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A PILOT STUDY ON HAEMOSTATIC PROPERTY OF NAGKESARA IN 1st AND 2nd DEGREE INTERNAL BLEEDING PILES

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ABSTRACT

Over thousands of year Piles or *Arsha* is a threatening problem of human race which is considered an outcome of a disturbed lifestyle and food habits. So many times, bleeding per rectum in early stages, draw the attention of patient and physician towards disease. Patients usually seek treatment when symptoms increase. Internal hemorrhoids typically present with prolapse or painless rectal bleeding. Medical therapy should be initiated with stool softeners, effective hemostatic plus local therapy to relieve swelling and symptoms. Hemostasis is always a big challenge in front of physician/ surgeon because it may cause progressive anaemia which may worsen normal health condition of patient. So the use of safe and effective hemostatic drug is always a subject of research in medical field. The present study is about to elaorate the hemostatic property of *Nagkesar* (Mesua ferrea) flower powder in bleeding piles cases with comparision of placebo therapy.

KEYWORD: Over thousands *Arsha* comparision of placebo therapy.

INTRODUCTION

piles is thought that this word comes from the Latin word pila, meaning "balls" because of the round shape of the inflamed hemorrhoids. Another term "hemorrhoid" also originated from Latin word comes from the Greek "haimorrhoides," which is the plural of αἱμορροΐς (haimorrhois), which is a compound word formed from αἷμα (haima), meaning "blood," plus ῥόος (rhoos), meaning "a stream," or "a flowing". Internal hemorrhoids are far enough inside

the rectum that you can't usually see or feel them. They don 't generally hurt because you have few pain-sensing nerves there. Bleeding may be the only sign of them. The most common symptom experienced is bleeding after going to the toilet to pass stools (faeces). The blood is usually bright red and may be noticed on the toilet tissue, in the toilet pan or coating the stool. Bleeding during defecation always create panic situation for patients. There are lot of efforts made in medical science to check bleeding per rectum due to Pile mass because in first degree and second degree conservative methods of treatments are more used in practice. Bleeding piles not only create panic situation for patients but it is a common cause of anaemia in society. So haemostasis is always a priority for any physician/ surgeon for treating first and second degree piles. In the last decade, many hemostatic agents have been proposed to facilitate hemostasis in severe bleeding. The ideal hemostatic agent would be easy to use, highly effective, biocompatible, durable and inexpensive. Unfortunately, haemostasis is an understudied subject in the surgical field, and current practice is based on beliefs and habits rather than on evidence. In other words, a so-called 'gold standard' regarding topical haemostasis does not exist. Recently published reviews all conclude that multiple factors determine the agent of choice, including familiarity with the products, patient characteristics and costs. Hence, the best choice for achieving haemostasis remains unclear. The following is a list of possible side-effects that may occur from all constituting ingredients of Hemostatic drugs. This is not a comprehensive list. These side-effects are possible, but do not always occur. Some of the side-effects may be rare but serious. Consult your doctor if you observe any of the following side-effects, especially if they do not go away.

- Allergic rejection.
- Nausea.
- Skin rash.
- Vomiting.
- Fever.
- Diarrhoea.

Lot of usage of modern hemostatic drugs alwas produce unwanted side effects by interfering the coagulation system. *Ayurveda* describes bleeding piles under *Sravi Rakta Pittaja Arsha* and consider bleeding as vitiating effect of *Rakta* with *Pitta*. So the herbs which are used as haemostatic neither disturb the hemostatic physiology of human being. This present study isbased on one of the most attractive hemostatic agents is *Nagkesar* flower, which had been used for many years by traditional *Ayurvedic* practitioners in many bleeding conditions.

REVIEW OF DISEASE

Modern

Piles are outgrowths that can occur inside and around the anus and the anal canal. There is spread of small veins within the lining of the anal canal. These veins sometimes become dilated and engorged with more blood than normal. The engorged veins and the overlying tissue may then produce one or more small swellings called piles.

Internal piles forms above a point 2-3 cm inside the anus in the upper part of the anal canal. Internal piles are usually painless because the upper anal canal has no pain sensitive nerve fibres.

External piles form below that point, in the lower part of the anal canal. External piles are mostly painful because the lower part of the anal canal has lots of pain sensitive nerve fibres.

Internal piles can be classified into grades 1, 2, 3, 4 according to their severity and size

- **Grade 1** are small swellings on the inside lining of the anal wall. They cannot be seen or felt from outside the anal canal.
- **Grade 2**are larger. They may be partly comes out from the anus when you go to the toilet, but quickly spring back in anal canal again.
- **Grade 3** hangs out from the anus when patient go to the toilet. Patient may feel one or more as small, soft lumps that hangs from the anus. However, patient can push them back digital inside the anus.
- **Grade 4** permanently hangs down from within the anus, and patient cannot push them back digital inside. They sometimes become quite large.

Symptoms of piles patients can vary. Sometimes no symptoms present and a person may not realise that they are diseased piles.

The bleeding is painless and occurs with defecation in early stage. In the later stage, a steady dip of blood after defecation. In still later stage, bleeding occurs even without defecation. The mostcommon symptom felt is bleeding after going to the toilet to pass stools (faeces). The blood is usually bright red and may present on the toilet tissue, in the toilet pan or coating the stools.

A haemorrhoid can hang down (prolapsed) and can be felt outside the anus. Often, it can be pushed back up after patient has been to the toilet. However, more advanced stage of piles remain permanently prolapsed and cannot be pushed back up inside. Small internal piles are usually painless. Larger piles may cause mucous discharge, pain, and itch. The discharge may irritate the skin around the anus. You may have a sense of fullness in the anal canal, or a feeling of not fully emptying anal canal when patient goes to the toilet.

A possible complication of piles that hangs down is that they can 'strangulate' (the blood supply to the haemorrhoid has cut off). This can be severely painful. Another possible complication is a blood clot which can form within the haemorrhoid, condition is known as thrombosis.

Ayurvedic review

Etymology: *Arsha* pertains to a disease occurring in *Guda* and it is torturing to the patients. It may create obstruction of the ano-rectal passage. Piles: - This word is derived from the Latin word ‘pila’ which means a ‘ball’. Thus a growth in the anus which similar in ball likes shape is designated as piles. It is manifested due to multiple factors viz. disturbed life style or daily routines, irregular and faulty diet intake, prolonged standing or sitting, faulty habits of defeacation etc. which results in derangement of *Jatharagni* leading to vitiation of *Tridosha*, These vitiated *Doshas* get localized in *Guda Vali* and its *Pradhana Dhamani* which further vitiates *Twak*, *Mansa*, and *Meda Dhatus* leads to development of *Manspraroha* called *Arsha*.

Classification of Arsha (Piles)

There are different concepts of *Acharyas* regarding the classification of *Arsha*.

On the basis of the origin

1. Sahaja, 2. *Janmottarakalaja*.

On the basis of the character of bleeding

Ardra (*Sravi*)-Bleeding piles due to vitiation of *Rakta* and *Pitta Dosha*.

Shushka- Non bleeding piles due to vitiation of *Vata* and *Kapha Dosha*.

On the basis of the predominance of *Dosha*

1. Vataj, 2. *Pittaj*, 3. *Kaphaj*, 4. *Raktaj,* 5. *Sannipataj,* 6. *Sahaj.*

On the basis of prognosis

1. Sadhya (Curable), 2. *Yapya* (Palliative), 3. *Asadhya* (Incurable).

***Sadhya* variety**

If *Arsha* is located in the *Samvarani vali* and is of single *Doshika* involvement and not very chronic.

***Yapya* variety**

Arsha caused by the simultaneous vitiation of any two *Doshas* and the location of *Arsha* in the second *Vali*, the chronicity of the disease is not more than one year.

***Asadhya* variety**

Sahaja Arsha and if caused by the vitiation of three *Doshas* and if the *Arsha* is situated in the *Pravahini Vali*, than it is incurable.

In addition to this if the patient develops oedema in hands, legs, face, umbilical region, anal region, testicles or if he suffers from pain in the cardiac region, it is also considered as incurable.

Drug review

Mesua ferrea is a medium-sized or fairly large evergreen tree up to 36 m tall. Bole cylindrical to poorly shaped, up to 95 cm in diameter, often fluted at base. Bark surface is smooth to adherent scaly, sometimes somewhat dippled, ochrous-brown revealing a bright orange layer below.

Leaves are opposite, simple and entire, usually elliptical to narrowly elliptical, glabrous or occasionally glaucous. Leaves are shiny with numerous secondary veins, looping, running parallel nearly to the margin, frequently with equally prominent reticulating tertiary veins. Sometimes with more or less persistent, stipule-like interpetiolar modified leaves.

Medicinal usage

In Malaysia and India, a mixture of pounded kernels and seed oil is used for poulticing wounds. The seed-oil is used for treating itch and other skin eruptions, dandruff and against rheumatism. In Java, a decoction of the flowers is drunk by women after childbirth. Qurs-e-Habis is atraditional medicine consisting of the seeds of Wrightia tinctoria, the stamens of M. ferrea, and the shells of pearl oysters (Pinctada margaritifera). Qurs-e-Habis is used as a

haemostatic, antidysenteric and antidiarrhoetic. The medicinal properties of the constituents of Qurs-e-Habis, particularly styptic and astringent properties are related to its haemostatic effects. Flowers of M. ferrea exhibit antibacterial activity.

MATERIAL METHOD

SELECTION OF THE PATIENTS

A series of 30 cases of haemarrnoids were selected from the O.P.D. of Department of surgery of *Gurukul Ayurvedic* college, Haridwar. For this clinical study 30 patients were divided into two groups of 15 in each. First group of patients has treated with wheat flour powder as placebo and second group has treated with *Nagkesar churna*.

INCLUSION CRITERIA

Inclusion criteria for patients of haemorrhoids which has included in this work are as follows:

1. All Patients having classical symptoms of first degree and second degree of bleeding piles.
2. Uncomplicated cases of haemorrhoids.
3. All patient of age group in between 20-50 years.

EXCLUSION CRITERIA

1. Third degree haemorrhoid and fourth degree haemorrhoids.
2. Having other associated diseases like T.B. or diabetes mellitus.
3. Cases were excluded from the study which were complicated.

PLAN OF STUDY

Total 30 cases suffering from first degree and second degree haemorrhoids were registered for the study after clinical examination. On the basis of plan of study these patients has been divided in two groups and every group has fifteen patients.

-the patients of group A has been treated with wheat flour powder

-the patients of group B has been treated with *Nagkesar churna*.

DEMOGRAPHIC PROFILE

Following points were noted under demographic profile Name, Age, Sex, Religion, Address, O.P.D./Hosp No., Occupation, Marital Status, Habitat (Rural/Urban).

CLINICAL PROFILE

All cases to be registered were subjected for their detailed examination after history taking as per following points.

1. Chief complaints with duration.
2. History of Past illness.
3. Treatment history.
4. Family history of relevance of disease.
5. Personal history - appetite, diet, sleep, micturation, bowel habit and addiction.

Physical Examination

General condition, Pulse rate, Pallor, Icterus, Cyanosis, Clubbing, Lymph nodes, Thyroid, Tongue and Edema.

Systemic Examination

Gastrointestinal System, Cardio Vascular System, Respiratory System, Urogenital System, Central Nervous System and examinations were thoroughly done.

PARAMETERS OF ASSESSMENTS

(i) Subjective Assessment

This completely depends upon symptomatology and grade depends on symptoms told by patient follow up period of these patients are 7days maximum. This clinical symptomatology was divided into four grades (0-3) and change in these gradations of each symptom was to assess the effect of treatment provided. Bleeding per rectum is the main factor of comparative assessment of two groups of patients. The clinical grade were decided as follows.

SCALE FOR SYMPTOMS OF CASES

Symptoms	Score	Grade	Grading Criteria of Symptoms
Bleeding	0	Absent	No complaint of bleeding per Rectum
	1	Mild	Bleeding per rectum after taking spicy food.
	2	Moderate	Bleeding per rectum during almost every motion
	3	Severe	Bleeding per rectum continuous.

OBSERVATION AND RESULT

STATISTICAL CALCULATIONS WITH THEIR RESULTS

FIRST DAY BLEEDING FROM ANAL ROUTE: MEAN ± S.D

	MEAN+SD	Improvement	Within the group comparison, paired 't' test
Group 'A'	2.1 ± .4830	23.81%	t=3.0
Group 'B'	1.6 +.5163		
D +S.D.	.5 +.527		

This table shows improvement in relation to bleeding per rectum in group B on the basis of group A. The mean ±SD of group A is 2.1±.4830 and the mean ±SD of group B is 1.6±.5163. The difference is positive (.5) and improvement percentage is also positive (23.81%) which is proving positive improvement. Between the Group A and B comparison, unpaired 't' test is 3.0 and p value is <.01which is highly significant.

SECOND DAY BLEEDING FROM ANAL ROUTE: MEAN ± S.D

	MEAN+SD	Improvement	Within the group comparison, paired 't' test
Group 'A'	2.1 + .4830	47.619%	t=6.7082
Group 'B'	1.1+.32		
D+ S.D.	1.0+.4714		

This table shows improvement in relation to bleeding per rectum in group B on the basis of group A. the mean ±SD of group A is 2.1 ±.4830 and the mean ±SD of group B is 1.1±.32. The difference is highly positive (1.0) and improvement percentage is also highly positive (47.619%) which is proving positive improvement. Between the Group A and B comparison, unpaired 't' test is 3.0 and p value is <.01which is highly significant.

Third DAY BLEEDING FROM ANAL ROUTE: MEAN ± S.D.

	MEAN+SD	Improvement	Within the group comparison, paired 't' test
Group 'A'	2.3 +.4830	52.174%	t=9.0
Group 'B'	1.1 + .32		
D+ S.D.	1.2 + .4216		

This table shows improvement in relation to post ligation burning sensation in group C on the basis of group A. the mean ±SD of group a is 2.3 ±.4830 and the mean ±SD of group B is 1.1±.32. The difference is highly positive (1.2) and improvement percentage is also highly positive (52.174%) which is proving positive improvement. Between the Group A and C comparison, unpaired 't' test is 9.0 and p value is <.01which is highly significant.

DISCUSSION

Bleeding per rectum on 1st day after administration of drug the mean ±SD of group A is 2.1 ±.4830 and the mean ±SD of group B is 1.6±.5163 and comparison of group A-B shows 23.81% improvement in group B which highly significant.

On 2nd day after administration of drug bleeding varies in both groups. The mean ±SD of group A is 2.1 ±.4830 and the mean ±SD of group B is 1.1±.32. Bleeding was improved in group B 47.62% from group A which was the highly significant change.

On 3rd day after administration of drug bleeding varies in both groups. The mean ±SD of group A is 2.3 ±.4830 and the mean ±SD of group B is 1.1±.32. Burning was improved in group B 52.17% which was highly significant.

SUMMARY AND CONCLUSION

In the present study, 30 patients were randomly registered in to two groups, each consisting of 15 patients. In group A patient was treated with wheat flour powder as placebo for bleeding in haemorrhoids patients. In group B patient was treated with *Nagkesar Churna* for bleeding in haemorrhoids.

After discussion about the present study following points are concluded.

1. Group B shows better results than group A in relation bleeding in haemorrhoid patients which was highly significant on 1st 2nd and 3rd day.
2. So *Nagkesar Churna* may be considered as a better alternative option in search of new and safe hemostatic drugs for bleeding in patients of haemorrhoids.

It is suggested for the future that this study can further be conducted on more number of patients to verify the facts in the more appropriate statistical analysis.