

The Role of Sodium Tetradecyl Sulphate (S.T.D.) as Sclerosing Agent in the Management of 1st & 2nd Degree Haemorrhoids

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Haemorrhoids are common surgical problem all over the world. Various modalities for the treatment of haemorrhoids are there. However, efforts are being made to treat the haemorrhoids as outpatient procedure. Injection Sclerotherapy has been the orthodox treatment for early haemorrhoids. Various sclerosing agents have been used. 5% phenol in almond oil was more commonly used as, sclerosant. I carried out a prospective comparative study comprising the results of Sodium Tetra Decyl Sulphate (STD 3%) and phenol, as sclerosing agents. Fifty patients having cardinal symptoms of haemorrhoids, first and 2nd degree were included in the study; divided into two equal groups. The purpose of study was to assess the role of STD 3% (Sodium Tetra-Decyl Sulphate) as sclerosing agent in the treatment of first and 2nd degree haemorrhoids. All the patients were having bleeding symptoms in their presenting complaints. Prolapse was present in 52% patients of "STD group" and in 44% patients of "Phenol Group". A final review by questionnaire was under taken one to six months later. Our results showed an overall success rate of 70% in STD group and 80% in phenol group regarding the control of bleeding and prolapse, which were the cardinal symptoms, in our patients. On these results we concluded that the results of both sclerosing agent were comparable. Both were painless, effective, complication free and can safely be used in out patient procedure as sclerosant. The results with 5% phenol in almond oil were better, superior and effective in controlling the symptoms of the patients. Along with that 5% phenol was cost effective by 3.5 times than STD 3%. However, its availability in the market sometimes becomes a problem.

Key words: Sodium tetradecyl sulphate (STD), sclerosing agent

Haemorrhoids are among the commonest ailments of the anorectal region. These are usually associated with distressing symptoms. Although the frequency of haemorrhoids in general population is unknown, but workers have reported the incidence in their studies. Kang found in a consecutive series of 115 patients, Seventy nine percent of bleeding per rectum cases were due to haemorrhoids. Not only the adult but people of all ages even the very young are affected. Male to female ratio is about 2:1. In the age group of 50 years and over, 29% had asymptomatic haemorrhoids. Males however, had a significant greater incidence of asymptomatic haemorrhoids than females¹.

Haemorrhoidectomy is the conventional treatment of 2nd and 3rd degree in procuring haemorrhoids. Surgeon had been treating the condition for many centuries. Ligation - excision and cautery were being used by the Hippocrates who named the disease.

Operative treatment has been the method of choice for 2nd and 3rd degree haemorrhoids but in the recent past there has been a tendency to avoid haemorrhoidectomy in favour of day case procedures.

Haemorrhoidectomy has had reputation of being very painful, unpleasant and uncomfortable procedure for the patients. This fact is well known to the general public. Patients often conceal their symptoms because of their fear about the procedure. Prolonged hospitalization is another disadvantage of haemorrhoidectomy leading to decreased turnover of patient^{2,3,4}.

Severe postoperative pain, urinary retention, reactionary and secondary haemorrhage, stricture, stenosis and anal incontinence are the reported sequelae of haemorrhoidectomy⁵.

To reduce the complications various modification, were done in the standard operative techniques, and the results are much better and comparable

In the modern treatment there have been a strong trend in favour of day case and office procedures for the treatment of internal haemorrhoids⁶. The motivating factors for the surgeons are cost effectiveness, better patient's satisfaction and lesser risk of complications with the newer techniques. While patient's compliance is related to shorter hospitalization, less morbidity, early return to work and absence of unbearable pain, which is usually associated with haemorrhoidectomy.

The incidence of needless operations has been reduced with the acceptance of the fact that haemorrhoids should not be operated unless symptoms necessitates; when an operation is justified; out patients and day case procedures are more attractive to the patients. By considering these facts enormous sums of money can be saved annually by reducing this number of hospital admissions and waiting list. The time spent on the patients can also be reduced from weeks to days.

Aims and Objectives

Various modalities for the management of haemorrhoids have been mentioned. The aim of this study is to assess the efficacy of this mode of treatment for first and second degree haemorrhoids, when the "Sodium Tetra Decyl

Sulphate 3% (STD)" is used as sclerosing agent. The results are compared with the outcome of patients who were injected with Inj. Phenol in almond oil as sclerosant.

The chief objectives of this study are:

1. To know the most successful and economical method of cure.
2. To render minimal discomfort and disability to the patients.
3. To reduce the off work period
4. To reduce the hospital stay of the patient.
5. To reduce the chances of post operative stenosis and other complications.
6. Avoidance of anal incontinence by protecting the anal sphincter from injury.

Material and Methods

This study was conducted at Mayo Hospital, Lahore, in the Out-patient Department and in the Department of Casualty and Emergency. All the patients who were referred from Out Patient Department to visiting surgeon, as well as those patients who were referred from general practitioners or presented themselves in Out Patient Department or casualty, having history of bleeding per rectum or prolapse, were picked up.

Following material was used.

- Proctoscope with light source
- Gloves
- Gabriel Syringe with its needle.
- Sclerotherapy needle and disposable syringe 10ml
- Lubricant
- Sclerosant
- Gauze holding forceps and gauze
- Adjustable couch

Digital rectal and Proctoscopic examination was performed to confirm the disease. The traditional classification of haemorrhoids according to the degree of prolapse was used to classify the patient. The degree and size of prolapsed haemorrhoidal mass was recorded on the proforma or outdoor patients slip with the help of diagram. These records were kept with the patients for comparison on follow up examination. A total of 50 patients were included in the study. It was a non-consecutive series and the patients were equally distributed into two groups (25 to each) on random basis.

- One group for injection STD as sclerosant
 - Other group for Injection phenol in almond oil
- Patients of either sex and all age groups were included in trial. Details of the procedure were discussed with the patient for proper understanding and a written consent was taken. A proforma was filled detailing the name, age, sex, profession, address with phone number, date of procedure, detailed history thorough examination and procedure performed. The patients were advised to revisit for follow up after one month, 2 months and 6 months to assess the results of the procedure performed.

Group A: Twenty five patients having 1st and 2nd degree haemorrhoids selected after proper evaluation for sclerotherapy with "STD" or Sclerosant (STD Group)

Group B: Twenty five patients having 1st and 2nd degree haemorrhoids selected after proper evaluation for sclerotherapy with "Phenol in almond oil" as sclerosant (Phenol group).

Results

Initially 55 patients were included in the study. Two patients of "STD group" did not come for follow up examination after one month. Moreover three other patients, one from "STD group" while other two from "Phenol group" were lost after 2 months. They were excluded from the study. Those fifty patients, 25 of each group, who completed follow up visits, were included in final analysis.

In "STD group" 22 patients were male and 3 were females; while in "Phenol group" there were 21 males and 4 female patients. Age of the patients was varied from 18 years to 65 years, with a mean age of 41 years.

On follow up all patients were assessed both subjectively as well as objectively. They were asked about their opinion for the treatment received. Main emphasis was laid on subjective assessment while compiling results, because the object of treatment was to abolish the symptoms. On subjective assessment inquiries were made regarding.

- Simplicity
- Acceptability
- Efficacy
- Pain free
- Postoperative disability
- Pre and post treatment symptoms

Table 1 Pre-treatment symptoms

Complaints	Group A (n=25)	Group B (n=25)
Bleeding	25	25
Prolapse during defecation	13	11
Constipation	11	14
Itching	7	5

Table 2 Questionnaire/Inquiries at follow up

Questions Asked	Answers
Do you still have bleeding P/R during /after defecation?	Yes/No
Does the pile still come down during/after defecation?	Yes/No
What is your opinion about the results of the procedure performed?	
Excellent	Yes/No
Improved	Yes/No
No improvement	Yes/No

For objective assessment proctoscopic examination was made to see the degree and size of prolapse. Whole data was formulated to find out complication rate, recurrence rate and success rate of the procedure performed. The results were declared as excellent, improved and failure, based on this data.

Discussion

Haemorrhoids are known as disease entity since centuries. The incidence in both sexes is considerably high, though exact statistics are not known. Majority of the cases of piles are symptomatic. Majority of the patients suffering from haemorrhoids are relieved by simple dietary advise^{8,5}.

Among the various outpatient procedures to treat the haemorrhoids. Injection Sclerotherapy is simple than all other office procedures because no equipment required and cheaper as compared to other methods for which specific and much costly instruments e.g. Band applicator for RBL treatment, cryoprobe set for cryotherapy, bipolar diathermy and plastic proctoscopes in diathermy coagulation, infra red coagulator for infra-red photocoagulation and Laser apparatus for Laser ablation are required.

Arullani and Cappello, discussing "the diagnosis and current treatment of haemorrhoidal disease" stated that "in the modern treatment, fast and painless procedures that can be carried out in the office practice, without anesthesia will be more and more indicated"⁶.

From the above study, I have concluded that Injection Sclerotherapy is a simple and easy method which can be practiced as an office procedure. It is painless and no fancy equipment is required. No anaesthesia is needed. It can be performed even in those remote areas of Pakistan where electricity is not supplied and a torch light is sufficient. No need for admission in the hospital after the injection.

Family physicians had treated successfully symptomatic internal haemorrhoids with injection sclerotherapy.

Chiappone and Malpas reported that sclerotherapy is well tolerated and associated with high patient satisfaction, low complication rate and satisfactory long term results¹⁵. Varma et al conducted a comparative study between current coagulation and injection sclerotherapy and reported that sclerotherapy was found significantly less tedious than current coagulation¹⁰.

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