition don't seek medical advice but, at least 50% of US POPULATION suffer from haemorrhoids at some times during their life span and around 5% of the population is affect at any given time. (***Lorenzo-Rivero, 2009)***

Haemorrhoids are classified into internal and external haemorrhoids according to their presence to the dentate line. External haemorrhoids are derived from ectoderm, while internal haemorrhoids are developed from endoderm. Internal haemorrhoids have 3 main sites, which are situated in the left lateral, right posterior (most common), and right anterior areas of the anal canal. External haemorrhoidal veins present circumferentially under the anoderm. Internal haemorrhoids drain into the superior rectal vein which goes to the portal system, while

External haemorrhoids drain into the inferior rectal vein which goes to the inferior vena cava. Venous connections do exist between them and the middle rectal vein, so it's a site for Porto systemic anastomosis. The exact cause of symptomatic haemorrhoids is unknown. ***(Reese et al., 2009).***

A number of factors are thought to be causes of haemorrhoids for example, Low-fiber diets, Straining and constipation. As a result of low-fiber diets intake, small-caliber stools are formed, which result in straining during defecation, which interferes with venous return causing congestion of the haemorrhoids. Also, prolonged sitting on a toilet is thought to cause some sort of decrease in the venous return in the perianal area (a tourniquet effect), causing congestion of haemorrhoids. Aging can be considered as a risk factor for developing haemorrhoids due to weakening of the supporting connective tissues and structure, and therefore facilitates prolapse. Weakening of supportive structures can also be a part of a congenital disease. It was noticed that commonly women suffer from haemorrhoids during pregnancy or post-delivery. The aetiology is no so clear but it thought to be due to hormonal changes or direct pressure. ***(Gibbons et al., 1988)***

About 40% of patients suffering from pathological haemorrhoids are with no significant symptoms. Patients may suffer from only internal or external haemorrhoids but a combination of both also is reported. ***(Sun and Migaly, 2016)***

Bleeding per rectum is a frequently reported complain especially with internal haemorrhoids during or following bowel movement. Pain is a frequent symptom especially from thrombosed external haemorrhoids because of its somatic innervation. The patient may come complaining of presence of a skin tag which is a result from healing process. Also, large haemorrhoids may interfere with hygiene, resulting in irritation of the surrounding skin causing itchiness around the anus. And abnormal felted perineal mass due to prolapsed haemorrhoids. ***(Schubertet al., 2009)***

Haemorrhoids are usually diagnosed by physical examination, inspection of the anus and the surrounding area can verify presence of external haemorrhoids and prolapsed internal ones, which may be or may be not thrombosed. Full examination by doing PR to detect any polyps, tumours, enlarged prostate or abscess may be not possible without proper sedation because of pain. Differentiation between external and internal haemorrhoids is according to their relation to dentate line. ***(Schubert et al., 2009)***

Conservative treatment usually consider advice of having high dietary fiber diet, plenty intake of water and oral fluids to keep good hydration, nonsteroidal anti-inflammatory drugs, sitz baths, and rest. ***(Lorenzo-Rivero, 2009)***

Topical agents and suppositories are available, but of little value especially with advanced degrees. Topical Steroid-containing drugs should be discontinued for more than 14 days, for fear of its complications. Topical analgesic agents such as lidocaine and a vasoconstrictor such as epinephrine are used to relieve the pain and facilitate defecation. ***(Misra, 2005)***

In advanced cases physicians consider surgical procedures as Rubber band ligation which is usually the first-line of treatment especially in those with grade 1 to 3. Success rate is estimated to be about 87%, with a complication rate up to 3%. Also, Sclerotherapy has success rate about 70% for four years after treatment.

Other methods like electrocautery, infrared radiation, laser surgery or cryosurgery can be effective for haemorrhoids; they are used only when other methods fail.

Excisional haemorrhoidectomy is usually the first and most effective line of treatment in severe cases, but the post-operative pain is usually significant and is the most important complications and requires 2–4 weeks for recovery. Excisional

haemorrhoidectomy is the recommended treatment in patients with thrombosed external haemorrhoid especially within 24–72 hours. Doppler-guided, trans-anal haemorrhoidal de-arterialization also can be done and have less complications. Stapled haemorrhoidectomy is less painful and has more rapid healing process compared to complete removal of haemorrhoids, but recurrence is usually reported. ***(Buntzen et al., 2013)***

All surgical treatments have complications including bleeding, infection, anal strictures and urine retention and risk of faecal incontinence. The most important reported complications are the post- operative pains. (***Sun and Migaly, 2016).***

AIM OF THE WORK

Assessment of oral metronidazole in pain management post Haemorrhoidectomy.

Chapter 1

Haemorrhoids

❖ Anatomy of anal canal

The anal canal is the last portion of the rectum and is about 3-4 cm long. It starts 1 inch below and in front of the coccyx at the level of pelvic diaphragm and ends at the anal verge. It is an embryo-logically complicated structure. It looks like as if two tubes are overlapping. One tube enclosing the other. The external tube is made up of the external sphincter and the pelvic floor muscles that are mostly composed of the levator ani muscle. The internal tube is innervated by the autonomic nervous system and forms the mucosa, sub mucosa, internal sphincter and conjoined longitudinal muscle. ***(Yang, 2017).***