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EFFICACY OF SCLEROTHERAPY FOR MANAGEMENT OF GRADE II HAEMORRHOIDS: A CROSS SECTIONAL OBSERVATIONAL STUDY FROM CENTRAL INDIA

Dr. Anil Akulwar
Associate Professor Dept. of General Surgery MGMS Sevagram Wardha, Maharashtra

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Address for Correspondence: Dr. Anil Akulwar, Associate Professor Dept. of General Surgery MGMS Sevagram Wardha, Maharashtra

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ABSTRACT:

Background: Haemorrhoids is an anal disorder that has a negative impact on one's quality of life by causing severe pain and discomfort. Sclerotherapy injections are often used to treat haemorrhoids.

Aims: The aim of this study was to see if sclerotherapy could benefit with grade II haemorrhoids.

Methods: The research was a two-year hospital-based cross-sectional study of patients diagnosed with grade II haemorrhoids who visited the general surgery department of a tertiary care hospital in Central India. The research enlisted the participation of 100 patients. One of the eligibility criteria was that participants must be between the ages of 18 and 70 and have been diagnosed with grade II haemorrhoids.

Results: There were 76 patients with grade II haemorrhoids who had no underlying conditions and 24 patients with grade II haemorrhoids who had cirrhosis of the liver with portal hypertension out of a total of 100 patients. Males outnumbered females by a factor of two (68 males and 32 females). The age group that contributed the most was 50 to 60 years old (54 percent).

Conclusion: Injection sclerotherapy has been found to be a safe and cost-effective approach for the non-surgical treatment of haemorrhoids.

Key Words: Haemorrhoids, Sclerotheraphy, II-degree Haemorrhoids

INTRODUCTION:

Haemorrhoids are a common health disorder that affects the majority of people by the age of 50. The word haemorrhoids mean "blood streaming" (Greek: Haema- blood and Rhoos - flowing). Globally, the incidence varies from 50 to 80 percent, with about 75 percent of the population in India being affected[1,2]. Erect posture, constipation, straining during defecation, a high fat diet, and a low fibre diet are all linked to the production of haemorrhoids. Cushion sinusoids, also known as haemorrhoids, may be external or internal. It is the most common issue that surgeons have been treating for decades in clinical practise in general surgery. In the anus or lower rectum, these swollen, inflamed veins cause bleeding, irritation, and itching[3,4].

Bleeding during or after defecation, nausea, itching, prolapse, and perianal soiling are the most common complaints. Haemorrhoids are vascular structures in the anal canal that interfere in stool regulation. They are made up of arterio-venous channels and connective tissues, and in their natural state, they serve as a cushion[5,6]. The most common treatment advice is to make basic lifestyle improvements through diet, such as increasing fibre intake, drinking plenty of water, and exercising. Symptomatic haemorrhoids may

be treated both non-operatively and surgically[7]. Treatment of haemorrhoids without surgery by controlling bowel motility with patented creams injected into the rectum through a collapsible tube with a nozzle and a hip wash, or by using hydrophilic colloids. The surgical management options include injection sclerotherapy, cryosurgery, elastic rubber band ligation at the base of each haemorrhoid, laser therapy, infrared photo coagulation, and multiple formal surgeries.

Injection sclerotherapy is a commonly used outpatient clinical technique to treat first and second-degree haemorrhoids as opposed to other treatment options[8,9]. This technique is extremely secure, cost-effective, time-efficient, and has a high success rate. Sclerotherapy is a time-tested technique for treating 1st and 2nd degree haemorrhoids by inducing a fibrous reaction. It is used all over the world[10,11]. Sclerosants come in a variety of forms, but they all cause a low-grade, long-term inflammatory reaction that scars the vein and mucosal tissue, collapses the vein walls, and causes the Haemorrhoids to shrivel. Aims: The aim of this study is to investigate the efficacy and symptomatology of injection sclerotherapy in patients with grade II haemorrhoids.

MATERIAL AND METHODS

The research was a two-year hospital-based cross-sectional study of patients with grade II haemorrhoids who visited the department of general surgery at a tertiary care hospital in Central India. Eligible patients were enrolled in the study after receiving informed and written consent from them. The research enlisted the participation of 100 patients. The age range for inclusion was 18 to 70 years old, with a diagnosis of grade II haemorrhoids. Patients who presented to the outpatient department with reports of rectum bleeding and mass underwent a thorough history taking procedure that elicited symptoms and disease length. Following that, they were given a rectal digital inspection. Anoscopy was used to rule out internal haemorrhoids, their severity, and their location. Basic inquiries and a systemic review were carried out. Patients are scheduled for open haemorrhoidectomy, banding, or sclerotherapy depending on the nature and form of symptoms. History taking is used to monitor a patient's progress after surgery. Per anus, per rectal examination, and anoscopy were performed to determine the patient's reaction to care and complications such as discomfort, bleeding, recurrence, and discharge. The patient was followed up on the 1st, 3rd, and 7th postoperative days, as well as once at the 3rd and 6th months. The respondents' confidentiality was maintained. Data was collected using a pre-tested semi-structured questionnaire. The information was gathered and entered into a Microsoft Excel spreadsheet. The data collected was analysed using SPSS version 21.

Treatment protocol:

All patients were admitted, and bowel preparation was performed using PEGLEC (Polyethylene Glycol). Prior to sclerotherapy, the patients had a colonoscopy to rule out other causes of rectum bleeding. As a Sclero-therapeutic agent, 2% sodium tetra Decyl Sulphate is used. The anal canal was accessed with a proctoscope. Sclerosant is injected into the pile mass in the submucosal plane using a 25 gauge spinal needle. The procedure was performed under conscious sedation with intravenous injections of Midazolam and Fentanyl. Two hours after the operation, the patient was put on a regular diet. After 24 hours, the patient was released. For 7 days, oral antibiotics and analgesics (Tab. paracetamol) were administered, as well as liquid paraffin-containing syrup. Patients were told to eat a high-fiber diet and drink plenty of water.

OBSERVATION AND RESULTS

The research involved a total of 100 patients. There were 76 patients with grade II haemorrhoids who had no underlying conditions, and 24 patients with grade II haemorrhoids who had liver cirrhosis and portal hypertension. The ratio of males to females was 2:1. (68 male and 32 females). The age group that contributed the most was 50 to 60 years old (54 percent).

Table 1: Sociodemographic profile of study participants

Variable	Catergory	Frequency (n)	Percentage (%)
Gender	Male	68	68 %
	Female	32	32 %
Age group	18 – 30	2	2 %
	31 – 40	8	8 %
	41 – 50	14	14 %
	51 – 60	54	54 %
	61 – 70	22	22 %
Education	Illiterate	34	34 %
	Primary	28	28 %
	Middle school	18	18 %
	High school	4	4 %
	Higher secondary	6	6 %
	Graduate/Diploma	10	10 %
	Postgraduate	-	-
Economic status	Upper class	-	-
	Upper middle	4	4 %
	Middle	18	18 %
	Lower middle	52	52 %
	Lower	26	26 %
Marital status	Married	94	94 %
	Unmarried	2	2 %
	Widow	6	6%
	Divorced	-	-

Bleeding in the rectum, discomfort, prolapse, discharge, pruritis, and altered bowel habits were among the symptoms reported by study participants (Table 2). For the next 5-7 days, both patients had minor rectum bleeding during defecation. Nobody complains of bleeding after 5-7 days. The length of the post-operative stay in the hospital ranged from one to three days, depending on the patients' rehabilitation. Both of the patients remained for one day, with 34 being discharged on day two and 66 being discharged on the third post-operative day.

Table 2: Symptoms presented among study population attended OPD

Sr. no.	Symptoms presented	Frequency	Percentage (%)
1.	Bleeding	68	68 %
2.	Pain	44	44 %
3.	Prolapse	78	78 %
4.	Discharge	52	52 %
5.	Pruritis	64	64 %
6.	Altered Bowel Habit	36	36 %

Postoperative Complications – All sclerotherapy patients were followed up on the 1st, 3rd, and 7th postoperative days, as well as once at the 3rd and 6th month. During the operation, 36 patients

experienced moderate burning pain in the anal area, which was treated with oral paracetamol. After 12 months of surgery, 16 patients experienced rectum bleeding. Twelve of the 16 patients had underlying liver cirrhosis, and two of them formed an infective complication and a ruptured peri-anal abscess that spontaneously led to a fistula in the ano. The patient had a fistulectomy for this purpose.

DISCUSSION

Aluminium potassium sulphate and tannic acid (ALTA: Zione; Mitsubishi Pharma Corporation, Osaka, Japan) is a new sclerosing agent for haemorrhoids that is effective for both haemorrhaging and prolapse of internal haemorrhoids and is intended to replace surgical treatments. Sclerotherapy by injection is one of the oldest methods for treating haemorrhoids. It is a procedure that involves injecting 2-5ml of sclerosant into the submucosal plane of a dilated hemorrhoidal vein under local anaesthesia, causing inflammation and scarring, which leads to tissue necrosis, in which the dilated vein shrinks, collapses, and hardens over time, cutting off the blood supply to the haemorrhoids[12]. Haemorrhoid is a major anal disorder that affects the entire world's population, causing considerable morbidity and putting a financial strain on patients. Pain, a long hospital stay, bleeding, and anal stricture are all complications that can occur after a hemorrhoidectomy[13]. For haemorrhoid management without resection, minimally invasive treatment methods were needed. Sclerotherapy injection is the most effective and least invasive treatment for haemorrhoids currently available. In the current study, a higher proportion of patients aged 50 to 60 years (54 percent) are affected by haemorrhoids, and the male female ratio is 2:1 in the present study, with a male preponderance of about 60%. In a study conducted by Rizwan Mansoor Khan, the prevalence of haemorrhoids was found to be higher in patients over the age of 40, with males having a higher prevalence (76 percent). Sclerotherapy has been shown to be successful in the treatment of patients whose only presenting symptom is bleeding[14]. After sclerotherapy, 84 percent (n=84) of patients in our sample were symptom-free. Just 35 % of patients with pruritus saw a noticeable change after the treatment, while the majority of patients with mucoid discharge (75 %) saw an improvement in their symptoms. Sclerotherapy, in conclusion, is an effective and safe treatment for second-degree haemorrhoids. Furthermore, injection sclerotherapy has been found to be a safe and cost-effective approach for the nonsurgical treatment of haemorrhoids.

CONCLUSION

When used as foam, sclerosing agents are very useful in the treatment of second-degree hemorrhoidal disease. It's also helpful in patients with extreme anaemia that can't have surgery right away because sclerotherapy effectively controls bleeding. Sclerotherapy is a modern, advanced, safe, and highly effective approach for treating first and second grade hemorrhoidal disease, according to the findings of this report. In grade II hemorrhoidal disease, sclerotherapy almost always cures the patient, though long-term effectiveness needs further research.

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