INTRODUCTION

Ayurved is a science of life and **Shalyatantra** is its important branch which represents the surgical field. One of prime important disease from *Ashtamahagada* is ***'Arsha'***. Ayurveda, the ancient science of medicine of India has detail information and description of *Arsha*. The word '*Arsha*' is derived from the root *'Ru-gatau'* after adding the suffix *'Asuna'* which means 'to take life'. It is an entity in which muscular projections *(Mansakeel)* troubles the patient like an enemy. The common people call them **piles**. A pile (Pila – a ball) is derived from Latin. The aristocracy calls them **haemorrhoids**. The word haemorrhoid is derived from Greek. (Haema – blood, Rhoos – flowing) the lay man call them *mulvyadh / bawasir / komb* etc. what does it matter as long as you can cure them. *Arsha* have been known to mankind for a long time and are one of the commonest disease to affect human beings.

'*Arsha*' is the gift of busy life style. One of its prime etiological factor is ***'Mithyaahar - Vihar'*** and is unavoidable due to busy lifestyle. While working in Out Patient Department, it was observed that the percentage of patients having *Abhyantar Gudarsha* was increased. Hence, this problem was selected for scientific study.

According to Ayurvedic and Modern text, so many mode of treatment are available for *Abhyantar Gudarsha*. The treatment can be classified in to surgical, para-surgical and medicinal management. But no one is perfect due to their associated disadvantages.

The management of *Abhyantar Gudarsha* is mentioned in Ayurvedic Samhita like Charak, Sushruta and Astang Sangraha etc. But Acharya Sushruta has described in detail all about *Arsha* in Sushruta Samhita. According to Acharya Sushruta the management of *Abhyantar Gudarsha* is of four types. *Aushadhi Chikitsa* (conservative), *Ksharkarma*, *Agnikarma*, *Shastrakarma* (surgical). The ***'Dhatuvaigunya'*** (organic pathology local deformity) of anal structures requires local treatment.

Ksharkarma is the treatment having more effect which was proved previously. ***Yava-kshar*** was selected as a kshar ingredient as previous study was done by using *Yava-kshar Pratisaran* and this project was the extension of previous study. But for *Pratisaran* of *Kshar,* intervention of doctor is necessary and compulsory. Hence it was decided to make the process convenient for patient to apply the *Kshar* at internal haemorrhoid and to avoid doctor's intervention for application of *Kshar*. Concept of application of *Kshar* by patient himself was presumed and for this purpose the **Ointment of *Kshar*** was preferred.

Here the study was carried out, to prove the effect of application of *Yava Kshar* ointment at internal haemorrhoid *(Abhyantar Gudarsha)*. The *Yava Kshar* ointment was prepared of **two different concentration** i.e. **5%** and **10%** also **two different base** were selected one was **natural** and other was **synthetic** i.e. ***Sikta Tail*** and **Petroleum Jelly** respectively. During pilot study 5% and 10% composition was used to verify results and it was continued for final study. Due to minimum concentration of *Yava Kshar* the unwanted corrosion to normal mucosa is avoided.

AIM AND OBJECTIVES

AIM :

- ✻ Evaluation of effects Yava-kshar malhar – ointment on Abhyantar Gudarsha (Internal piles).

OBJECTIVES :

- ✻ To modify the ancient mode of treatment in the scientific era.
- ✻ To provide a cost effective, local application in the form of malhar – ointment.
- ✻ To provide the local medicine in the form of malhar – ointment with easy application having the direct local effect.

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REVIEW OF AYURVEDIC LITERATURE

The Arsha means the abnormal fleshy growth related with particularly ano-rectal region. It occurs at various organs like nose, throat, skin, penis, vagina etc.

SHARIR RACHANA OF ANAL CANAL (GUDA) :

'Abhyantar Gudarsha' – the name of disease itself suggest that it is related with the organ 'Guda'. The description of Guda is given below –

The distal part of large intestine (Antra), which is four and half fingers in length, is called as Guda[2]. It is formed by the best part (Prasad bhaga) of blood and Kapha, after being digested by Pitta with the help of Vayu[3]; Inferior portion of the Guda has three spiral grooves, arranged in a circular pattern one upon other, situated at a distance of 1½ finger from each other. They are known as Pravahini, Visarjani, Samvarni, when counted from proximally to distally[4]. They have the appearance of involuted indentures of couch cell, situated one above another and coloured like a palate of an elephant. The distal part of Guda, which is ½ finger in length, circular in nature and from which at the distance of 1½ yava, the hairy margin is situated, is known as Gudoshtha. The distance between last vali and Gudoshtha is about 1 finger. The length of Gudoshtha is ½ finger. 1 finger is equal to 3 yava. Each vali is 1 finger in length and the distance between 2 valies is ½ finger. Hence the length of Guda, including Gudoshtha is 5½ finger[6].

According to Acharya Sushrut Guda is formed by 3 Peshies[7]. There are 60 Snayoo in pelvic region and 10 in groin[8]. The pelvic region has 5 bones. Out of these 4 are found is anal region, pubic region and hip, one in the sacral region[9]. Out of total 24 Dhamanies, 10 spread downwards and go to rectum, pelvis, anus, bladder, penis, etc[10]. Out of 700 Shiras, 34 Vata carrying shiras are in the koshtha. Out of them 8 Shiras are in the anus, penis and pelvis. The rest of the shiras carrying pitta, kapha and rakta are distributed similarly[11].

Guda is a Pranaytan, where the Prana is situated[12]. Guda is Sadyo Pranhara Marma, Mansa Marma and Dhamani Marma[13-14]. Guda is a part of Purishavaha Strotasas. It is a Moolsthan of Purishavaha strotasas[15].

SHARIR KRIYA OF ANAL CANAL (GUDA) :

The important function of Guda is the excretion of Vayu and faecal material[16]. This function is controlled by Apan Vayu with the help of three valies of Guda. The Pravahini forces the stool downward. The Visarjani relaxes the ano-rectal muscles and thus performs excretion of the faeces. The Samvarani closes the anal orifice, after faecal column has been cut by the action of Visarjani[17].

DESCRIPTION OF ARSHA VYADHI :

Arsha occurs at many sites but the present context deals with the Arsha occurring at the Guda only[18].

Etymology :

The word Arsha is derived from the root word Ru-gatau after adding the suffix Asuna which means to take life[19].

Synonyms :

- **Sanskrit** - Arsha, Durnama, Gudaja
- **Marathi** - Mulvyadha, Komb
- **Hindi** - Bawasir, Muli

Defination of Arsha :

According to Vagbhata, Arsha is a muscular projection (Mans-keel) which troubles the patient like an enemy[20]. According to Madhava, Arsha is like an enemy[21].

NIDANA OF ARSHA :

All Hetu of Arsha can be classified mainly in two groups, named as Sahaj and Janmottaraja[22].

Nidan of Sahaja Arsha :

The cause of sahaj arsha is Dushti (vitiation) of Beej-bhaga, which produces the Gudavali[23]. Beej – bhaga vitiation occurs due to 2 factors.

1) Mithya Aahar and vihar of mother and father
2) Poorvajanmakarma[24]

According to Sushruta the vitiated shonita and shukra is the Hetu of Sahaj – arsha[25].

The Nidana of Janmottaraj Arsha :

a) Samanya Hetu :

Which are responsible for all types of Arsha. The Samanya Hetu described by Charak are as given below[26].

1) Aaharaj Hetu :

Guru, Madhur, Sheeta, Abhishyandi, Vidahi, Virudhdha-bhojan, Pramit-bhojan, Asatmya-bhojan; Matsya, Varaha, Mahisha, Aja- Mansa; Krusha-Prani Mansa; Shushka Mansa;

Nava shuka Dhanya, Nava shami Dhanya, Pinnak, Shaluka, Shastika, Shrungataka, Shushka, Teela, Gud-vikruti, Vasa, viruddha Dhanya, Aama moolaka, Guru raga, Gurushaak, Kasheruka, Kilat, Krounch Daan, Lashuna, Mrunala, Atikranta Madya, Ali-snehapan, Dadhi, Guru Jala, Ikshu Ras, Ksheer, Manda, Mansa Yoosha.

The Sushrut has mentioned only Adhashana, Virudhdhashana[27].

2) Viharaj Hetu:

According to Charaka, Sushruta and Vagbhata the Viharaj hetu are described as shown in the following table –

Table showing the Samanya Viharaj Hetu of Arsha[26-28]:

Sr.no.	Hetu	Sushrut	Vagbhat	Charak
1.	Agnimandya	+	+	+
2.	Ati-Vyayama / Vyavaya	+	+	+
3.	Gud Gharshana	+	+	+
4.	Utkatasana	+	+	+
5.	Vegodeerana	+	+	+
6.	Vega Vidharana	+	+	+
7.	Atipravahana	-	+	+
8.	Aamagarbha Bhransha	-	+	+
9.	Guda Kshanan	-	+	+

Sr.no.	Hetu	Sushrut	Vagbhat	Charak
10.	Kathin Aasan	-	+	+
11.	Vishama- Aasana / Prasuti / Cheshta	-	+	+
12.	Aasan Sookh	-	-	+
13.	Asamyak sanshodhan	-	-	+
14.	Asamyak Bastinetra Pranidhan	-	-	+
15.	Avyavaya	-	-	+
16.	Basti Vibhrama	-	-	+
17.	Diva Swaap	-	-	+
18.	Garbhata Peedana	-	-	+
19.	Shayya sookha	-	-	+
20.	Sheetamba Sparsha	-	-	+
21.	Ushtra / Udbhranta – Yaan	-	-	+
22.	Amatisaar / Atisaar / Grabhani	-	+	-
23.	Gulma	-	+	-
24.	Jeerna Kaas	-	+	-
25.	Jwara	-	+	-
26.	Pandu	-	+	-
27.	Kshavathu	-	+	-
28.	Vibandha	-	+	-
29.	Vyadhijanya Krushata	-	+	-
30.	Yaan Sankshobha	-	+	-

B) Vishesh Hetu :

Which are responsible for specific types of Arsha. The types of Arsha are according to the Dosha involvement. Hence, the Vishesh Hetu of Arsha are as show bellow :

Table showing the causes of Doshaj Arsha:

Sr.no.	Type of Arsha	Aaharaj Hetu	Viharaj Hetu
1	**Vataja Arsha**[29]	Kashay Ras Sevan Katu Ras Seven Tikta Ras Seven Rooksha Anna Seven Sheetal Anna Seven Laghu Anna Seven Pramit / Alpa Bhojan Teekshna Anna sevan Teekshna Madya sevan Anaashana	Ati – Maithun Sevan Ati Vyayam Ati Vata Sparsha Ati Atapa Sparsha Shoka Sheetal Desh Sevan Sheetal Kaal Sevan
2	**Pittaja Arsha**[30]	Katu Ras sevan Amla Ras Sevan Lavan Ras Sevan Ushna Aahar / Aushadhi Ushna Jalan Kshar Sevan Madyapan Vidahi Anna Sevan Teekshna Aahar Teekshna Aushadhi	Ati Vyayam Asuyanam Agni Sevan Atapa Seven Prabha Sevan Ushna Desh Ushna Kaal Krodha
3	**Kaphaja Arsha**[31]	Madhur Ras Sevan Amla Ras Sevan Lavan Ras Sevan Snigdha Aahar Sheetal Aahar Guru Aahar	Aasan Sookh Diva swaps Achintanan Praag vata sevan Shayya Sookha Rati Sheetal Desh / kaal / Sevan.

POORVAROOP OF ARSHA :

The poorva roopas of Arsha have been described by all Acharyas. They are as given bellow[32].

Table Showing the Poorva Roopas of Arsha :

Sr.no.	Poorva Roopas	Sushruta	Vagbhata	Charaka
1	Anna – Vishthambha / Aatop	+	+	+
2	Grahani / Pandu rog Akshanka	+	+	+
3	Udgaar – bahulya	+	+	+
4	Shakti – Saad	+	+	+
5	Amlika / Anna- ashradhdha	+	+	-
6	Antra – Koojana / Guda – Parikartan	+	+	-
7	Akshy – Shoth	+	+	-
8	Indriya – daurbalya	+	+	-
9	Bhrama / Tandra	+	+	-
10	Kaas / Shwas	+	-	-
11	Kruch chata – annam – pakti	+	-	-
12	Amashaye – paridaaha	+	-	-
13	Bala – haani / Shosha Ashanka	+	-	-
14	Nidra / Pipasa	+	-	-
15	Alpa – Purishata	-	+	+
16	Daurbalya / Udar- rog Ashanka	-	+	+
17	Aalasya / Anga – Saad	-	+	-
18	Agnimandya	-	+	-
19	Atisaar / Malavroodh	-	+	-
20	Dhoomaka / Krodha	-	+	-
21	Bhinna – Varnata	-	+	-

22	Prabhut – Mutrata	-	+	-
23	Pindi Kodweshtana	-	+	-
24	Sheersha / Prushtha – Shoola	-	+	-
25	Dukkho pacharata	-	+	-
26	Sashabda- kartanavat sashool kruchchata vata – Nigrgamang	-	+	-

ROOPA :

Samanya Roopas : According to Acharya Vagbhata the Samanya Roopas of Arsha are given below.

1) Subjective General Symptoms[33] :

Agnimandya, Asya - vairasya, Arochak, Asthiparva shool
Vankshana shool Hrudaya shool Nabhi shool Payu shool,
Angamarda, Klama, Kshaam - bhinna swara, Krushata,
Hatotsah, Deenata, Asaarata, Kantibeen,
Jwara, Swasa, Kaas, Sarakta – Shtheevana,
Timir, Baadhirya, Peenasa, Pipasa,
Klaibya, Vaman, Visthambha, Pandu,
Shoth, Vaivarnya, Kwachit Amla / Haarit / Rakta / Pandu / Pitta / Vibhandhi – Malpravrutti.

2) Objective General Symptoms[34] :

Acharya Charak has described the general different sizes and shapes of Arsha, which are similarly to -

Sarshapa, Masur, Maasha, Muddga, Makusthaka,
Yava, Kalay-Pinda, Tintikera, Kebuka, Tinduka,
Karkandhu, Kakantika, Bimbee, Badar, Kareera,

Udumbara, Kharjur, Jamboca, Gostana, Angushtha,

Kasheruka, Shrungataka, Shrunga, Shika – tunda / Jimvha,

Shikhee – tunda / Jinvha, Daksha – Tunda / Jimvha,

Padmamukul – karnika.

Vishesh Roopas[35] :

1) Sahaj Arsha :

Table showing the symptoms of Sahaja Arsha :

Sr.no.	Hetu	Sushrut	Vagbhat	Charak
1	Aalasya \ Arpcjala \Antrakooj	+	-	+
2	Durbala-angata \Timir	+	-	+
3	Swar-vikrutee\Krodha	+	-	+
4	Karna-roga \Peenasa	+	-	+
5	Hrudaya –Upalepa \Trushna	+	-	+
6	Atopa\ Udaawart	+	-	+
7	Aniyat –Vibandha \Angamarda	-	-	+
8	Ati-Krushata \Daurbalya	-	-	+
9	Jwara\kaas \Swas \Ashmaree	-	-	+
10	Hrullas\Indriyopalepa	-	-	+
11	Nabhi \Basti \Vankshana shool	-	-	+
12	Kshayathu \Pariharsha	-	-	+
13	Vibandha\ Pravahika \ Prameha	-	-	+
14	Shirsha-Asthi-parva shool	-	-	+
15	Prachur Tik-amlodgaar	-	-	+
16	Prachur Vibandha mutrata	-	-	+
!7	Tanu \Sandra –purishopveshee	-	-	+
18	Vividha Varna-Yukta-mala Tyag	-	-	+

Table showing the local sign and symptoms of Sahaja Arsha[36]:

Sr.no.	Roopas	Sushruta	Vagbhat	Charak
	A) ACCORDING TO SHAPE			
1	Kinchit Antar- mukhani	+	+	+
2	Durdarshani	+	+	-
3	Kinchit Antar \Bahir Kutilani	-	-	+
4	Jatilani\Anuni \Mahanti	-	-	+
5	Rhaswani \Deerghani	-	-	+
6	Vishama visrutani\Kinchit vruttani	-	-	+
	B) ACCORDING TO COLOUR			
1	Panduni	+	+	-
	C) ACCORDING TO SURFACE			
1	Daarunani	+	+	-
2	Rooksha	-	+	-
	D) ACCORDING TO CONSISTANCY			
1	Parushni	+	+	-

2) Vataj Arsha:

Table showing the symptoms of Vataj Arsha[37]:

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
	A) RELATED WITH PAIN			
1	Kati-parsha shool	+	+	+
2	Prushtha shool	+	+	+
3	Nasa \ Nabhi \ Medhra \ Gud-Shool	+	-	-
4	Parva bheda	+	-	-
5	Karna \ Prushtha \ Shool	-	+	+
6	Mansa \ Vankshana Shool	-	+	-

7	Trik\ Basti\Kukshee\ Shankha Shool	-	-	-
8	Angmarda\ shirobhitaap	-	-	+
	B) RELATED WITH MAL MUTRA VEGA			
1	Mutra Purish Krushnata	+	+	-
2	Sa-pravahikopaveshi	-	+	+
3	Safen-Sashabda-Sthoolopaveshi	-	+	-
4	Granthil –Pichchil –Vibandhopaveshi	-	+	-
5	Arun\Parush \ Shyav-Mutra purish	-	+	-
6	Vibandha –Vata –Mutra	-	-	+
7	Prabhoot Mutrata	-	-	+
	C) ACCORDING TO COLOUR CHANGES OF DIFFERENT PARTS OF BODY			
1	Vadan-Nakh-Nayan-Twaka Krushnata	+	+	+
2	Arunata\Parushata\Shyavata	-	-	+
	D) ACCORDING TO UPASHAYANUPSHAY			
1	Snigdha Ushnopashayani	-	-	+
	E) OTHERS			
1	Ashthila \Gulma\ Pleehodar	+	+	-
2	Chimchimayana at Arsha	+	-	+

Table showing the local signs and symptoms of Vataj Arsha[37] :

Sr.no.	Roopas	Sushruta	Vagbhat	Charak
	A) ACCORDING TO CONSISTENCY			
1	Shuska	+	+	+
2	Kathina / Parusha / Rooksha	-	+	+
3	Khara	-	+	-
	B) ACCORDING TO SIZE AND SHAPE			
1	Kadamba – Pushpakruti	+	+	-

2	Tundikeri – sadrusha	+	+	-
3	Mukula / Naadi – sadrusha	+	-	-
4	Suchimukhakruti	+	-	-
5	Bimbeefala / Karpasfala – sannibha	-	+	-
6	Kharjura / Sidhdharthak – sannibha	-	+	-
	C) ACCORDING TO COLOUR			
1	Arun Varna	+	+	-
2	Shyav Varna	-	+	+
	D) ACCORDING TO SURFACE			
1	Mlaan / Sphutit – Mukhani	-	+	+
2	Teekshnagrani / Vakrani	-	+	+
3	Visham Visrutani	-	-	+

3) Pittaj Arsha :

Table showing the general symptoms of Pittaj Arsha[38] :

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
	A) RELATED WITH MALA – MUTRA VEGA			
1	Peet – Mutrata	+	-	+
2	Sadah – Sarudhir – Atisaryet	+	-	-
3	Bhinna Varchansi	-	+	+
4	Harit Varchansi	-	-	+
5	Prachur / Visrragandhi Vidmutrata	-	-	+
6	Aama / Drava / Ushna Varchansi	-	+	-
7	Neel / Rakta Varchansi	-	+	-
	B) ACCORDING TO CHANGE IN COLOUR OF DIFFERENT PARTS			
1	Nakha, Nayana, Twak Peetata	+	+	+
2	Nakha, Nayana, Twak Harita	-	+	-

	C) ACCORDING TO UPASHAYANUPASHAY			
1	Sheetopashayani	-	-	+
	D) RELATED WITH LOCAL DEFORMITY			
1	Daah	+	+	+
2	Guda – paak / Rudhira – Vahana	-	+	+
3	Kandu / Nistoda / Shool	-	+	+
	E) OTHERS			
1	Daaha, Jwara, Pipasa	+	+	+
2	Moorchha	+	+	-

Table showing the local signs and symptoms of Pittaj Arsha[38] :

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
	A) ACCORDING TO CONSISTENCY			
1.	Mruduni	-	+	+
2.	Sparsha – Asahani	-	-	+
	B) ACCORDING TO SIZE AND SHAPE			
1	Yava / Jalauka – Mukha sadrushya	+	+	-
2	Shuk – Jimvha sannibha	+	+	-
3	Yakruta khanda sannibha	-	+	-
	C) ACCORDING TO COLOUR			
1	Neelagrani / Peetani	+	+	+
2	Yakrut – Prakashani	+	+	-
3	Aaseet – Prabha	-	+	-
	D) ACCORDING TO SURFACE AND DISCHARGE			
1	Rudhir–Vahani / Visragandhi–Sravani	+	+	+
2	Swedopkleda Bahulani	+	+	+
3	Tanuni / Visarpini	+	+	-

4) Kaphaj Arsha :

Table showing the general symptoms of Kaphaj Arsha[39]

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
	A) RELATED WITH MALA – MUTRA VEGA			
1	Mutra – Purisha Swetata	+	+	+
2	Analpa – Sashleshma Atisarayet	+	+	-
3	Mansa–Dhavan-Prakasham Atisarayet	+	-	-
4	Pravahika / Mutra- Kruchhata	-	+	+
5	Mutra – Purish Guruta / Pichhilata	-	-	+
	B) ACCORDING TO CHANGE IN COLOUR OF PARTS -			
1	Nakha–Nayan–Twak–Vadana Shuklata	+	+	+
2	Dashana Shuklata	+	-	-
3	Twaka-adi / Vadana Panduta	-	+	+
	C) ACCORDING TO UPASHAYANUPASHAYA -			
1	Rooksha – Ushna Upashayani	-	-	+
	D) RELATED WITH LOCAL DEFORMITY			
1	Kandu	+	+	+
2	Guruta / Stambhata / Stimitata	-	+	+
3	Manda – Ruja	-	+	-
	E) OTHERS			
1	Arochak / Shoth / Sheeta – Jwara	+	+	+
2	Avipaka	+	-	-

Table showing the local signs and symptoms of Kaphaj Arsh[39]:

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
	A) ACCORDING TO CONSISTENCY			
1	Snigdhani	+	+	+
2	Sthirani	+	-	+
3	Picchilani / Slakshnani	-	+	+
4	Sparsh – Sahani	-	+	+
	B) ACCORDING TO SIZE AND SHAPE			
1	Gostana / Kareera – Sannibha	+	+	-
2	Panasasthi – Sannibha	+	+	-
	C) ACCORDING TO COLOUR			
1	Shwetani	+	+	+
2	Panduni	+	-	+
	D) ACCORDING TO SURFACE AND DISCHARGE			
1	Maha – Moolani / Vruttani	+	+	-
2	Upchitani / Pramaanvanti	-	+	+
3	Ghana / Utchhritani	-	+	-
4	Pichhastravini	-	-	+

5) Raktaj Arsha:

Table showing the general symptoms of Raktaj Arsha[40]:

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
1	Dushta Rakta Pravrutti	+	+	-
2	Pittaj Arshavat Lakshanani	+	+	-
3	Avagadha Purishata	+	+	-
4	Analpa Rakta – Sahasaa Visrujanti	+	+	-
5	Bala – Varna Heenata / Ojakshaya	-	+	-

6	Kalushendriya	-	+	-
7	Ushna Rakta- Pravrutti	-	+	-

Table showing the local signs and symptoms of Raktaj Arsha[40] :

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
1	Kakantika Phala Sadrusha	+	+	-
2	Vidruma Sadrusha	+	+	-
3	Nyagrodha Praroha Sadrusha	+	+	-

Table showing the symptoms of Vatanubandhi Raktaj Arsha[41-42] :

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
1	Adho – Vata Apravrutti	-	+	+
2	Guda – Kati Shool	-	+	+
3	Vit – Kharta / Rookshata / Shyavata	-	+	+
4	Daurbalya / Uroo Shool	-	-	+
5	Vit Kathina	-	-	+
6	Fenil – Tanu- Aruna Varna Rakta Srav	-	-	+

Table showing the symptoms of kaphanubandhi Raktaj Arsha[42-43] :

Sr. no.	Roopas	Sushruta	Vagbhat	Charak
1	Guda Picchilata / Stimitata	-	+	+
2	Vit – Shwetata, Snigdhata	-	+	+
3	Ghana Rakta – Strav	-	+	+
4	Guda – Guruta, Snigdhata	-	-	+
5	Pichhil, Tanumaya, Rakta- Srav	-	-	+
6	Pandu Rakta – Srav	-	-	+
7	Vit – Guruta, Peetata, Sheetata	-	-	+
8	Vit – Shithilata	-	-	+

6) Sannipataj Arsha :

The symptoms of Sannipataj Arsha have not described separately by any Acharya. All Acharya said that the symptoms of Sannipataj Arsha are depending upon the involvement of Dosha. The symptoms of concern Doshaj Arsha occurs unitedly are the symptoms of Sannipataj Arsha.

They may be Dwandaj or Tridoshaj.

SAMPRAPTI OF ARSHA :

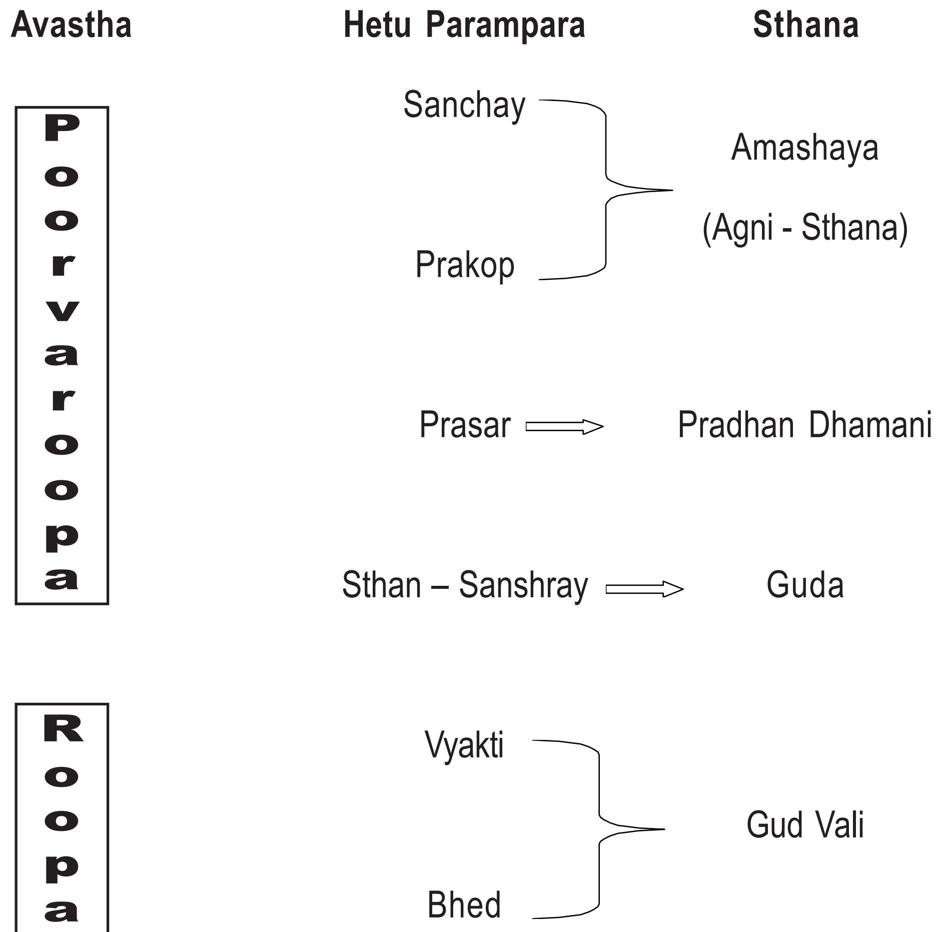
Samprapti is a complex of aetiological factor as well as phenomena complex arising from them to produce disease. The samprapti is nothing but aetiopathology of disease[44].

According to Acharya Sushruta, due to Hetu (like Virudhdha – Aahar, Adhyashana, Stree- Prasanga, Utkatasana, Prustha – yaan, Veg – Vidharan etc.) Dosha Prakop occurs. The main Hetu is Mandagni, which is mentioned as *'Visheshto Mandagne'*. These prakupeet Doshas alone or all together with or without Rakta, enters in the pradhan Dhamani (main channel), go downward and reach at Guda. By vitating the Gudavalies, Produces the Mansa-Prarohas are known as Arsha[45]. Acharya Charak and Vagbhat also supports this description[46].

Shat – Kriya Kaal :

These are the stages complex of aetio-pathological process of disease. It has mentioned by only Sushruta. The management of each shat-kriya kaal is different. The symptoms of disease occur after sthan sanshraya Avastha. Hence if the treatment up to this stage is given, disease can not occurs.

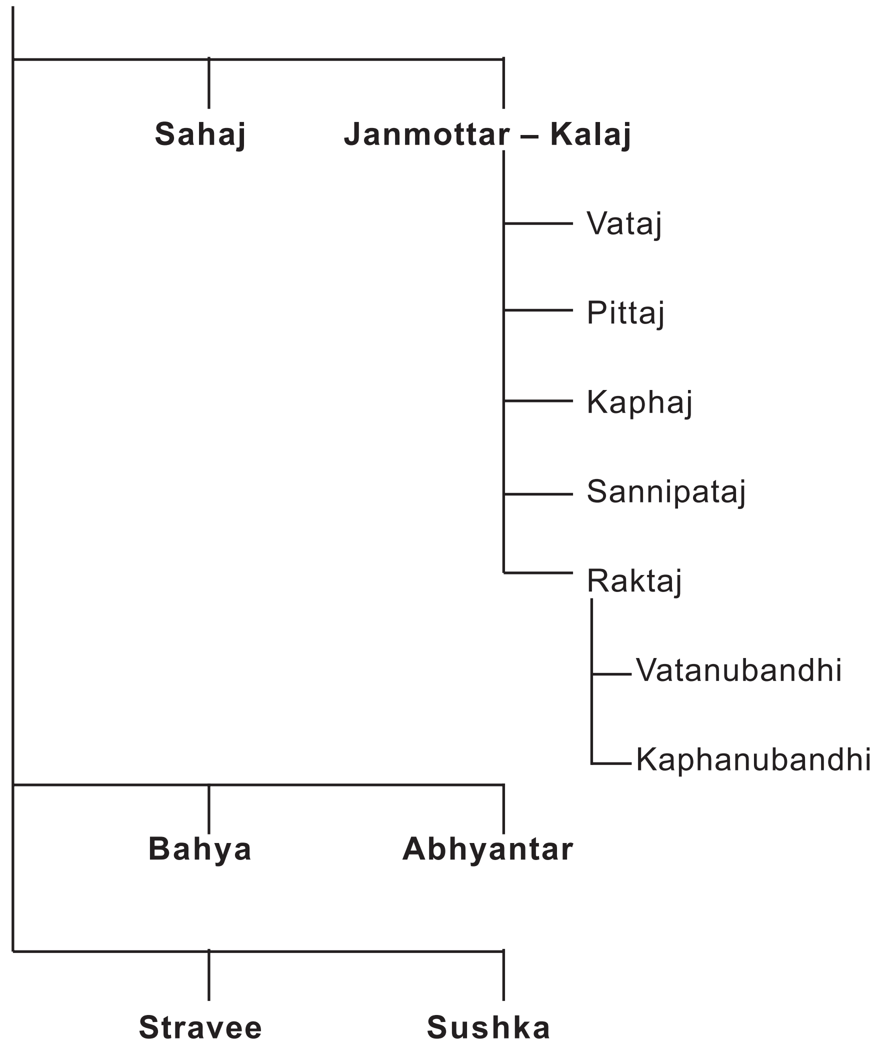
Diagrammatic presentation of Shat-kriya kaal of Arsha[47] :



Sankhya Samprapti :

The number of types of Arsha varies according to different Acharyas.

Diagramatic presentation of types of *Arsha* -



Upadravas :

If the Arsha has not treated for a long period, updravas may occurs like –

1) Badhdhagudodar

2) Udavarta[48]

Sadhya – Asadhyatwa :

Table showing the description of Sadhya-Asadhyatwa of Arsha[49-51] :

According to	Sadhya (Curable)		Asadhya (Uncurable)	
	Sukh – Sadhya (Easily curable)	Kruchha – Sadhya (Difficulty cured)	Yaapya (Palliable)	Pratyaakheya (Irremediable)
Sthana	Samvarni	Visarjani	-	Pravabini,
Dosha	Ek – Doshaj	Dwi- Doshaj	Tridoshaj with mild symptoms	Sannipataj
Hetu	Janmottar	Janmottar	Janmottar	Sahaj
Duration	-	More than on year	-	-

Also Acharya Charak indicated the symptoms of incurable stage of Arsha, which are as given below[52] –

Hasta – Paad – Nabhi – Guda – Vrushan shotha, Hrud – Paarshwa Shool, Sammoha, Chhardi, Trushna, Guda-Paak, Angomarda.

CHIKITSA OF ARSHA :

Arsha must be treated as early as possible otherwise complications may develop.

So many remedies of Arsha are mentioned in various Ayurvedic Text. According to Sushruta samhita, the management of Arsha has been classified as Aushadhi – Chikitsa, Shastrakarma, Ksharkarma and Agnikarma[53].

Acharya Charak has also mentioned such management[54] but only Aushadhi – Chikitsa has been described in detail. Different types of treatment with their indications has been described in detail by Acharya Sushruta[55].

Table showing the indication for different mode of treatment of Arsha[55]:

Sr. no.	Mode of Treatment	Indications
1	**Aushadhi chikitsa**	Arsha : 1) Which are newly occurred 2) Having less Dosha – Dusthi 3) In which symptoms are not fully developed. 4) Which are without complication.
2	**Kshar Karma**	Arsha : 1. Of soft consistency 2. Which are widely spread 3. Which are deeply situated 4. Which are protruded out
3	**Agni karma**	Arsha : 1. Having rough surface. 2. Having fixed base 3. Which are thickened 4. Which are harder in consistency
4	**Shastra karma**	Arsha : 1. Which are thin rooted 2. Projected out 3. Having mucus discharge

Aushadhi – Chikitsa :

The medicinal treatment of Arsha has been mentioned by all Acharya. The line of medicinal treatment in Sushruta – samhita is as shown below[56] –

* **Vataj Arsha** : Snehan, Swedan, Vaman, Virechan, Asthapan Anuwasan basti.

- ✻ **Pittaj Arsha** : Virechana
- ✻ **Raktaj Arsha** : Sanshamana
- ✻ **Kapahj Arsha** : Ardrak, Kulathya
- ✻ **Tridoshaj Arsha** : All Doshanashak chikitsa and Siddha milk.

Acharya Charak and Vagbhat have desribed the various preparations for the treatment of different types of Arsha[57].

KSHARKARMA[58] :

Poorvakarma :

Snehan, Swedan.

One day prior, Mrudu – Virechan must be given to the patient for the clear emptying of the bowel.

Pradhankarma :

The patient is kept in lithotomical position and then Ghruta is applied at anus and on the Arsha – Yantra. The yantra should be introduced into the anus to see the Arsha clearly. The Kshar application with the help of shalaka is made. Arsho-yantra is kept as it is in the anus for few minutes, to avoid the application of Kshar at normal mucous layer of anus. When the colour of Arsha is appeared like a colour of Pakwa – Jambu, the Kshar is washout by Amla Dravya like Kanji, fresh lime juice etc. Kshar application is repeated till the Pakwa- Jambu like colour is not appeared.

Paschatkarma :

The paste of Yashtimadhu and Ghruta is applied at the Arsha.

If two or more than two Arsha are present, treat the Arsha first which present on right side and then which present on left side. If the Kshar – Pratisaran is necessary more than one time, then repeat the Kshar-Pratisarana again keeping gap of 7 days in between two setting of Kshar – Pratisarana. Some people try Ksarsutra for haemorrhoids.

Kshar Matra[59] :

How much amount of Kshar applied is mentioned as :

Sr.no.	Type of Arsha	Kshar Matra
1	Pittaj	Nakhootsed
2	Kaphaj	Double Nakhootsed
3	Vataj	Triple Nakhootsed

Application of Kshar in Doshaj Arsha :

Sushratacharya specifically mentioned kshar karma in Doshaj Arsha as :

1. **Vataj and Kaphaj Arsha :** "Agni" and "Kshar Karma"
2. **Pittaj and Raktaj Arsha :** "Mrudukshar Karma"

Complications of Kshar[60] :

Kshar must be applied very carefully at anus, otherwise following complications may occur. Napunsakata (sterility), Shooth, Daaha, Moorcha, Aatopa, Anaha, Atisara, Pravahana, Death.

Agnikarma[58-61] :

The pre-procedure measures are same as for that for Ksharkarma. The only difference is instead of Kshar – application, the hot shalaka is applied

at Arsha. Even after the excision of Arsha, Agnikarma is recommended by Acharya Sushruta.

Shastrakarma[61-62] :

After preparing the patient, the Arsha is excised in lithotomical position. All the bleeding points are cauterized.

Raktamokshan[63] :

Raktamokshan is also indicated in Arsha Chikitsa. It is done with the help of Jaluka, Suchi, Shastra etc.

Pathya – Apathya[64]:

Pathya Aahara:

Kulithha, Godhuma, Yava, Punarnava, Jeevanti, Dhatri, Chitraka, Lashuna, Takra etc.

Apathya Aahara:

Vishthambhi, Sheet – Padarthas, Vidagdha – Amla Padarthas etc.

REVIEW OF MODERN LITERATURE

ANATOMY OF ANAL CANAL:

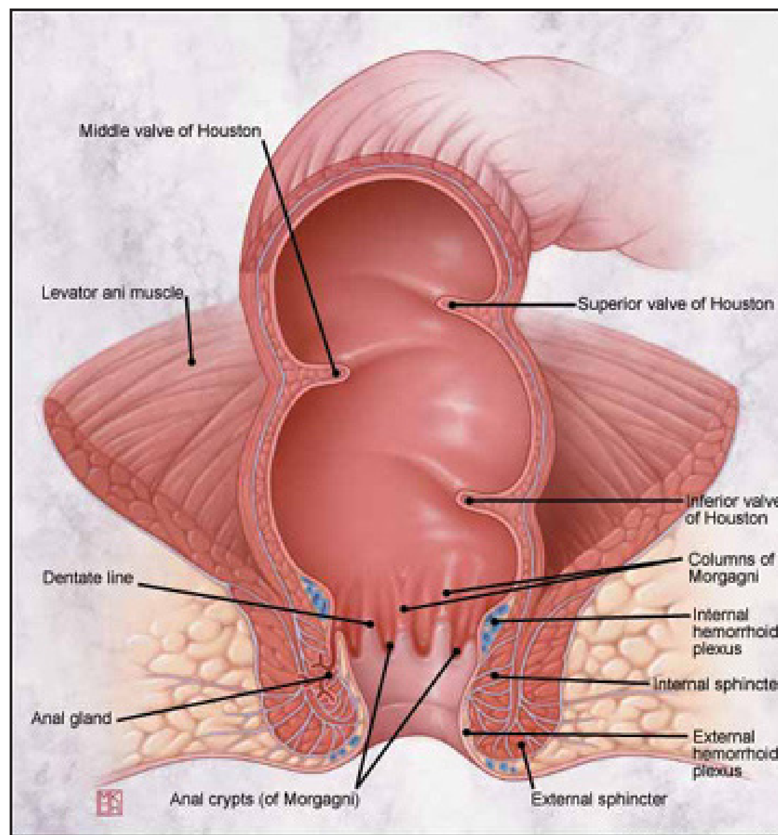
The anal canal is a short passage only 4 cms. long. It begins where rectal ampulla suddenly narrows passing down and backwards to the anus. Its anterior wall is slightly shorter than the posterior. This short passage is of the greatest surgical importance both because its role in the mechanism of rectal continence and because of it is prone to harbour certain disease. For those reasons its anatomy and that of the closely related levator ani muscle require to be considered in disproportionately greater details.

Development of anal canal:

The anal canal is formed partly from the endoderm of primitive rectum and partly from the ectoderm of anal pit as proctodaeum. The line of the junction of the endodermal and ectodermal parts respectively is represented by the anal valves (Pectinate line).

Anatomical relations:

In the normal living subject the anal canal is completely collapsed owing to the tonic contraction of anal spincters and the anal orifice is represented by an anteroposterior slit in the anal skin.


Middle valve of Houston
Levator ani muscle
Superior valve of Houston
Inferior valve of Houston
Columns of Morgagni
Dentate line
Internal hemorrhoid plexus
Internal sphincter
Anal gland
External hemorrhoid plexus
Anal crypts (of Morgagni)
External sphincter

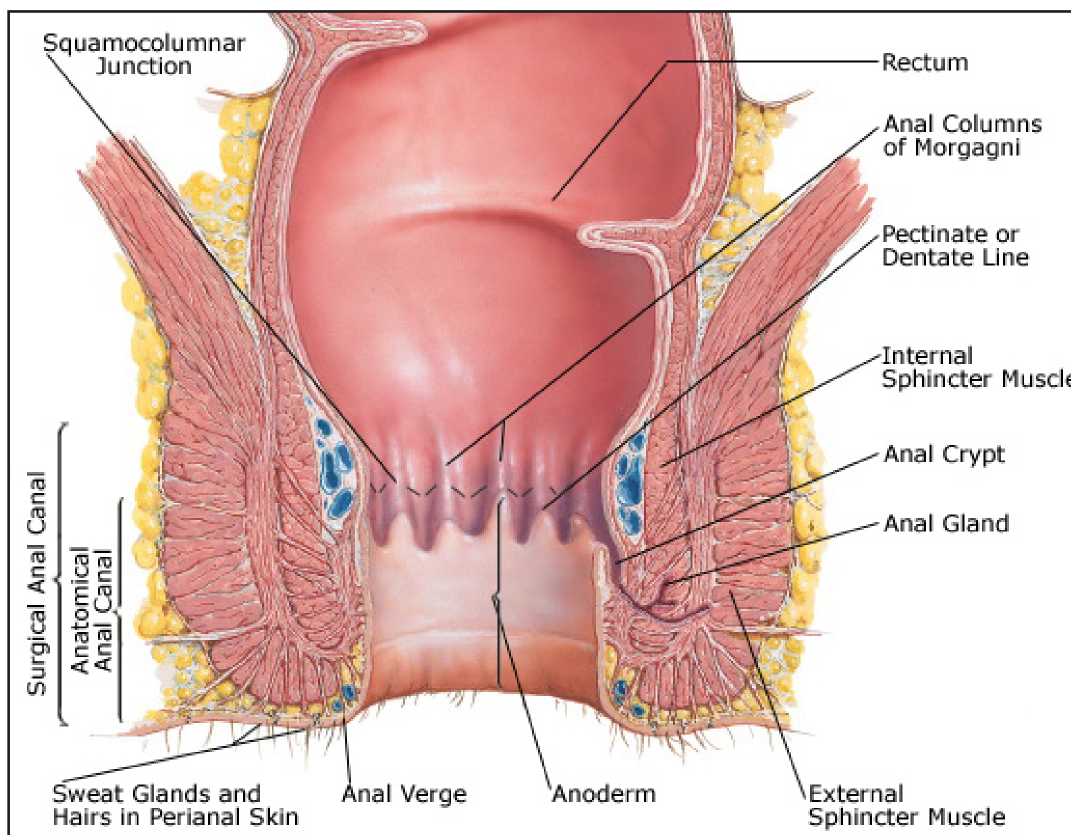

Squamocolumnar Junction
Rectum
Anal Columns of Morgagni
Pectinate or Dentate Line
Internal Sphincter Muscle
Anal Crypt
Anal Gland
Surgical Anal Canal
Anatomical Anal Canal
Sweat Glands and Hairs in Perianal Skin
Anal Verge
Anoderm
External Sphincter Muscle

Table showing the anatomical relations of anal canal –

Site	Male		Female
A)	**Anteriorly related to**		
1.	Central part of perineum	1.	Perineal body
2.	The bulb of urethra	2.	lowest part of the posterior vaginal wall
3.	Posterior border of the urogenital diaphragm (triangular ligament) containing the membranous urethra		
B)	**Posteriorly related to**		
1.	Coccyx	1.	Coccyx
2.	Mass of fibrous, fatty and muscular tissue	2.	Mass of fibrous, fatty and muscular tissue
C)	**Laterally**		
1.	Ischiorectal fossa on either side.	1.	Ischiorectal fossa on either side.
2.	Inferior haemorrhoidal vessels and nerve which cross it to enter the wall of the canal	2.	Inferior haemorrhoidal vessels and nerve which cross it to enter the wall of the canal

The lining of Anal Canal:

The lining of anal canal consists of an upper mucosal and a lower cutaneous part, the junction of the two being marked by the line of the anal valves about 2 cms from the anal orifice and opposite the middle or the junction of the middle and lower thirds of the internal spincter. This level is known as the 'pectinate' or 'dentate line' (L. pecten = cock's comb; L. dentatus = toothed). This line marks the junction of post allantoic gut and the proctodeum. Valves are remnants of proctodaeal membrane. Above each valve is anal sinus or 'Crypt of Morgagni'.

Above the pectinate line, the mucosa is thrown into 8-14 longitudinal folds known as rectal columns or columns of Morgagni Below the pectinate line the anal canal is lined with a modified skin devoid of hair and sebaceous and sweat glands.

Anatomical and surgical importance of Dentate (Pectinate) line:

1) It forms the embryological watershed between visceral structures above and somatic structures below the line.

2) The mucosa above the line has an autonomic nerve supply and is thus insensitive to cutting and pricking, whereas the skin below is supplied by the inferior rectal branch of the pudendal nerve and is acutely sensitive to these stimuli.

3) The venous drainage of the mucosa is upwards into the inferior mesenteric and portal circulation, whereas that of the skin below is to the systemic venous circulation. This is relevant to the spread of malignant tumours.

4) The lymphatic drainage above the dentate line is upwards and similar to that of rectum, where as below lymph drains down and out to the inguinal lymph nodes. The lymphatic spread of malignant tumours and of infections in these area will thus differ.

5) **Internal haemorrhoids develop just above this line.**

6) The anal glands open into the anal sinuses above the anal valves at this level, and infection in an anal gland may lead to an anal abscess which may extend into the ischiorectal space or the perianal space.

7) A crack or fissure in the skin of the anal canal extending from the

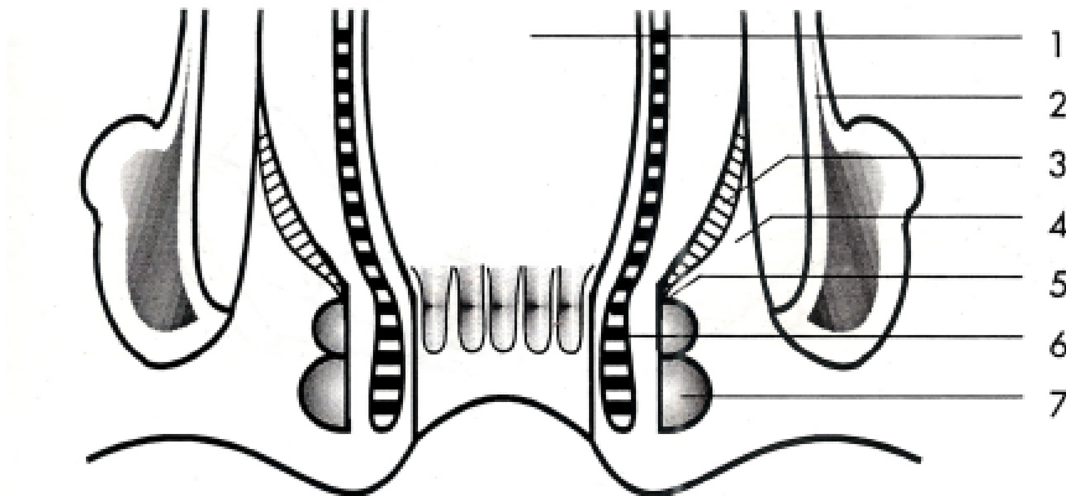
dentate line to the anal verge and usually lying in the midline, is associated with local inflammation spasm of the sphincter, causing severe pain on defecation in this sensitive area with its rich somatic nerve supply. A fissure in ano is sometimes caused by rupture of one of the anal valves.

8) In the finer control of continence, stimulation of nerve endings in the region of the dentate line may initiate reflex or voluntary changes on sphincter tone.

Anal Musculature:

The anal walls are surrounded by a complex of anal sphincters, internal and external. The together form the sphincter mechanism of anal canal.

Diagram – The anal sphincter in schematic colonal section.



1.Rectum 2.Side wall of pelvis 3.Pelvic floor (levator ani) 4.Ischiorectal fossa

5.Level of anorectal junction 6.Internal anal spincter 7.External anal spincter

1) The internal sphincter:

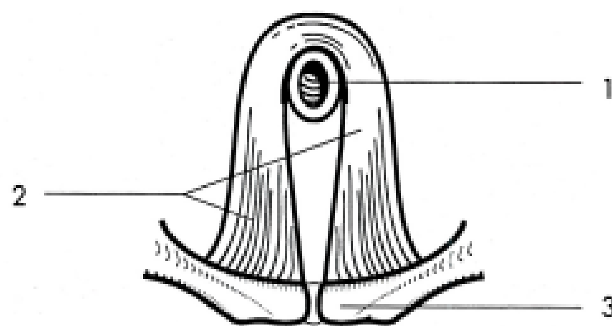
It is a downward extension of circular layer of rectal muscle wall and is a smooth muscle layer with autonomic control.

2) The external sphincter:

It surrounds the internal sphincter, and is continuous with the fibres of the levator ani muscle; it forms a skeletal muscle extension of the pelvic floor. While the internal sphincter is a well developed downward extension of the circular muscle layer of the rectum.

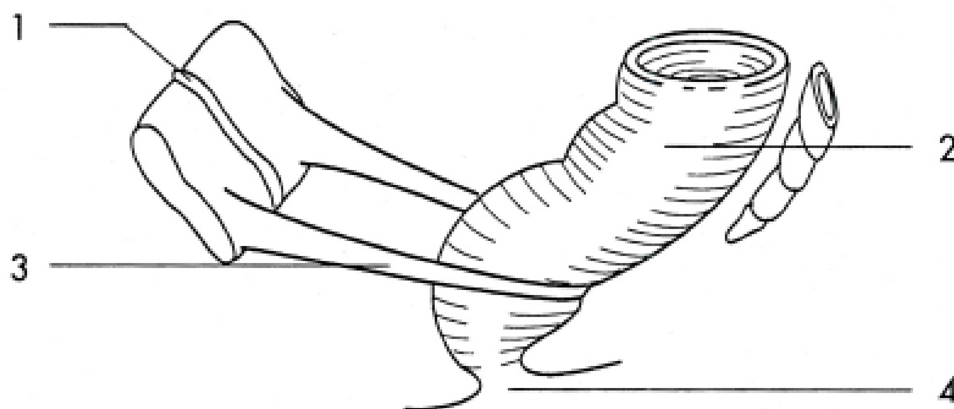
The upper part of the sphincter, at the level of the anorectal junction, is the **puborectalis muscle** which forms a sling around the anorectal junction being attached anteriorly to the back of the pubis.

Diagram – Plan of the puborectalis muscle sling



1.Anal canal 2.Puborectalis 3.Pubis

Diagram – To show how the anorectal juction is angulated by the sling formed by the puborectalis muscles.



1.Symphysis pubis 2.Rectum 3.Puborectalis 4.Anal canal

3) The longitudinal layer:

The longitudinal layer of muscle wall of rectum contributes a far less discrete component partly muscle and partly fibrous tissue, it runs down to end as fibrous bands passing through perianal fat and lower part of external spincter to be attached to skin. The fat and perianal space is broken up into small loculi.

'The Levator Ani' forms the pelvic diaphragm supporting pelvic viscera. The structures passing through the pelvic diaphragm lie within the sling of puborectalis. The levator ani arises in continuity form pelvic bone in front and thickening of obturator fascia and ischial spine and is inserted into coccyx and anococcygeal ligament posteriorly. The coccygeus muscle forms posterior part of pelvic floor, its under surface being continuous with sacrococcygeal ligament.

Blood supply of anal canal:

The anal canal is supplied by –

1) Terminal superior haemorrhoidal **branches of inferior mesenteric artery.**
2) Right and left middle haemorrhoidal **branches of internal iliac artery.**
3) Right and left inferior haemorrhoidal **branches from internal pudendal branches of the internal vessels.**

Venous drainage of anal canal :

The veins of the rectum and anal canal comprise –

1) The **superior haemorrhoidal vein** which drains into the inferior mesenteric vein and portal system.

2) **Middle and inferior haemorrhoidal veins,** which enter the systemic venous circulation, in the internal iliac veins.

The superior haemorrhoidal venous plexus lies in the submucosa of the upper part of the anal canal and lower 2 cms. or so of the rectum. From these five to six collecting veins pass upwards in the wall of rectum; at first they run in the submucosa but gradually they penetrate the muscle coat to be in the perirectal fat where they unite to form tow main veins and eventually the single superior haemorrhoidal trunk.

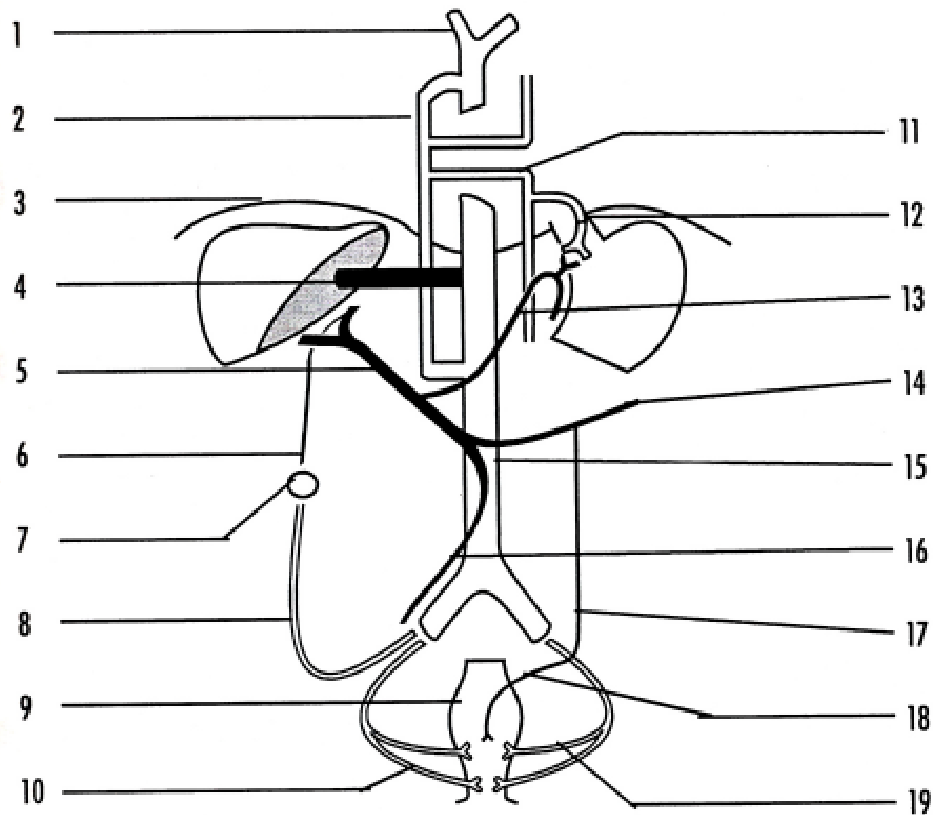
The middle haemorrhoidal vein is relatively unimportant, but the inferior haemorrhoidal vein is of more significance in that it drains the subcutaneous or external haemorrhoidal plexus of veins which lies under the skin of the anal orifice and lower part of the anal canal. Probably this plexus has communications also with the submucosal or internal haemorrhoidal plexus and normally drains partly upward along the superior haemorrhoidal veins unless there is some obstruction of the portal system or distension of the internal haemorrhoidal plexus.

The veins of the portal system do not have valves and are therefore specially susceptible to back pressure.

Diagram : The important sites of portal systemic communication.

1) At the lower end of oesophagus 2) Around the umbilicus

3) The anal canal



1.Superior vena cava 2.Azygos vein 3.Diaghragm 4.Ductus venosus 5.Portal vein 6.Paraumbilical vein 7.Umbilicus 8.Vein of anterior abdominal wall 9.Rectum and anal canal 10.Inferior haemorrhoidal vein 11.Hemiazygos vein 12.Lower end of the oesophagus 13.Left gastric vein 14.Splenic vein 15.Inferior vena cava 16.Superior mesenteric vein 17.Inferior mesenteric vein 18.Superior haemorrhoidal vein 19.Middle haemorrhoidal veins

Lymphatic drainage of anal canal:

Above the pectinate line the lymphatics drain with those of rectum, into the internal iliac group of lymph nodes. Below the pectinate line the lymphatics drain into the medial group of superficial inguinal lymph nodes.

Nerve supply of anal canal:

1. Above the pectinate line the anal canal is surrounded by autonomic nerve both sympathetic (inferior hypogastric plexus L_{1-2}) and Para sympathetic (Pelvic sphlanchnic S_{2-3-4}) nerves. Pain sensations are carried by both of them.
2. Below the pectinate line, it is supplied by somatic (inferior rectal S_{2-3-4}) nerves.
3. Spincters – The internal spincter is contracted by sympathetic nerves and relaxed by parasympathetic nerves. The external spincter is supplied by inferior rectal and perineal branch of fourth sacral nerve.

PHYSIOLOGY OF DEFECATION[65]:

Defecation is an act of emptying the distal colon from the splenic flexture through the anal orifice into the exterior which is a reflex process.

When faeces enter the rectum, distension of the rectal wall initiate the afferent signals that spread through the mesenteric plexus to initiate the peristaltic wave in the descending colon, sigmoid and the rectum forcing the faeces towards the anus. Various physical exercises, breakfast, glass of warm water, a cup of tea or smoking and mass movement help to provide mechanical stimulation of the intestines giving rise to gastro-colic reflex and may have the same effect.

The act of defecation provides another instance of a reflex that is under some degree of voluntary control. The voluntary regulation consists of the ability to inhibit the reflex under the normal circumstances and to initiate it

voluntarily, provided the necessary visceral stimulus is present. The reflex centres for the defecation have been located in the hypothalamus, in the lower lumbar and upper sacral segments of the spinal cord and the ganglionic plexus of the gut. The reflux is initiated by the rise of intraluminal pressure of about 20-25 cms. of water on rectum containing pressoreceptors, which not only detects increase of pressure but also differentiates whether the increase in pressure is due to gas, liquid or solid.

Many workers have measured the high pressure zone in the anal canal noted response to the distention of the colon and the rectum (Hill, Kellay et al).

HAEMORRHOIDS OR PILES :

Etymology:

The term **'haemorrhoid'** is derived from the Greek adjective **haem-orrhoides,** meaning bleeding **(haema = blood, rhoos = flowing)** and the term **'Pile'** derived from the Latin word **pila, a ball,** can be aptly used for all forms of haemorrhoids.

Definition:

Dilatation of the veins of the internal rectal plexus constitutes the condition of the internal haemorrhoids which are covered by the mucus membrane. The external haemorrhoidal plexus are also formed in the same way which is placed below the dentate line and around the perianal region, are external haemorrhoids being covered with skin. The union of these two types is known as 'interno-external haemorrhoids.'

Pathology and classification of haemorrhoids:

Haemorrhoids are classified as –

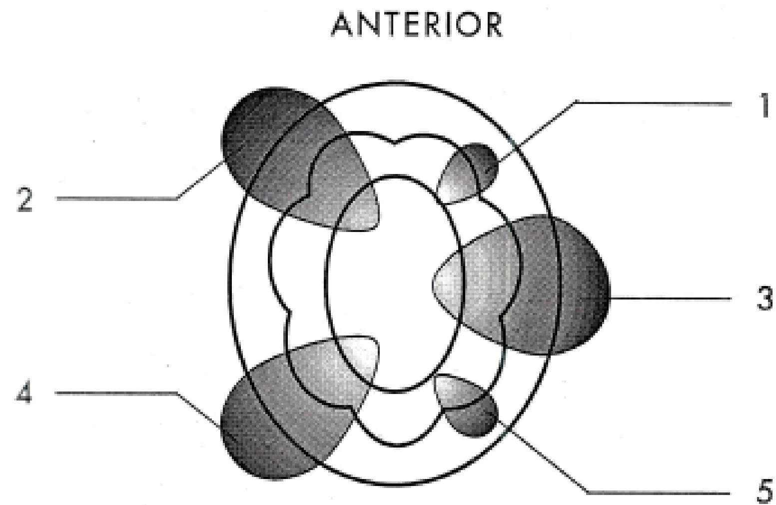
1) **Internal haemorrhoids –** Arising in the upper two-third of the anal canal which is lined by columnar celled epithelium.

2) **External haemorrhoids –** Arising in the skin covered lower one third of the canal or at the anal orifice itself.

1) Internal haemorrhoids:

These form **swelling covered with mucosa,** which **bulge into the lumen** of the anal canal, especially when the **portal venous pressure is raised** and the sphincters are relaxed during defecation and straining. The veins concerned are chiefly those of the submucous or **internal haemorrhoidal plexus,** which are mainly radicles of the **superior rectal (haemorrhoidal) vein.** But except in the very earliest stages of internal haemorrhoids, the subcutaneous or external haemorrhoidal venous plexus of the corresponding segment of the anal canal also participates in the varicose process. The so called internal haemorrhoid is therefore really often more accurately an interno-external pile, and has an upper two thirds, above the level of the anal valves, covered with mucosa and a lower one-third below the valves, covered with the skin of the anal canal and anus. In addition to veins, the contents of the pile include a **small arterial twig,** which is one of the ultimate branches of the **superior rectal (haemorrhoidal) artery** and can sometimes be quite clearly palpated against the firm internal sphincter muscle by the examining finger in the anal canal and also a certain amount of **loose submucous and subcutaneous areolar tissue surrounding the vessels.** In long standing piles this connective tissue is converted into denser fibrous tissue so that the piles, instead of being easily collapsible venous swellings, become palpable on rectal examination.

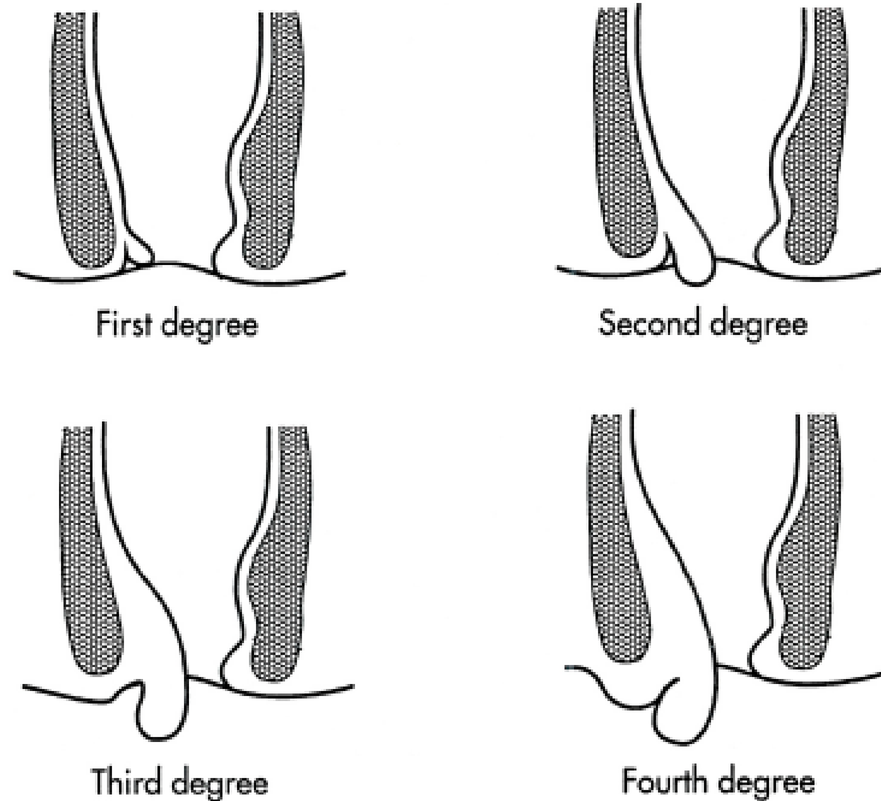
Diagram – Number and position of internal haemorrhoids.



1.Accessory pile 2.Right anterior 3.Left lateral 4.Right posterior 5.Accessory pile

It might be expected that the number and arrangement of internal haemorrhoids in the anal canal would vary greatly from patient to patient but in-fact the distribution is remarkably constant. In the great majority of patients there are three main piles which occupy well-defined positions; two are present on the right side of the anal canal and are termed the **right anterior and right posterior piles** respectively and third forms on the left side and is the **left lateral pile.**[66] Additional haemorrhoids may be present between these main piles. **Miles (1939)**[69] explained this arrangement of the piles was due to the difference in the termination of the right and left main branches of the superior rectal artery, the left branch continuing essentially as a single vessel, whilst the right branch splits into an interior and a posterior branch.

Diagram – Degrees of internal haemorrhoids. Four stages in the development of internal haemorrhoids.



Internal haemorrhoids vary greatly in size –

1) **I° -** Haemorrhoids projecting slightly in lumen of anal canal, when vein are congested at defecation.

2) **II° -** These prolapses out of the anal canal opening on straining, but return spontaneously to the anal canal when motion has been passed and the defecation effort has ceased.

3) **III° -** These prolapse, but do not reduce spontaneously and remain prolapsed afterwards and have to be replaced digitally.

4) **IV° -** Completely irreducible haemorrhoids usually are long standing and acquire a component of skin.

Graham Stewart (1963)[70] suggested that internal haemorrhoids could be divided into two categories –

1) **Vascular haemorrhoids –** Seen mainly in young patients where distended veins are main component.

2) **Mucosal haemorrhoids –** More often encountered in elderly people which are composed of thickened mucosa.

V.V. Dultsev and Rivkin (1989)[71] have classified haemorrhoids in four forms –

1. Asymptomatic haemorrhoids – Are seen at their typical sites but without clinical signs.
2. Acute haemorrhoids – Thrombosed or inflamed haemorrhoids.
3. Haemorrhoids with profuse and persistent bleeding
4. Chronic haemorrhoidal syndrome

External haemorrhoids:

External haemorrhoids form at or just outside the anal orifice. They are invariably covered with skin, not mucosa, and as this is endowed with ordinary cutaneous sensation they may be extremely painful. They may be divided into two groups.

1. Acute thrombosed external haemorrhoids or anal haematomas.
2. Chronic and skin tags.[66]

Aetiological considerations:

Over thousands of years since the recognition of haemorrhoids, numerous aetiological factors have been implicated. In the distant past they

included temperament, body habits, climate and seasons, customs, passions, sedentary life and tight laced clothes. In more recent time's anatomic abnormalities, diet, constipation, anal spasm, portal hypertension, and carcinoma have been implicated **(Dennison et al 1988)[72].**

For aetiological consideration, **Goligher (1992)[66]** (Surgery of Anus, Rectum and Colon) has divided haemorrhoids in two categories –

1) **Internal haemorrhoids associated with a definite organic obstruction to the venous return from the superior haemorrhoidal veins.**

This is seen in –

* Cirrhosis of the liver[73]
* Thrombosis of the portal vein
* Abdominal tumours, notably pregnancy
* Carcinoma of rectum

2) **Idiopathic haemorrhoids where no evident organic venous obstruction is present.**

This is commonest type of presentation –

* Heredity
* Anatomical and physiological factors
* Constipation, diarrhea and straining at stool[74]
* Epidemiology and diet[75]
* Deficiency of the anal sphincters and alteration of sphincter tone.[76]

SYMPTOMATOLOGY[77,78] :

1) Bleeding per rectum:

Bleeding is the earliest and principle symptom of the internal haemorrhoid. Initially it is slight and bright red in colour. It is during the defecation. Per rectum on and off fresh bleeding when the patient is constipated. This may continue for months or years becoming independent on the bowel action.

2) Pain:

Uncomplicated piles are generally not painful but it is due to an acute attack of prolapsed with thrombosis. It arises from the involvement of the one or the more parts or complete external region of the haemorrhoidal plexus and much related to the external oedema, over stretching of the skin, congestion or due to the presence of some acute anal lesion such as an anal fissure or an anal abscess etc.

3) Discharge:

A mucoid discharge is not uncommon symptom of the prolapsing haemorrhoids through the rectum particularly in the third and fourth degree haemorrhoids.

4) Prolapse:

'Tuttle' mentioned that prolapse meaning falling down. 'Buie' divided the types of prolapse into two categories i.e. visible and consealed. The visible prolapse may be partial or complete, while the consealed rectal prolapse is an intussuception of the upper portion of the rectum. In the late stage there is prolapse of piles which was noticed by patient while it occurs

during defecation in the beginning and haemorrhoids slips back spontaneously when expulsive effort ceases.

5) Irritation:

The irritation is the common symptom due to constant mucous discharge on the anal skin in the third degree piles.

6) Anaemia:

The patient becomes gradually anaemic in the second degree piles due to the profuse bleeding from the haemorrhoids.

DIFFERENTIAL DIAGNOSIS[77]:

A) Bleeding per rectum / Rectorrhagia:

1) General Disorders or Haematic Origin:

- Blood disorders
- Medications
- Hepatic / Renal insufficiency.

2) Local Perianal:

- Cutaneaus lesions
- Fissure in ano
- Prolapsed thrombosed piles
- Condyloma
- Tumor
- Traumatic lesions

3) Anal canal:

- Haemorrhoids
- Ulcerations e.g. Syphilitic
- Tumor
- Traumatic lesions

4) Colorectal:

- Polyps
- Angiodysplasia
- Diverticulitis
- Colitis (e.g. Ischaemic Colitis, Infectious and Parasitic Colitis)
- Tumor

5) Small bowel:

- Crohn's disease
- Meckel's diverticulum
- Ischaemic lesion
- Tumor

6) Gastroduodenal:

- Mucosal erosions
- Ulcerations
- Tumor
- Traumatic lesions

B) Prolapse per Rectum:

- Piles = Only II^0, III^0, IV^0, Piles prolapses through rectum.
- Rectal polyp especially at younger age
- Tumour e.g. Malignancy especially at older age.

C) Pruritus ani:

1) Primany dermatosis:

- Eczema, Psoriasis
- Allergic eruptions
- Perianal lesions contact dermatitis
  - Local anaesthetic, antibiotic ointments

- Local
  - Fissure in ano
  - Crohn’s disease
- Infections
  - Fungus
  - Worm infestation
  - Sexually transmitted diseases

2) Scecondary Irritative Cutaneous Lesions:

- Transpiration i.e. excessive sweating
  - Hirsutism
  - Inadequate anal hygiene
- Mucous
  - Excesive production in prolapse of piles and rectum
- Pus
  - Fistula in ano
- Stool
  - Diarrhoea
  - Incontinence
- Systemic disorders
  - Diabetes
  - Obstructive Jaundice
- Idiopathic and Psychogenic

D) Perianal Pain:

- Perianal region
  - Thrombosed varix
  - Haematoma
  - Fissure in ano
  - Herpes

- Anus
    - Cryptitis - Papilitis
    - Acute submucous abscess
    - Thrombosed and prolapsed haemorhoid
- Rectum
    - Solitary ulcer Invagination
- Pelvic floor
    - Proctalgia fugal
    - Idiopathic pain
- Nonproctological origin
    - Gynaecological
    - Urological
    - Neurogenic
    - Musculoskeletal

E) Per Rectum Discharge:

- Transpiration, Eczema
- Fissure in ano
- Fistula in ano
- Abcesses
- Furunculosis
- Anal
    - Haemorrhoids
    - Fistula in ano
    - Condylomata acuminata
    - Abscess
    - Incontinence
- Colorectal
    - Prolapse of rectum
    - Solitary ulcer
    - Adenoma
    - Irritable colon

Most Common locations of anorectal symptoms:

Depending on their presence or absence, the characteristic signs or symptoms of anorectal disorders allow to determine one or more specific sites of origin. These symptoms are listed together as a function of three relevent localization: The anal verge, The anal canal, The rectosigmoid junction.

Differential diagnosis of external haemorrhoids:

The differential diagnosis of the external haemorrhoids should include anal epithelioma, chondiloma, rectal polyp etc.

Obvious red blood passed per anum may be due to a fissure, fistula, polyps, syphilitic ulceration, and amoebic proctitis. In the elderly fresh bleeding per rectum may be due to carcinoma.

Internal haemorrhoids complicated by thrombosis, oedema or other factors are unlike to cause difficulty in diagnosis. Partial rectal prolapse must be differentiated from the haemorrhoidal prolapse.

Examination[66]:

Examination follows the routine lines adopted in any rectal case and includes examination of the abdmen and if necessary, haematological investigation of any suspected anaemia.

1) Inspection:

Large third degree haemorrhoids will be readily recognized as projecting masses, the outer part of which is covered with skin, the inner portion with red or purplish anal mucosa, the junction between these two areas

being marked by a linear furrow. In long standing cases of prolapsing haemorrhoids, where the mucosa has been in frequent contact with the clothing over a period of months or years, the lining epithelium often undergoes metaplasia to a squamous type, which is seen as pale white pannus extending from the mucocutaneous junction over the most dependent part of the mucosal surface and terminating in a rather irregular edge. In advanced cases of this kind the perianal skin frequently shows characteristic changes of pruritis ani.

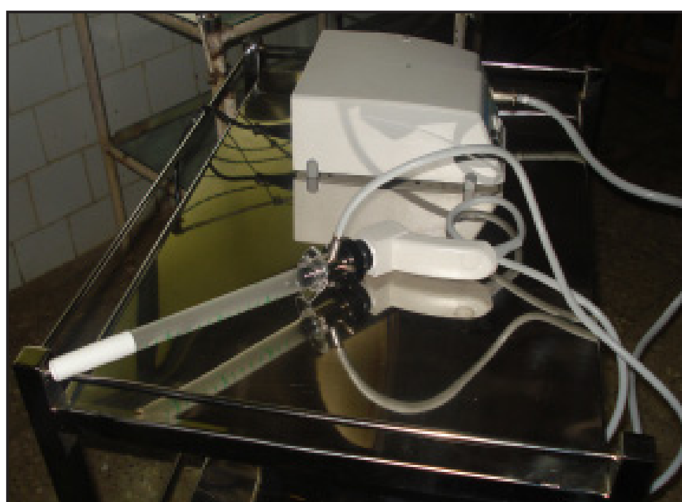
With second degree internal haemorrhoids there is naturally no projection of the mucosa, but the skin covered components of the piles may be evident at the anal orifices as distinct swellings in the three main positions and most frequently on the right anterior aspect. Gentle traction with the fingers on these loose folds or swellings often succeeds in drawing down some of the anal mucosa, again most frequently in connection with the right anterior haemorrhoid. First degree haemorrhoids do not usually produce any abnormality of the anal region that can be defected on simple inspection.

Piles in their earlier stages are soft, easily collapsible, venous swellings, quite imperceptible on digital palpation. It is only after they have been present for some time and have prolapsed that the submucous connective tissue undergoes fibrosis and the pile becomes palpable. It can then be felt as a soft longitudinal fold, as the finger is swept round the rectum.

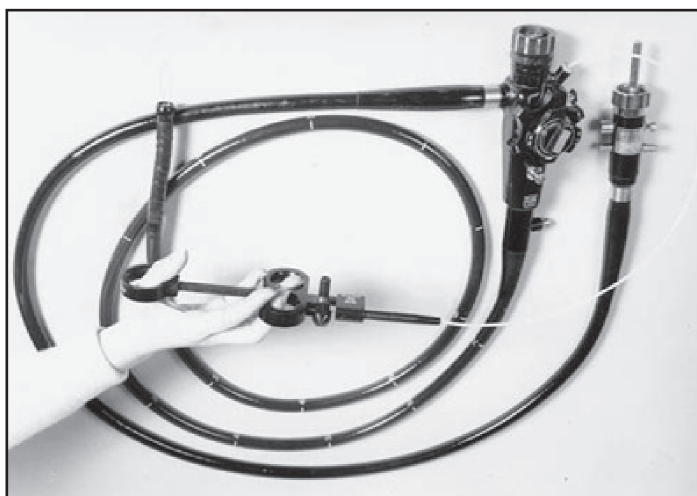
2) Proctoscopy:

Proctoscopy is the essential step in the examination for internal haemorrhoids. If haemorrhoids are present they tend to bulge into the end of the proctoscope like grapes, when the patient bears down slightly and the

Photograph: Self Illuminated Proctoscope



Photograph: Sigmoidoscope



Photograph: Colonoscope

instrument is gradually withdrawn. Sometimes when this is done one of the piles starts to bleed and the actual spot from which the haemorrhage is occurring can be clearly seen.

To assess the size and degree of the haemorrhoids the withdrawal of the proctoscope as continued till it just emerges from the anal orifice, the patient being instructed to maintain his expulsive effort. If now no red anal mucosa is evedent at the anal orifice the piles are only first degree; alternatively, if mucosa does project the piles are second or third degree. The patient is next requested to cease straining. If the piles are of second degree variety they immediately slip back into the anal canal out of view, and the anal orifice closes over them. But if they are third degree piles the mucosal prolapse persists after the cessation of straining till it is reduced digitally.

3) Sigmoidoscopy:

This becomes especially important when proctoscopy fails to reveal any significant haemorrhoids to account for the patients bleeding, but it is a wise routine measure in all cases attending a rectal clinic with haemorrhoids or other minor rectal complaint, especially if the patients are over 40 years of age. Occasionally admittedly very rarely an entirely unsuspected rectal or sigmoid carcinoma is detected in this way.

4) Abdominal examination:

This requires no comment.

Complication of internal haemorrhoids:

1. Profuse haemorrhage
2. Strangulation
3. Ulceration
4. Thrombosis

5. Gangrene
6. Sloughing
7. Infection
8. Suppuration
9. Fibrosis

Treatment of Internal Haemorrhoids :

Number of treatment modalities are available for the management of "Internal Haemorrhoid" as –

A) Non Surgical:

Medicinal Treatment.

B) Parasurgical / Office Treatment:

- Sclerotherapy
- Rubber band ligation
- Manual Dilatation
- Cryosurgery
- Infra red coagulation
- THD / DGHAL

C) Surgical:

- Stapler Haemorrhoidectomy / LONGO procedure
- Formal Haemorrhoidectomy

A) Non Surgical:

When the symptomatic haemorrhoid is treated by oral and local medicines like suppository, ointments etc. without any surgical intervention named as **"Non Surgical"** or **"Medicinal"** treatment.

It is recommended when the haemorrhoid is a symptom of some other condition or disease, except of course when a carcinoma is present.

It consists of correcting probable predisposing factors responsible for haemorrhoid like constipation, dietary and bowel habitat, life style etc.

Constipation is corrected by using unprocessed bran, mild laxatives. Advices regarding increasing bulk in diet, diet free of spices and chilly.

Hot fomentation like seitz bath with local hygeine used to reduce pain and local inflamation.

In a controlled trial by **Webster et al (1978)** Bran Laxative was found to be quite effective in I^0 and II^0 haemorrhoids.

The role of ointments and suppoositories is doubtful but in a study of 4500 cases by **Y.L. Dultsev** and **V.L. Rivkin (1989)** a combined treatment including suppositories and ointments with proteolytic enzymes was found quite effective in reducing inflammation.

B) Para Surgical Treatment:

Those Haemorrhoid not responding to medical treatment and lifestyle modifications treated by parasurgical methods.These are directed at the non-sensitive haemorrhoid lying above **“Dentate line”**.

Several forms of treatment are now available for internal haemorrhoids.

1. Expectant or medical treatment
2. Injection treatment
3. Rubber band ligation
4. Manual dialation

5. Cryosurgery
6. Infra red coagulation
7. DGHAL / THD
8. Operative treatment – formal haemorrhoidectomy, stapler haemorrhoidectomy (LONGO procedure)

1) Expectant or medical treatment:

It is recommended when the haemorrhoids are a symptom of some other condition or disease except, of course, when a carcinoma is present.

It consists of correcting probable predisposing factors responsible for haemorrhoids constipation is corrected by using unprocessed bran. Advice regarding increasing bulk in diet. Diet free of spices and chilly. Hot fomentation, sitz bath to reduce pain and local inflammation.[66,67]

In a controlled trial by **Webster et al[79] (1978)** bran laxative was found to be quite effective in I° and II° haemorrhoids.

The role of ointments and suppositories is doubtful but in a study of 4500 cases by **Y.L. Dultsev[71]** and **V.L. Rivkin (1989)** a combined treatment including suppositories and ointment with proteolytic enzymes was found quite effective in reducing inflammation.

2) Injection treatment:

Injection of chemicals into haemorrhoids for their cure was practiced by **Morgan,** Surgeon to Mercer Hospital, Dubling using iron per sulphate in 1869.[66,80]

Norman J. Kilbourne (1934)[81] compared the results of operative and

injection method. The result of 293 proctologists from America and Europe were compiled. The total number of cases which were treated by operation were 36,648 and by injection 26,262.

The solution used for injection were -

- ✻ Quinine hydrochloride (5%)
- ✻ Phenol in glycerine
- ✻ Phenol in oil (5%)
- ✻ 70% Alcohol
- ✻ Alcohol ergot and phenol
- ✻ Double chlorohydrolactate of quinine urea in glycerine

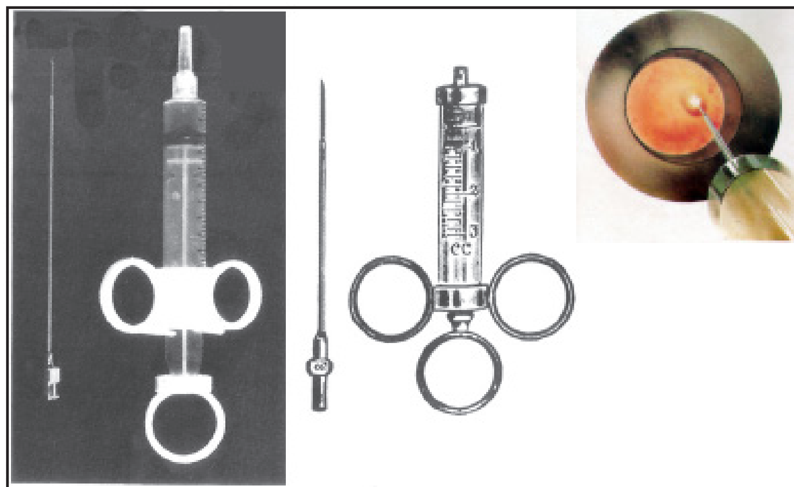
The site for injection differed according to the opinion of the proctologists some injected above the haemorrhoids, some at the upper border, some into the haemorrhoid itself. Some proctologists preferred injection of III° haemorrhoid while other did not.

Results:

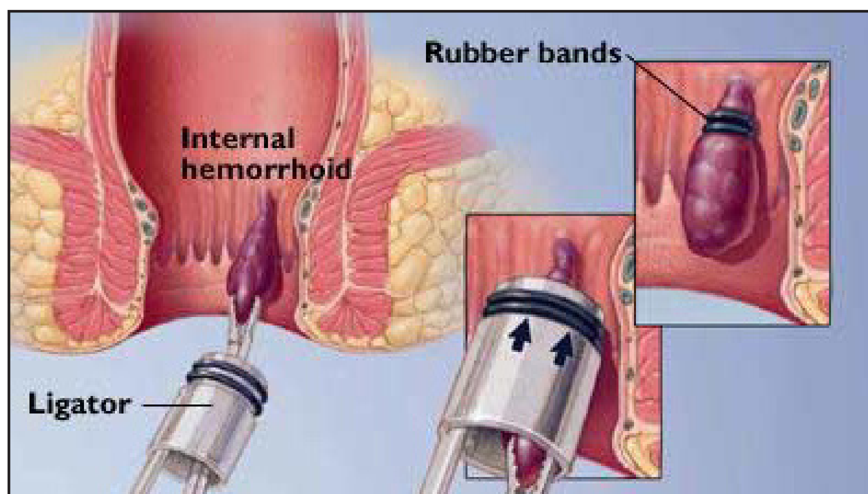
	Operative method	**Injection Method**
Mortality	11 out of 33,648	none
Complications :		
1) Haemorrhage	0.573%	0.279%
2) Stricture	0.22%	0.22%
3) Recurrence	0.5%	10.00%

(There were 285 sloughs out of 26,642 i.e. 1.05% by injection.)

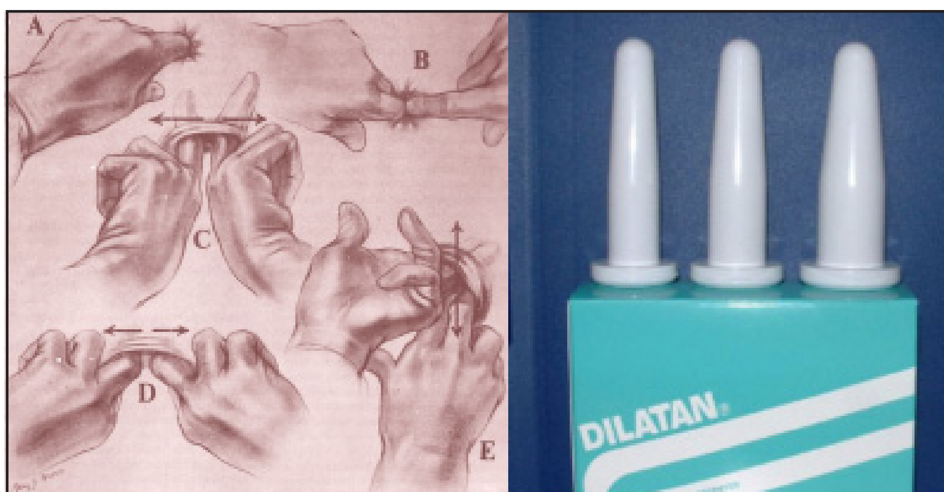
Results from various injection solutions were compared. Results from phenol in olive and almond oil compared favorably with results following uses



Injection treatment



Rubber band ligation



Manual dilation of the anus and lower rectum

quinine urea hydrochloride. The double chlorohydro-lactate of quine urea proved to be less likely to cause a slough than quinine urea hydrochloride.

From this study, it was derived that injection was a safe method to treat haemorrhoids.

Graham stewart (1962)[82] studied the histological changes produced by 5% phenol in almond oil and pure almond oil after injection. He found that histological changes produced by both were similar hence he concluded that symptomatic improvement after injection treatment in due to almond oil rather than the dissolved phenol.

3) Rubber band ligation:

This operation was developed by **Barron J.** (1963, 1964)[83,84] as a modification of an out-patient ligature method originally proposed and practiced by Blaisdell (1958).

The principle of the method is to apply a rubber ring ligature through a proctoscope to the mucosal covered part of the internal pile. Over a period of seven to ten days this destic band gradually cuts through the tissue and the piles sloughs off spontaneously.

No anesthetic is required for rubber band ligation. **Barron** (1963) claimed that it was a virtually painless maneuver as a rule or at least caused no more discomfort than does an injection for haemorrhoids.

It seems that rubber band ligation is best suited to **II°** degree hemorrhoids with **I°** degree piles, there in insufficient tissue available to pull into the ligature drum to make the method worth while, and in any event such small piles can be very successfully managed by injections. For **III°** degree

haemorrhoids with large skin covered components particularly if multiple, the rubber band ligations are of very limited and temporary value and are no substitute for a formal haemorrhoidectomy.

4) Manual dilation of the anus and lower rectum:

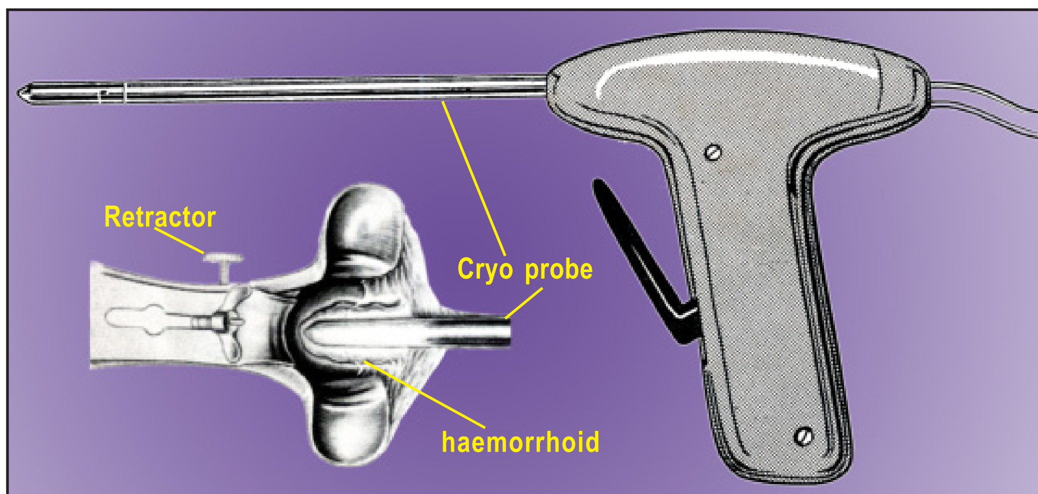
Lord (1968, 1969)[85] believed that there exist fibrous band in anal canal and rectum which interfere with venous drainage; hence they are responsible for development of haemorrhoids. If these bonds are broken by stretching the anus and the rectum, the causative factors are removed and condition improves.

This procedure is done under general anesthesia. The anus and rectum are gradually dilated using both hands by initially introducing two fingers then four fingers and finally eight fingers. At the end a sponge is introduced in anus and left there for an a hours or so from the next day onwards regular dilation with a rectal dilator is done.[85,86]

The disadvantage with this technique is that it confuses the mucosa anoderm and muscles of both sphincters. It can also cause incontinence.

5) Cryosurgery (Cryo haemorrhoidectomy):

Lewis et al (1969)[87] applied cryogenic technique in management of haemorrhoids. The essential item is a cryoprobe, capable of being cooled by nitrous oxide or liquid nitrogen. Liquid nitrogen produces a reduction of temperature to -180°C compared with nitrous oxide to – 70°C. The probe is applied along the axis of haemorrhoids. The tissue easily seems to freeze and returns to normal after rewarming swelling occurs 6 hours later. Thrombosis with infarction occurs at 24 hours. Necrosis occurs over 10-14 days; follow by sloughing and ulcer formation.[74, 87,88]



Cryosurgery (Cryo haemorrhoidectomy)

Infra Red Coagulation (Photo coagulation) I.R.C.

Bipolar diathermy

Advantages:

Out-patient procedure and can be carried under local anesthesia.

Disadvantages:

Post operative pain, a profuse discharge of foul smelling fluid from anal canal, there is recurrence of skin tag and it requires costly and sophisticated equipments.[66]

6) Infra Red Coagulation (Photo coagulation) I.R.C.:

Neiger et al (1979)[89] used infra red coagulator for the 1st time for the treatment of haemorrhoids. It causes localized tissue destruction, by rapidly increasing the temperature. Neiger mentions oedema of the underlying tissue with development of granulation tissue in submucosa and thrombosed vessels.

Two controlled studies carried out by **Ambrose** et al (1983)[90] and **Templeton** et al (1983)[91]. In a trial with rubber band ligation, they have found both methods equally effective but coagulation causes less pain and fever complications.

7) Bipolar diathermy:

This is a very recent method in treatment of haemorrhoids. It produces tissue destruction, ulceration and fibrosis by local application of the heater probe, developed by **Dr. David** Auth.[66]

Advantages:

One operator can carry out this procedure, no bowel preparation or anesthesia required.[92]

Disadvantages:

It causes excessive discharge of fluid from anal canal and may lead to fissure formation.

8) Galvanic generator (Ultroid DC, Microvasive):

This therapy was developed by **Dr. Daniel Norman** and has been utilized in all four degrees of haemorrhoids. This method is different from infrared coagulation and bipolar diathermy. A low voltage current is passed between a probe which is unipolar and earth plate of patient. The mode of action is, formation of NaOH with subsequent local effects, causing tissue destruction.[72,93]

Advantages:

Used for all four degrees of haemorrhoids and causes less discomfort.

Disadvantages:

Can cause electrical shock to the patient and it is time consuming.

9) Operative treatment:

A) FORMAL HAEMORRHOIDECTOMY:

a) Excision and ligation:

Fredrick Salmon the founder of St. Marks hospital modified the ancient method of ligation and excision of haemorrhoids, which consisted of making a cut with scissors at mucocutaneous junction of pile and stripping the mucosa covered portion upto the top of anal canal, where it was ligated and excess tied.

Miles (1919)[69] introduced the low ligation technique. He suggested making the scissors cut not at the mucocutaneous junction but at perianal and anal skin upto, but not beyond mucocutaneous junction. This separated a ‘V’ shaped piece of skin together with the mucosal part of pile which when tied dragged the mucosa to the level of mucocutaneous junction. Thus avoiding excessive raw area known to occur with previous procedure.

In 1937 **Milligan** et al[94] described a low ligation technique similar with that of Mile’s.

b) Submucosal haemorrhoidectomy:

Parks (1956)[95] proposed a modification of ligation operation. Originally proposed by **Petit** (1774)[96] and termed it as submucosal haemorrhoidectomy with high ligation.

Advantages:

Ligature does not include anal mucosa, hence is less painful as claimed by Parks. There is no extensive raw area hence less fibrosis and scarring.

Disadvantages:

It is more time consuming as compared to previous technique, dissection is very difficult because of continuous oozing. Recurrence is more common.

c) Excision with suture:

Introduced by **Mitchell** (1903)[97] the haemorrhoid was drawn down as far as possible and a clamp was applied radially across its base, distal portion of the haemorrhoid was cut. Next a ligature suture on curved needle was

passed as a continuous stitch. This was then tightened controlling bleeding more recently **Ferguson** (1959)[98] has advocated a method of haemorr-hoidectomy without use of clamp.

d) Excision of entire pile bearing area with suture:

This is the operation described by **White-head** (1882)[99] of **Manhester** which provides for excision of haemorrhoid bearing area of anal canal as a tubular segment, the lower edge of anal mucosa then sutured circumferentially to anal skin.

The result of this operation were most unsatisfactory, it caused considerable blood loss, sensory incontinence and formation of stricture.

e) Excision with clamp and cautery:

Cusack (1846)[100], in Dublin first used this method. The procedure was similar to Mitchell's method except thermal cautery was used instead of suture.

Advantages:

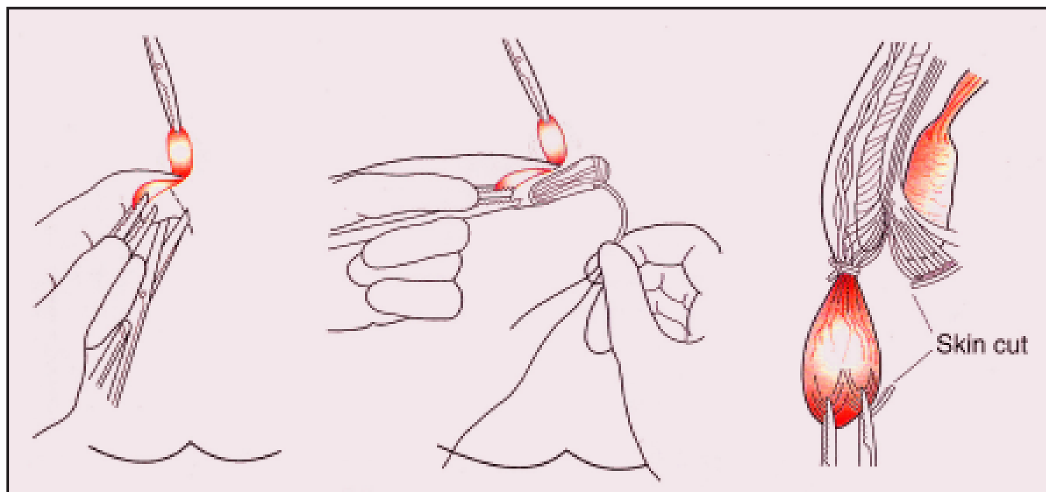
It caused less pain and less chance of stricture formation.

Disadvantages:

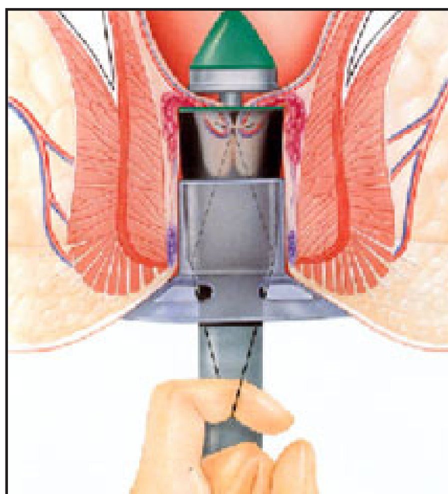
Increased chances of reactionary haemorrhage.

B) STAPLER HAEMORRHOIDECTOMY:

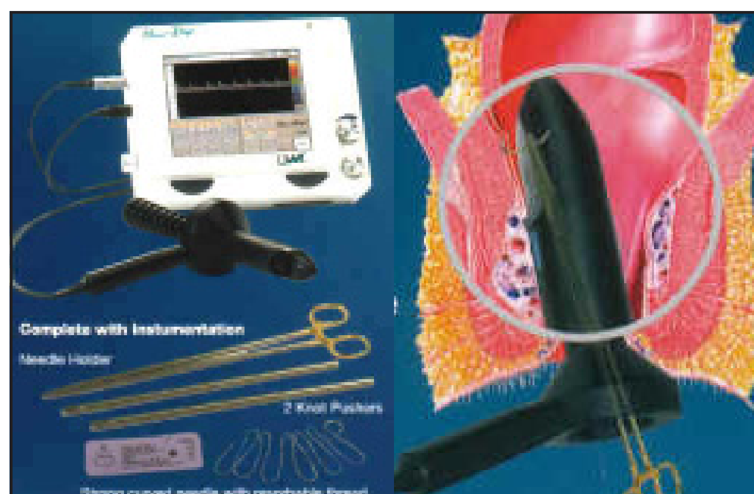
In **1993 Antonio Longo** reaffirmates the method, it was later named after him. A basic feature of stapler haemorrhoidectomy is **minimally invasive intervention,** with transanal simultaneous ligation of all terminal branches of a haemorrhoid involved in internal haemorrhoid vascularization and with the reduction of rectal mucosal prolapse.



Formal Haemorrhoidectomy



Stapler Haemorrhoidectomy



Doppler Guided Haemorrhoidal Artery Ligation (D.G.H.A.L.)

Method:

Patient was placed into the lithotomic position under general anaesthesia. Detailed exploration of the anorectal region is performed with anal retractor. After dentate line identification, mild eversion of the anal canal is performed with atraumatic clamps. At 4-5 cm from the dentate line cranially, beginning from the anterior rectal wall clockwise **tobacco pouch suture** was made, pertaining to involve the mucosal and submucosal layer. For the pouch suture, monofilament suture 2.0 is used.

After that a maximally open Ethicon Endo Surgery 33 mm haemorrhoidal stapler is inserted in the anal canal direction to the point where its 'Head' reaches the position above tobacco pouch suture. The suture is then tightened around the axis of the automatic suture device. In that position it is necessary to check the position of the tightened pouch suture i.e. whether is positioned symmetrically at least 2 cm from the dentate line.

After the stapler is triggered, it is gently palled out of the anal canal in a maximally open position. The dissected tissue around the stapler axis is checked (whether there is the total circumference) and the sample is send for histopathology. After removal of stapler, haemostasis is monitored.

Stapler haemorrhoidectomy is less risky procedure as it enables conservation of a larger mucosal portion and it lasts significantly at less time period, compared to conventional surgical approaches.

Advantage:

Less painful than traditional surgical methods but certainly not painfree.

Disadvantage:

Serious complications reported after procedure as requires hospitallisation and several days of recovery.

10) DGHAL / THD :

Transanal haemorrhoidal dearterialization (T.H.D.) and Doppler Guided Haemorrhoidal Artery Ligation (D.G.H.A.L.) is the least invasive technique, because there is no tissue removal but only the application of stitches on the rectal mucosa, an area lacking in pain receptors.

It utilizes a specially designed instrument with a Doppler transducer to locate the terminal branch of the superior rectal artery, which was then ligated, through an instrument 3 cm above the dentate line.

Advantage:

Being the only resolutive surgical treatment which can be conducted with local anaesthesia as a day case –

- ✻ Negligible post- operative pain and highly effective.
- ✻ Sufferer can resume his normal activity within 24 hrs.

Disadvantage:

Costly treatment modality.

★ ★ ★

DRUG REVIEW

The procedure of Kshar Pratisaran was described in detailed by Sushruta, in management of Abhyantar Gudarsha.

Sushruta says, whenever the only Kshar term is used the Yava Kshar is to be considered. Abhyantar Gudarsha having bleeding per-rectal the rakta and pitta dushti is predominant and whenever there is sever irritation this P/R bleeding is increased. The Yava Kshar is having mild irritation properly composed to other ksharas like Apamarg Kshar etc. As the Arsha means mansankura at guda, there is necessity of lekhan to reduce the size of Arsha. Therefore Yava Kshar was selected for the preparation of malahar – ointment.

Also, for *Pratisaran* of *Kshar,* intervention of doctor was necessary and compulsory. Hence it was decided to make the process convenient for patient to apply the *Kshar* at internal haemorrhoid and to avoid doctor's intervention for application of *Kshar*. So instead of using kshar, it was quite beneficial to use property of kshar i.e. lekhan, in the form of malahar-ointment. Concept of application of *Kshar* by patient himself was presumed and for this purpose the **ointment of *Kshar*** was preferred.

It was easy to apply. Patient himself can use this malahar-ointment at home safely and thers is no requirement of vaidya and trained staff so the yavakshar malahar ointment was used instead yava-kshar.

YAVA KSHARA[101-107]:

Synonyms[101]:

- **Sanskrit** : Paakya, Kshar, Yavakshar, Yavagraj, Darulawan.
- **Hindi** : Javakhar, Javaakhar, khar.
- **English** : Impure or fractions carbonate of potash, Impure potash carbonate, potash carbonate impure, salt of Tartar, Potash, Pearl Ash.
- **Marathi** : Javaakhar.
- **Bangali** : Yavakshar.
- **Gujrati** : Javakhar, Kharo.
- **Tamil** : Maravappu
- **Telgu** : Manuvappu
- **Malayalam** : Karam
- **Kannad** : Marada vappu
- **Latin** : Potasil Carbonas

It is found in all three kingdoms of Nature. In the Vegetable kingdom it is found either as carbonate of potash or as potash in combination with other organic acids.

Plants absorb it from the soil and when incinerated their ashes give Yavakshara. Succulent plants contain a large proportion of it than the woody parts.

“Impure potassium carbonate” has been known from very ancient time.

Its principle source in India is wood ashes because potash is an indispensable element for the growth of most plants.

The under mentioned woods yield on the average, for 1000 parts, the following quantities potash –

- ✻ Pine – 0.45
- ✻ Beech – 1.45
- ✻ Vak – 1.53
- ✻ Witlow – 2.85
- ✻ Wheat straw – 3.9
- ✻ Barley straw – 5.80
- ✻ Vine wood 5.50
- ✻ Stem of Maize – 6.50
- ✻ Sunflower steam 20.00
- ✻ Dried wheat plant Previous to blooming, 47.00

In the **mineral kingdom** it is obtained from rocks where it exists as sulphates, nitrates, carbonates and silicates. It is also found in the felspar of granite. It is obtained by fusing rock salt. It is an ingredient of various mineral waters.

Of the **animal kingdom** it is an essential constituent. It is found in the milk, flesh and urine of persons who take citrate or tartrate of potassium. The preparation of potash from vegetable matter is affected in three operations viz.

1) The lixiviation of the ash.
2) The boiling down of the crude liquor.
3) The calcination of the crude potash.

("Industry" Calcutta, April 1942, P-12)

It is prepared by reducing the ashes the green spikes of the barley,

dissolving the ashes in water, straining the solution through thick cloth and evaporating it over the fire. The resulting salt is a clear amorphus powder with a satine and partly acid taste.

Chemically it is carbonate of potash with some impurities.

Properties[102]:

- ✻ **Rasa** : Katu
- ✻ **Guna** : Laghu, Snigdha, Sukshma, Sara
- ✻ **Veerya** : Ushna
- ✻ **Vipaka** : Katu

Actions[103-104]:

Agnideepan, Lekhan etc.

It is used in urinary diseases, uric acid diathesis, leading to gout and rheumatism, uterine irritability, piles, shula (colic), cardialgia, acid eructation, dyspepsia, enlargement of lymphatic and secreting glands as the breasts, testicles, mesenteric and scrofulous glands, also the liver, spleen and salivary glands.

A decoction of chebulic myrobalans and Rohitaka bark (Amoor rohitaka) is given with the addition of carbonate of potash and long pepper in enlarged spleen and liver and in tumours in abdomen called Gulma (Sharangdhara). In Strangury of painful micturation, carbonate of potash with sugar is considered a very efficacious remedy. Carbonate of potash is given to persons who are gluttonous in eating and drinking. It is useful in dropsy[111].

YAVA:

Synonyms:

Sanskrit	:	Akshata, Dhanyaraja, Divya, Hayariya, Hayeshta, Kanchuki, Medhya, Pavitradhanya, Praveta shaktu, Shvetashunga, Sitashuka, Tikshnashuka, Turagapriya, Yava.
Gujarati	:	Jau, Jav, Yavaka
Marathi	:	Java, Jav, Satu, chevad.
Hindi	:	Java, Jau, Jao
Telagu	:	Barlibiyam, Dhanyabhedam, Pachchayam, Yava, Yavak.
Tamil	:	Barliyarisi, Barliyarishi
Urdu	:	Jav
Bengali	:	Jav, Jao
Arabic	:	Shaair, Shair
Afganistan	:	Jao, Jaoshirin
Chinese	:	Kung Mai, No mal, Ta mai
English	:	Barley
Latin	:	*Hordeum vulgare linn.*
Family	:	Gramineae

Morphology[112] :

Annual, 50 – 100cm high, erect, leaves flaccid, linear, acuminate, spike (with awns) 20 – 30cm long, 8 – 10mm broad, flattened, 2 ranked, with brittle

axis, lateral spikelets stipitate, staminate, muticous; perfect in the middle, sessile, aristate, glume lanceolate, subulate at the base, ciliateplumose, the longer awns once and a half as long as the sterile flowers, empty glumes of the lateral spikelets muticous; awn of the fertile glume scabrous 15-30cm long.

Distribution:

Cultivated chiefly in North India, widely cultivated in temperate region.

Chemical composition:

- **Carbohydrates** – 69.3%
- **Protein** – 11.3%
- **Minerals** – 1.5%

Properties[105] :

- **Rasa** – Kashay, Madhur
- **Gana** – Mrudu, Ruksha, Guru
- **Veerya** – Sheet
- **Vipaka** – Katu

Actions:

Lekhan, Agnivardhan, Anabhishyandi etc.

PETROLEUM JELLY[129]:

Petroleum jelly, petrolatum or soft paraffin is a semi-solid mixture of hydrocarbons (with carbon numbers mainly higher than 25) originally promoted as a topical ointment for its healing properties. Its folkloric medicinal value as a

"cure-all" has since been limited by better scientific understanding of appropriate and inappropriate uses (see *Uses* below). However, it is recognized by the U.S. Food and Drug Administration (FDA) as an approved over-the-counter (OTC) skin protectant and remains widely used in cosmetic skin care.

Physical properties :

Petrolatum is a flammable, semi-solid mixture of hydrocarbons, having a melting-point usually ranging from a little below to a few degrees above 100°F (37°C). It is colorless, or of a pale yellow color (when not highly distilled), translucent, and devoid of taste and smell when pure. It does not oxidize on exposure to the air, and is not readily acted on by chemical reagents. It is insoluble in water. It is soluble in chloroform, benzene, carbon disulfide and oil of turpentine.

There is a common misconception (resulting from the similar feel they produce when applied to human skin) that petroleum jelly and glycerol (glycerine) are physically similar. While petroleum jelly is a non-polar hydrocarbon hydrophobic (water-repelling) and insoluble in water, glycerol (not a hydrocarbon but an alcohol) is the opposite: it is so strongly hydrophilic (water-attracting) that by continuous absorption of moisture from the air, it produces the feeling of wetness on the skin, similar to the greasiness produced by petroleum jelly. The feeling is similar, but petroleum jelly repels water, and glycerine attracts it.

Depending on the specific industry the petrolatum is used for, the petrolatum may be USP (United States Pharmacopeia) grade. This pertains to the processing and handling of the petrolatum so it is suitable for cosmetic and personal care applications.

Chesebrough originally promoted Vaseline primarily as an ointment for scrapes, burns, and cuts, but physicians have shown that Vaseline has no medicinal effect or any effect on the blistering process, nor is it absorbed by the skin. Vaseline’s effectiveness in accelerating wound healing stems from its sealing effect on cuts and burns, which inhibits germs from getting into the wound and keeps the injured area supple by preventing the skin’s moisture from evaporating. Vaseline brand First Aid Petroleum Jelly, or carbolated petroleum jelly, containing phenol to give the jelly additional anti-bacterial effect, has been discontinued.

However, after becoming a medicine chest staple, consumers began to use Vaseline for myriad ailments and cosmetic uses, including chapped hands and lips, toenail fungus, nosebleeds, diaper rash, chest colds, and even to remove makeup or stains from furniture. Uses for pets include stopping fungi from developing on aquatic turtles’ shells and keeping cats from making messes when they cough up furballs. In the first part of the twentieth century, petrolatum, either pure or as an ingredient, was also popular as a hair pomade. When used in a 50/50 mixture with pure beeswax, it makes an effective moustache wax.

Dangerous uses to avoid:

As the substance became more common in households, it began to be used for a number of medical purposes, some of which medical science has shown to be dangerous or damaging.

Burns:

It should not be used on *fresh* burns of any kind, including sunburn.

Petrolatum traps heat inside, worsening burns. After heat has dissipated, however, it can serve as a dressing for minor burns to soothe later pain.

Nasal congestion or dryness:

If particles of petrolatum are inhaled from the nose, they may deposit in the lungs and lead to a condition called lipoid pneumonia, although this is usually caused by excessive use, rather than daily use.

Sexual intercourse with latex condoms:

Because petroleum jelly is oil-based, it interferes with the structure of latex. Using petroleum jelly with latex condoms weakens the material very quickly, increasing the chance of rupture, and thereby the chance of causing an unwanted pregnancy or spreading sexually transmitted infections.

SIKTA TAILA[128] :

Contains of Sikta Taila are Bee Wax and Til taila.

Bee wax[129] :

Beeswax is a natural wax produced in the bee hive of honey bees of the genus *Apis*. Beeswax is produced by young worker bees between 12 and 17 days old in the form of thin scales secreted by glands on the ventral surface of the abdomen. Worker bees have eight wax-producing mirror glands on the inner sides of the sternites (the ventral shield or plate of each segment of the body) on abdominal segments 4 to 7. The size of these wax glands depends on the age of the worker and after daily flights begin these glands gradually atrophy. The new wax scales are initially glass-clear and colourless (see illustration), becoming opaque after mastication by the worker bee. The

wax of honeycomb is nearly white, but becomes progressively more yellow or brown by incorporation of pollen oils and propolis. The wax scales are about 3 millimetres (0.12 in) across and 0.1 millimetres (0.0039 in) thick, and about 1100 are required to make a gram of wax.

Western honey bees use the beeswax to build honeycomb cells in which their young are raised and honey and pollen are stored. For the wax-making bees to secrete wax, the ambient temperature in the hive has to be 33 to 36 °C (91 to 97 °F). To produce their wax, bees must consume about eight times as much honey by mass. It is estimated that bees fly 150,000 miles to yield one pound of beeswax (530,000 km/kg). When beekeepers extract the honey, they cut off the wax caps from each honeycomb cell with an uncapping knife or machine. Its color varies from nearly white to brownish, but most often a shade of yellow, depending on purity and the type of flowers gathered by the bees. Wax from the brood comb of the honey bee hive tends to be darker than wax from the honeycomb. Impurities accumulate more quickly in the brood comb. Due to the impurities, the wax has to be rendered before further use. The leftovers are called slumgum.

The wax may further be clarified by heating in water and may then be used for candles or as a lubricant for drawers and windows or as a wood polish. As with petroleum waxes, it may be softened by dilution with vegetable oil to make it more workable at room temperature

Physical characteristics :

Beeswax is a tough wax formed from a mixture of several compounds.

Sr. no.	Wax Content Type	Percent
1	Hydrocarbons	14%
2	Monoesters	35%
3	Diesters	14%
4	Triesters	3%
5	Hydroxy monoesters	4%
6	Hydroxy polyesters	8%
7	Acid esters	1%
8	Acid polyesters	2%
9	Free acids	12%
10	Free alcohols	1%
11	Unidentified	6%

The empirical formula for beeswax is $C_{15}H_{51}COOC_{30}H_{61}$[2]. Its main components are palmitate, palmitoleate, hydroxypalmitate and oleate esters of long-chain (30-32 carbons) aliphatic alcohols, with the ratio of triacontanylpalmitate $CH_3(CH_2)_{29}O\text{-}CO\text{-}(CH_2)_{14}CH_3$ to cerotic acid $CH_3(CH_2)_{24}COOH$, the two principal components, being 6:1.

Beeswax has a high melting point range, of 62 to 64 °C (144 to 147 °F). If beeswax is heated above 85 °C (185 °F) discoloration occurs. The flash point of beeswax is 204.4 °C (400 °F), there is no reported autoignition temperature. Density at 15 °C is 0.958 to 0.970 g/cm^3.

Bee wax can be classified generally into European and Oriental types. The ratio of saponification value is lower (3-5) for European beeswax and higher (8-9) for Oriental types.

Hydroxyoctacosanyl hydroxystearate can be used as a beeswax substitute as a consistency regulator and emulsion stabilizer. Japan wax is another substitute.

Til (taila)[114-115]:

Synonyms:

Sanskrit : Tila, Homadhanya, Pavitra, Pitrutarpan, Papaghna, Pootadhanya, Jartil, Vanodbhav.

English : Sesamum.

Latin : Sesamum = from English name

Indicum = Indian

Family : Pedalianceae (of the pedalium tribe)

Botanical Description:

Annual herb of 1 mt height, stalk bears soft, tender hair.

Leaves : 7-12 cm long.

Flowers : Tender, ciliated, bluish, whitish, brown or yellowish

Seeds : Small, white, brownish or black. Depending upon colour of seeds, it is of three varieties. White seeds yield more oil, whereas the black variety is considered to be the best for medicinal use.

Habitat : All over india.

Chemical composition :

Oleic & lionelic acids : 85% of total fatty acid.

Myristic : 0.1-0.3%

Palmitic	:	7.8 – 9.4%
Stearic	:	3.6 – 5.7%
Arachidic	:	0.4 – 1.2%
Hexadeconoic	:	0.0 – 0.5%
Oleic	:	35.0 – 49.4%
Linoleic	:	37.7 – 48.4%
Phospholipid	:	0.034 – 0.132% of oil (52% fraction of phospholipid is alcohol soluble lecithin, cephaline 40.6% is alcohol in soluble)
Sesamin	:	0.5 –1.0%
Sesamolin	:	0.3 – 0.5%

Properties:

Guna	**:**	Guru, Snigdha.
Rasa	**:**	Madhur, Kashaya, Tikta.
Vipaka	**:**	Madhur

Uses:

Sesamum is an excellent *snehan* and *analgesic*. It is very useful for wound healing, dental health, skin and hair disorders. It is also useful in dry skin and bodyache by acting as Vatashaman. Local application of oil pack in the anal region reduces the pain of Piles. Decoction of the roots and leaves is used for washing the hair which is helpful in hair growth and making them black and soft. Tila is a brain tonic and aphrodisiac. It is useful in dysme-norrhoea, diabetes, gum and teeth disorders.

Among all the available oils, tila oil is considered to be the best for nourishing all the seven dhatus of the body. Therefore, it is useful as both food as well as medicine.

Doshaghnata : Vataghna, Kaphapittavardhak.

Dhatu : Mamsa, Shukra, Meda, Majja, Asthi, Rakta, Rasa.

Mala : Keshya, Purisha (Increasing the bulk), mutra (antidiuretic).

TRIFGOL[130]:

Trifgol is an Isabgol based natural fiber laxative, which also contains the goodness of Triphala (Amlaki, Hareetaki and Vibheetaki). Besides a laxative action Trifgol has other multiple health benefits as well.

Composition:

Each 100 gm contain -

- Isabgol powder : 68.00%
- Triphala powder : 19.60%
- Excipients and flavours to : 100%

Pharmacology:

Bulk forming laxative, Hypo Glycaemic, Hypocholesterolaemic.

Isabgol :

- Increases stool weight.
- Hypocholesterolaemic effects
- Useful in Ulcerative colitis

Triphala:

1) Bibheetaka[121-124]:

Latin Name : *Terminalia bellerica*

Gana : Virechanopag, Mustadi (s), Jwarhar, Triphala

Family : Combrataceae

Sanskrit Name : Karshaphala, Kalidrum, Tailpushpak, Kalinda

English Name : Belleric myrobalan

Botanical Description:

The tree grows up to height of 10-32 meters. The bark is brownish in colour. Leaves resemble those of banayan tree and 8 to 16 cm in length. Leaves may be long or circular. At the base of the leaves where the lamina ends, there are two small nodules. Flowers are very small and yellow. There are five small and 5 large stamens. Fruits are round in shape, brownish and hairy. Each fruit contain one seed. The tree flowers in summer and fruits in winter. The seed pulp is sweet to taste but it produces mild intoxication.

Varieties -

Depending on the size of fruits - I) Small fruits II) Large fruits

Habitat:

Predominantly found in hilly areas of India and Burma

Properties:

* **Guna** : Ruksha, Laghu
* **Rasa** : Kashaya

- ✻ **Vipaka** : Madhur
- ✻ **Veerya** : Ushna
- ✻ **Doshaghnata** : Tridoshaghna

Chemical composition:

It contains triterpen oils including bellericid, b - sitosterol, saponin, glycosides bellericain polyphenols, lignans and fixed yellow oil.

Karma:

It is mainly Kaphashamak - because of its Ruksha, Laghu guna and Kashaya rasa. Pittaghna - by Kashaya and Madhur vipak and Vatashamak by Ushna veerya.

External Uses:

Anti inflammatory, antiallergic, haemostatic and gives black colour to the skin and hair. Oil of it is a hair tonic. An application of the fruit or oil extracted from the fruit pulp is useful in painful inflammatory conditions. The oil is used in skin diseases, leucorrhea, premature graying of hairs. The seeds act as mucolytic. The powder is used for local application on the eyelids in conjunctivitis and also act as haemostatic in fresh wounds.

Internal uses:

1) **The nervous system :** Pulp is used in vata disorders and insomnia
2) **Digestive system :** Useful in indigestion, flatulence, excessive thirst, vomiting, haemorrhoids. Half ripe fruits relieve constipation whereas dried fruit is useful in diarrhea and dysentry.

3) **Circulatory system :** Useful in internal bleeding more useful in haemoptysis.

4) **Respiratory system :** Effective on cold, cough, asthma and hoarseness of voice.

5) **Reproductive system :** Pulp of seed is useful in impotency and libido

Useful part : Fruit

Formulation:

Bibheetaka taila, Phalatrikadi kwatha, Lavangadi vati, Triphala churna.

Srotogamitva:

- **Dosha** : Tridosha
- **Dhatu** : Majja (intoxication), Rakta (Haemostatic) Shukra (aphrodisiac)
- **Mala** : Purisha (laxative), hair tonic (majja taila)

2) Amalaki[125-127]:

Latin Name : *Emblica officinalis*

Gana : Vayahsthapana, Virechanopaga (c), Triphala, Parushakadi (s)

Family : Euphorbiaceae

Sanskrit Name : Shriphala, Dhatrika, Amruta, sheeta, Gayatri, Vrushya, Rochani, Tishyaphala, Pancharasa, kayastha.

English Name : Emblica myrobalan

Botanical Description:

Medium sized 8 to 10 m of height. Bark whitish thin. Its wood is strong and red, leaves - having the appearance of tamarind leaves but more thin and small and long petioles. Flowers stalk is long. Flowers are small and yellow, flowering in autumn, fruits- round and greenish yellow. Six striotims with seeds.

Varieties:

1) Cultivated - large, soft and fleshy.
2) Wild - small, hard.

Habitat:

All over India.

Properties :

- **Guna** : Laghu, Ruksha, Sheet
- **Rasa** : Panchrasa (except Lavan rasa)
- **Vipak** : Madhur
- **Veerya** : Sheet
- **Doshaghanta** : Tridoshghna

Chemical composition:

Rich source of vitamin 'C' and contains phosphorus, potassium, calcium, magnesium, tannin, pectin and ascorbic acid.

External Use:

Refrigerate, Complexion enhancer, hair tonic. Juice is used in eye

disorders. Hair wash by amala is useful in baldness and gray hair, useful in toothache. Leaf swarasa (juice) is used as eye drops.

Internal use:

1) **Digestive system:** Laxative and rasayan, antacid, improves digestion.
2) **Circulatory system:** Cardiotonic and haemostatic.
3) **Respiratory system:** Reduces cough, hence useful in cough, asthma, tuberculosis etc.
4) **Reproductive system:** useful in spermatorrhea, menorrhagia, uterine debility.
5) **Urinary system:** useful in dysuria and pittaj prameha.
6) **Skin:** effective in skin diseases.
7) **Temperature:** Antipyretic, refrigerant.
8) **Nervous system:** strengthens bone marrow, effective in incipient blindness and any weakness in sense organs.

Useful part : Fruit, leaf swarasa (juice), seeds.

Srotogamitva:

✻ **Dosha** : Tridoshshamak.

✻ **Dhatu** : Rakta - haemorrhagic disease

Shukra - aphrodisiac all dhatu rasayan

✻ **Mala** : Purisha - laxative (fresh fruit)

3) Haritaki[116-120]:

Latin Name : *Terminalia chebula*

Gana : Triphala, Amalakyadi, Parushakadi, Trivruttadi, Prajasthapana, Jwaraghna, Kushthaghna, Kashaghna, Arshaghna

Family : Combrataceae

Sanskrit : Haritaki, Haimamati, Shiva, Pathya, Rohini, Kayastha, Shreyasi, Chhedanika,

English : Myrobalans, Chebulic myrobalan

Botanical Description:

A big tree 25 to 30 m in height. Wood is hard and bulky. Leaves are 10 to 30 cm in length. The inferior aspect of the leaves shows two small nodules near its attachment with stalk. The flowers have short stalks, white or yellow in colour. Fruits are 3 to 6 cm in length, initially green but on ripening they become yellowish brown. Seeds are oval and hard.

Properties:

- ✻ **Guna** : Laghu, Ruksha
- ✻ **Rasa** : Five rasa (Lavan varjit)
- ✻ **Vipak** : Madhur
- ✻ **Veerya** : Ushna
- ✻ **Doshaghanata** : Tridoshghna

Chemical composition:

Haritaki contains - tannin, chebulagic acid, gallic acid, chebulinic acid, 18 amino acids, sugar and succinic acid.

Karma:

Tridoshahar mostly vataghna, vranaropak, medhya, shothaghna, chakshushya.

External Uses:

Anti-inflammatory hence used in conjunctivitis. For washing and cleaning wounds decoction of Haritaki is used and also used in diseases of the mouth and throat in the form of decoction gargling.

Formulations:

Abhayadi modak, Abhayarishta, Pathyadi vati, Pathyadikwatha, Vyaghriharitakileha, Agastiharitaki leha, Gandharvaharitaki powder.

Internal Uses:

1) **Digestive system:** Useful in indigestion, constipation, loss of appetite and strengthens the gums.
2) **Circulatory system:** Useful in vatarakta.
3) **Respiratory system:** Used in Rhinitis, Cough, hoarseness of voice, dyspnoea.
4) **Reproductive system:** Effective in shukrameha, leucorrhoea and act as uterine tonic.
5) **Urinary system:** Useful in dysurea, urine retention, calculus, kaphaj prameha.

6) **Skin:** Useful in erysipelas and other skin disorders.

7) **Restorative effect:** Acts as a rejuvenator, rasayana.

8) **Nervous system:** As tonic for nerves and brain

Useful part : Fruit

Srotogamitva:

- **Dosha** : Tridoshashamak, mainly vatakaphashamak
- **Dhatu** : Rasa, majja, rakta, mansa, meda, asthi, shukra,
- **Mala** : Purisha (mild laxative), Mutra (calculus)

Indications:

- Constipation
- Fecal incontinence
- Irritable Bowel Syndrome (IBS)
- Diverticular diseases
- Hemorrhoids / Piles
- Impaired liver functions
- Ulcerative colitis & Duodenal Ulcer
- Hyperlipidemia
- Non-insulin Dependent Diabetes with or without hypercholesteromia.

Contra-indications:

- Intestinal obstruction
- Faecal impaction

- Undiagnosed change in bowel habits
- Undiagnosed abdominal pain
- Acute Abdomen

Dosage:

One teaspoonful at bedtime by brisk mixing with water.

Packing:

100 gm in a HDPE container

Adverse Reactions:

None reported. No adverse effects of supplementation were noted in a 52-week study of 93 individuals

FAKTU OINTMENT[129]:

Application form : Rectal preparations (ointments)

Indication group : Antihemorrhoids

Manufacturer : Nycomed GmbH, Singen, Nìmecko

Active substance : Policresulenum 50 mg,
Cinchocaini hydrochloridum 10 mg in 1 g

Faktu stops bleeding, itching and burning accompanying haemorrhoids and other ailments in the area of anus quickly. It prevents inflammation inception and supports regeneration of the affected area. Cinchocaine causes local desensitisation, by which it decreases itching and burning.

Policresulen :

Policresulen is a topical haemostatic and antiseptic. It is indicated for common anorectal disorders, such as hemorrhoids. It is a phenol derivative.

Drug name : Policresulen aldehyde

English : Policresulen

Alias : Policresulen aldehyde, Albothyl

English Name : Policresulen, Albothyl

Use:

For skin wounds and lesions in the treatment of localized, it can speed up the shedding of necrotic tissue, bleeding and promote healing process.

Cinchocaine :

Cinchocaine (or Dibucaine) is an amide local anesthetic. Cinchocaine causes local desensitisation, by which it decreases itching and burning.

It is the active ingredient in some topical hemorrhoid creams.

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REVIEW OF PREVIOUS WORK

CLINICAL STUDY OF PILEX COMBINATION THERAPY VS CONVENTIONAL AYURVEDIC THERAPY IN THE MANAGEMENT OF HAEMORRHOIDS:

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ABSTRACT :

In a clinical trial conducted on 88 patients with haemorrhoid, the response to therapy in the Pilex combination therapy (PCT) group and the conventional Ayurvedic therapy group was almost similar (95.5%); however the percentage of complete response (72.7%) was greater in the PCT group than in the Conventional Ayurvedic therapy group (68%). The patients in thePCT group also responded earlier in terms of bleeding. The period of straining during defaecation (which was marginally high in the Conventional Ayurvedic therapy group) was reduced in both groups. In only 1 case, local application of Pilex cream causes irritation.

DISCUSSION :

Conventional Ayurvedic Therapy is being used to treat haemorrhoids

with satisfactory results. The therapy is based on the following principles:

1. Appetite and digestion should be improved.

2. Table showing response to therapy in terms of bleeding:

Response	Conventional Ayurvedic Therapy	Pilex Combination Therapy
Complete Response	68%	72.7%
Partial Response	27.5%	22.8%
No Response	4.5%	4.5%

3. Constipation should be prevented.

4. Congestion of haemorrhoidal vessels should be reduced.

5. The drug should produce local astringent and styptic actions.

6. The drug should stabilise the endothelial lining to stop bleeding.

The main components of this therapy are:

Abhayarishta has been described as a good appetiser that corrects constipation and improves hepatic functions.

Local application of *Kashisadi oil* facilitates easy passage of stools and minimises trauma to the engorged vascular bed. This drug mainly contains kashis (ferrous sulphate), which reduces bleeding and stabilises vascular endothelium by its astringent effect.

Triphala guggulu is used along with the above drugs, as it helps to reduce local inflammation, improves blood circulation, reduces haemorrhoidal congestion and also improves appetite, digestion and bowel evacuation.

Pilex combination therapy includes systemic use of Pilex tablet along

with local application of Pilex cream and Styplon tablet during the period of bleeding.

The main ingredients of Pilex tablet are *Terminalia chebula* (fruit), *Cassia fistula* (pod),

Emblica officinalis (fruit) and *Mimosa pudica* (whole plant). The first three ingredients improve appetite, correct hepatic function and have mild laxative properties thereby facilitating bowel evacuation and reducing local trauma to the haemorrhoidal vessels. *Mimosa pudica* has a styptic effect. The main ingredients of Pilex cream are *Mimosa pudica* (whole plant), *Vitex negundo* (whole plant), *Eclipta alba* (whole plant) and *Solanum nigrum* (aerial parts). They possess styptic and anti-inflammatory properties and help in regeneration of the vascular endothelium.

CONCLUSION :

Pilex combination therapy was accepted well by the participants in the study as compared with Conventional Ayurvedic therapy due to easy administration of drugs particularly Pilex cream, which exerts a soothing and styptic effect. The use of Pilex cream resulted in rapid and effective relief in local haemorrhoidal symptoms as was observed in a majority of patients. However, in some cases, Pilex combination therapy was not very satisfactory in relieving constipation and required additional stool softeners like Isabgol husk. It can be stated that Pilex combination therapy was found safe and effective in the management of uncomplicated early haemorrhoids.

Review of Previous work on Arsha:

Ahemedabad (Gujrat University):

1. 1988 : Nakrani M.H., The Study of Dosha Dooshya in Arsha Roga and Its Management.

Akola (Nagpur University):

1*. 1997 : Umare K.S., Role of **Pratisaraneeya** Kshar in the management of Arsha.

2**. 2001 : Jondhale P.B.. Role of *Kasisadee Taila* in Management of Arsha (Piles)

3**. 2002 : Narkhede H.P., Role of Snuhi Ksheeradi Lepa & Guda Haritki in the management of Arsha (Piles)

4. 2002 : Patil V.S., Preparation Analytical study if Snuhi Ksheer Bhavita Arka Kshar Sootra and its effect on Arsha

5. 2004 : Shival Minas, Efficacy of Ghosha Phalvarti in the management of Arsha.

Banaras Hindu University:

1. 1969 : Jha G.S., Management of Piles (Arsha) in Ayurveda.
2. 1973 : Vedprakash, Study on Aetiopathological factors of Arsha (Piles).
3. 1979 : Prasad V.N., Study on Arsha in relation to Liver function.

4**. 1980 : Sharma B.N., Role of Parasurgical measures in treatment of Arsha.

Banglore University:

1*. 1985 : Padmanabhan P., The clinical evaluation of **Chitraka Kshara** in Bahya Arsha.

* - Pratisarniya kshar ** - Local application of other Drugs

2. 1988 : Rao Bhaskara M., Comparative clinical evaluation of Kshar Sutra and the appliation of Kshar Sutra in management of Bahya Arshas.

3**. 1990 : Venkateshwarlu K., Clinical study on the management of Bahya Arshas with Pippalyadi Lepa and Nimbadi Lepa.

Bijapur (R.G.University –Banglore):

1. 2004 : Chegaraddi Renuka B., A Clinical study on the management of Rakta Arsha w.s.r. to Piccha basti and Kutaja Rasakriya.

Haridwar (Kanpur University):

1. 1991 : Tiwari P.N., Effects of different sample of Abhayarishta w.s.r. to its purgative effect in Arsha disease.

2. 1999 : Rajesh Kumar, Kankayan Vati Nirman Tatha Bhautika Rasayanika Parikshana Evam Arsha Rog par prabhavatmak Adhayana.

Hassan (R. G. Unviersity, Karnataka):

1*. 2001 : Murlidhar N., Effect of Pratisarniya kshara on Ardra Arsha.

2. 2002 : Kulloll Vivekananda, Agnikarma in the management of Arsha.

Hyderabad (Andhra Pradesh University):

1. 1989 : Wake A.B., A Clinical study on Role of Anushalya Karma in management of Bahya Arshas.

2**. 1996 : Reddy Vasudeva, Clinical study on Karanjadi Churna on Arsha.

3**. 1997 : Narsimha Murthy B., Management of Arsha with pippalyadi lepam.

4**. 1998 : Rao Venkata, Effect of Manibhadra yoga and *Kasisadi Tail* in the management of Arsha.

5**. 1999 : Anjaneyalu, The Management of Arsha with Chitrakadi Tail (Ext.) and Chitrakadi Churna (Int.)

6. 2003 : Udaya Krishna, A Clinical study on Management of Arsha (Prolapsed piles) by Jalaukavacharana.

7. 2003 : Vidyasagar B., Management of Arsha with indigenous drugs.

8. 2004 : Rao Phanishankar M K, A clinical study on the management of Arsha (Prolapsed piles) by transfixation of Yava-Ksharasutra.

9**. 2004 : Sudhakumari V., A clinical study on the management of Arsha with Vyoshadi Churna internal and shireesha Beejadi lepa.

10. 2005 : Reddy Prasannakumar, A clinical study on the management of Arsha (prolapsed piles) by transfixation with Tankan Ksharsutra.

Jaipur University:

1. 1976 : Arsha Roga Vimarsha (Nidan)
2. 1980 : Shringi M.K., Arsharogopar Durnamanataka Shatamalla Yoga ka Chikitsatmaka Adhyanna.
3. 1983 : Shukla A.K., Arsha, Aatisar Grahani ka Prayaha Paraspar Hetu Va Evam Tadgat Agnimandya ka Chikitsatmaka Adhyanna.
4. 1988 : Sharma M.K., Arsha roga mein Arshoghni Vati ka Chikitsatmaka Adhyanna.
5. 1989 : Sharma D.K., Arsha Roga ka Naidanik Adhyanna.
6. 1990 : Sharma A.L., Arsha Roga Chikitsa me Vibhinna Kshar Sutro ka Tulnatmak Adhyanna.
7. 1992 : Sharma K.P., Arsha ki Kshar Sutra Chikitsa karma main Lords Vidhi ki Upayogita.
8. 1993 : Ojha V.K., Arsha Chikitsa mein Kshar Sutra evam Surgery ka Tulnatmak Adhyanna.

9. 1993 : Shrivastava S., Arsha Chikitsa mein Kshar Sutra evam *Band ligation* ka Karmatmak Adhyanna.

10. 1993 : Rusia Ranjara, Arsha Chikitsa mein Kshar Sutra evam Samanya Sutra ka Prayogatmak Adhyanna.

11**1993 : Sundari (Ku.) D., Raktarsha mein Samudradi Churna ki Karmukta ka Aadhyana.

12. 1997 : Dixit Mahesh, Raktarsha mein tutyadi Rasakriya ki Karmukta ka Aadhyana.

13. 2000 : Dhruve N., Study to evaluate the efficacy of Lavantomadya Churna in management of Arsha roga.

14. 2001 : Singh Chandan, Bilwaparni (Limonia crenulata Roxb.) ka Gunakarmatmak Adhyanna.

15. 2002 : Sarkar D., The clinical study of evaluate the efficacy of Arshoghna Mahakashaya with Nagkeshara in the management of Raktarsha.

16*. 2003 : Pramila Kumari, Arsha roga ki Chikitsa mein lords vidhi evam Arshohara Malahar ka Tulnatmak Adhyanaa.

17. 2004 : Gautam Surendra Kumar, Arsha Chikitsa mein Snuhi Ksheer Nirmit Kshar Sutra evam Udumbara Ksheer Nirmit Kshar Sutra ka Tulnatmak Adhyanna.

18*. 2004 : Arsha roga mein Durnamanatka Vati evam Kshar Prayog ki Karmukata.

Jamnagar (Gujrat University):

1. 1969 : Archanay M.P., Arsha Evam Kshar Sootra Chikitsa.

2*. 1978 : Baraskar K.J., Arsha mein Kshar Patana (Nidan Chikitsatmak Adhayana).

3. 1984 : Arya R.L., A comparative study of the role of indigenous drugs in the management of Arsha (Haemorrhoids) w.s.r. to Ksharsutra.

4. 1985 : Upadhya P.M., Role of Pratisarniya Kshara in management of Rakta Arsha (Bleeding piles).

5. 1987 : Gujrathi M.N., Role of Rakta-mokshan w.s.r. to Arsha.

6. 1993 : Suresh Kumar N., Pharmaco therapeutical studies on Soorana w.s.r. to Arhsa.

7*. 1998 : Pandya P.J., Kshar patana in the management of Arsha.

8*. 1999 : Pareekh S.R., A Comparative study of Pratisarneeya Ksharas in the management of Arsha.

9. 2003 : Malli Vimal R., Role of Jalukavacharana in the management of Rakta Pradoshaja vikara w.s.r. to Arsha (Thrombosed Piles).

Kolkata University:

1. 1991 : Ghosh Bishvanath, Aetiopathogenisis of Arsha (Piles) with a comparative study of its management with some Indigenous drugs and Modern trends.

2. 1994 : Chakarborty, Role of some Ayurvedic drugs on Arsha.

Mumbai University:

1. 2002 : Singh K.K., Bhalatakadi Yogaka Pittaja Arshe mein Prayogika Aadhyana.

Mysore (Rajiv Gandhi University Of Health Science, Banglore):

1. 1991 : Thandavamurthy M., Medical Management of Arsha.

2**. 1997 : Ganesh., Evaluation of the effect of snuhi kshira Rajni lepa in Sushkarsha.

3*. 1998 : Mutha S.L., To study the effect of apmarga Kshara pratisarna on Sushka and Parisravi Arsha.

4. 2001 : Veena Kumari A., Evaluating the effect of Bahushaladi Guda in Rakta-Arshas- An Observational study.

5. 2003 : Shrivallabha Rao Desai., A clinical study on the management of Raktarsha w.s.r. to Picchabasti and Kutaj Rasakriya.

Nagpur University:

1**. 1992 : Sonekar R.M., Arkadi Malhara ka Arsha Rogapar Adhyayana.

2. 1993 : Metangale Anuradha, Arsha Vyadhi mein Kshara Karma Dwara Chikitsa.

3**. 1996 : Gahlot P.P., Hartaladi Malhara ka Arsharoga par Prayog.

4. 1997 : Kawadkar S, Role of Trivalkal patra in Management of Arsha.

5. 1998 : Mankar D., Vasanvela Raktarshavar parinam Ek Ayadhyana.

6. 2001 : Nanoli L.M., Charak Samhita Raktarsha Vyadhika Chikitsa Sutra Vishleshanatmaka Ayadhyana.

7. 2001 : Sharma Hariprakash, Role of Jalukavacharana in management of Secondary complications of Arhsa.

8**. 2001 : Rathod S.P., Role of Snuhi Kshiradi lepa in Management of Arsha.

9**. 2004 : Clinical evaluation of Haridradi Lepa in Arsha (Haemorrhoids)

Nanded (Shri Swami Ramanand Teerth Marathwada University) :

1. 1998 : Dr. Ukhalkar V.P., To study the efficacy of Pratisarniya Yava Kshar in Management of Abhyantar Gudarsha.
2. 2008 : Swapnil B. Zimre, Comparative study between Kasisadi Tail Abhyang and *Barron's Band Ligation* in the management of Abhyantar Arsha (Internal Haemorrhoids).

Paprola (Himachal University –Shimala):

1. 2005 : Singh Rakhi, Comparative study for role of Guggulu based Apamarga Kshara Sutra and *Rubber Band ligation* in the management of Rakta Arsha w.s.r. Haemorrhoids.

Patiyala (Baba Farid University of Health Science- Faridkot):

1. 1982 : Sharma V.J., Kootaja ka Dravya Guna – Karmatmaka Shuska Arsha Vivechana evam Raktarsha par Prabhava.
2. 1983 : Gour K., Tila Bhalatakadi Yoga ka nirman matra nirdharana evam Arsha par uska Tulnatmak Adhyanna.
3. 1989 : Rishi P.K., Trividha Kshar Sootra ka Nirma evam Arsha roga par Adhyanna.
4. 1991 : Goyal A.K., Arshoghna vati ka Nirman evam Arsha par prabhava Parikshana.

Patna (B.R. Ambedkar Bihar University):

1. 2004 : Singh A.K., Vacha evam soorana ka Arsha rog par tulnatmak Adhyanna.

Pune University :

1**. 1994 : Kulkarni Uday, Nimba Ghrita Pratisarna in Raktarsha associated with Daha, Kleda and Gudabramsa.

2. 1996 : Bharti A.R., Study of Etiological factors of Arsha.

3. 1996 : Wable Umakant., To study the effect of Kutaja Tvaka Churna in Raktarsha.

4. 1997 : Gatne N., To Study the Rakta stambhaka effect of Kirat tikta Churna in the treatment of Raktarsha.

5. 1998 : Kadalaskar B.B., Evaluation of Kankayana Gutika in Sushka Arsha (Bleeding pile).

6*. 1998 : Mutha S.L., To study the effect of Apamarga Kshara Pratisarna in Sushka and Parisravi Arsha.

7. 1999 : Nalge P.S., Comparison of Gudavali with rectal folds study of Pravahini of Gudarsha.

8**. 1999 : Rokade Bharat., Darvi Ghrita Pratisarana in Raktarsha.

9. 2000 : Avachat A.A., To study the effect of Chandanadi Kvatha in Raktarsha.

10. 2001 : Jaware Dinesh., To study the effect of Guda Haritaki Yoga in Raktarsha.

11**. 2004 : Bodke Vinay S., To study the effect of Snuhi Kshir and Haridra lepa on Arsha.

12**. 2004 : Jaiswal Seema., To study the efficacy of Apmarga Beeja Kalka on Raktarsha.

13. 2004 : Patange Bhausaheb, To study effect of Darvyadi Kwatha in Raktarsha.

14. 2004 : Patil Manoj., To study the efficacy of Nagkeshar Churna with Navneeta and Sugar in Raktarsha.
15. 2005 : Amit K.L., To study the effect of Jalukavacharana on Raktarsha (Inflammed and Thrombosed Haemorrhoids).
16. 2005 : Londhe Navnath, To study efficacy of Shunthi patha churna in Arsha as vednahara.
17. 2005 : Paratwagh Vithal., To study the effect of Soorana Pindi in Arsha w.s.r. Agnimandya.

Trivendram (Kerala – Tiruvanantpuram University):

1. 1987 : Rao V.B., The effect of Takrapana in sushka Arshas.
2. 1988 : Deshmukh V.B., Effect of Lavanottamadi Churna along with buttermilk in Arsha roga.
3. 1991 : Prabhakaran V.A., Clinical Study on the effect of Jalukavacharana in Bahya Arshas. (External Piles)
4. 1995 : Usha R., Study of Arshas w.s.r. to Arshoghna gana.
5. 1999 : Nair Rajani A., A study on effect of Vanasoorana in Arsha roga.

6**. 2000 : Syan V.L., Management of Arsha with Arkadi lepa.

7. 2003 : Anil K., Effect of Kattapa Taila in Arshas.

8*. 2003 : Mini P., A Clinical study on the effect of Apamarga kshara in the management of Arshas.

Udaipur (Rajasthan University):

1. 1989 : Agrawal A.K., Vrihat *kashisadi Taila* ka Nirman prakriya evam Arsha roga par prbhavatmak Adhyanna.

2. 1990 : Sharma S.N., Panchanan vati ka Bhaishojyakeeya Nirma evam Arsha roga par prbhavatmak Adhyanna.

3. 1993 : Parikh K.J., Arhsa roga mein Panchmrita Kuthara rasa ka prayogik Adhyanna.

4. 1999 : Meena Harimohan, A clinical study of Pranada gooti ka and *Kassesadya Taila* in the management of Arsha roga.

Current reserach work related to internal haemorrhoid :

1) Journal Article:

“Do patients with haemorrhoids have pelvic floor denervation?“

C. E. Bruck, D. Z. Lubowski and D. W. King

Straining at stool is found in patients with haemorrhoids, rectal prolapse and neurogenic (idiopathic) faecal incontinence. In the latter two conditions...

International Journal of Colorectal Disease, Volume 3, Number 4 / December, 1988

2) Journal Article:

“Prospective randomised comparison of current coagulation and injection sclerotherapy for the outpatient treatment of haemorrhoids”

J. S. Varma, S. C. S. Chung and A. K. C. Li

...and early results of a new technique of outpatient proctoscopic coagulation of haemorrhoids by means of an electronic probe (Ultroid ® , Microvasive Inc., USA) were evaluated...

International Journal of Colorectal Disease, Volume 6, Number 1 / March, 1991

3) Journal Article :

“A randomised trial to compare the results of injection sclerotherapy with a bulk laxative alone in the treatment of bleeding haemorrhoids”

A. Senapati and R. J. Nicholls

In a prospective randomised trial, 43 patients with bleeding haemorrhoids were allocated to receive either a bulk laxative with injection of phenol...

International Journal of Colorectal Disease, Volume 3, Number 2 / June, 1988

4) Journal Article :

“A prospective study of infrared coagulation, injection and rubber band ligation in the treatment of haemorrhoids”

A. J. Walker, R. J. Leicester, R. J. Nicholls and C. V. Mann

One hundred patients with non-prolapsing and one hundred with prolapsing haemorrhoids were allocated to receive conventional treatment (CT) by injection sclerotherapy or rubber...

International Journal of Colorectal Disease, Volume 5, Number 2 / May, 1990

5) Journal Article :

“Long–term results after stapled haemorrhoidopexy for third–degree haemorrhoids”

I. Kanellos, E. Zacharakis, D. Kanellos, M. G. Pramateftakis, T. Tsachalis and D. Betsis

...was to assess our long–term results after SH for third–degree haemorrhoids. Methods A total of 126 consecutive patients (67 men and...

Techniques in Coloproctology, Volume 10, Number 1 / March, 2006

6) Journal Article :

"Solo operated haemorrhoid ligator rectoscope A report on 200 consecutive bandings*"

A report on 200 consecutive bandings*

J. Budding

Abstract. A new solo operated haemorrhoid ligator rectoscope is described by the author. This new ligator consists of...

International Journal of Colorectal Disease, Volume 12, Number 1 / March, 1997

7) Journal Article :

"Prospective randomised clinical trial of single versus double purse-string stapled mucosectomy in the treatment of prolapsed haemorrhoids"

Francisco Pérez-Vicente, Antonio Arroyo, Pilar Serrano, Fernando Candela, Ana Sánchez and Rafael Calpena

International Journal of Colorectal Disease, Volume 21, Number 1 / January, 2006

8) Journal Article :

"A technique to demonstrate external haemorrhoids"

R. Babu and D. M. Burge

Although uncommon in children, haemorrhoids are one of the causes of a protruding anal lesion and may...

Pediatric Surgery International, Volume 20, Number 6 / June, 2004

9) Journal Article :

“Diagnosis and treatment of haemorrhoids in the elderly: results from 291 patients”

L. Navarra, R. Pietroletti, G. Maggi, S. Leardi and M. Simi

Abstract Haemorrhoids are believed to be rare in elderly patients, occurring mainly in young...

Techniques in Coloproctology, Volume 3, Number 3 / December, 1999

10) Journal Article :

“Conservative treatment of haemorrhoids”

Die konservative Hämorrhoidenbehandlung

Jens J. Kirsch and Bernd-D. Grimm

WMW Wiener Medizinische Wochenschrift, Volume 154, Numbers 3-4 / February, 2004

11) Journal Article :

“Life-threatening perineal sepsis after rubber band ligation of haemorrhoids”

H. L. Sim, K. Y. Tan, P. L. Poon, A. Cheng and K. Mak

...ligation is a widely performed procedure in the outpatient setting for symptomatic haemorrhoids. This method is generally considered to be safe and easily performed. However...

Techniques in Coloproctology

12) Journal Article :

“Surgical treatment of haemorrhoids by stapled mucosaresection in the lower rectum: Indication, results, side-effects“

Die maschinelle Mukosaresektion im distalen Rektum als Therapie der Hämorrhoiden: Indikation, Ergebnisse, Nebenwirkungen

M. Glöckler, M. Abrahamowicz, D. Gabriel, M. Glöckler, G. Bacsa and A. Kucani

...stapler, a mucosal cuff in the distal rectum is excised and prolapsed haemorrhoids are lifted into the proximal anal canal where they regress. No further...

European Surgery, Volume 33, Number 2 / March, 2001

13) Journal Article :

“Perirectal haematoma and hypovolaemic shock after rectal stapled mucosectomy for haemorrhoids”

L. A. Hidalgo Grau, A. Heredia Budó, M. J. Fantova and X. Suñol Sala

International Journal of Colorectal Disease, Volume 20, Number 5 / September, 2005

14) Journal Article :

“Surgical treatment of haemorrhoids with the use of the circular stapler and open haemorrhoidectomy. A comparative study”

G. Basdanis, N. Harlaftis, A. Michalopoulos, V. Papadopoulos and S. Apostolidis

Abstract The surgical treatment of haemorrhoids with the use of a circular stapler is a novel method. A...

Techniques in Coloproctology, Volume 4, Number 3 / December, 2000

15) Journal Article :

“Prostato-cutaneous fistula following injection of internal haemorrhoids with oily phenol”

V. Palit, C.S. Biyani, C.L. Kay and T. Shah

International Urology and Nephrology, Volume 33, Number 3 / September, 2001.

16) Journal Article :

“Stapling procedure for haemorrhoids versus Milligan-Morgan haemorrhoidectomy: randomised controlled trial”

Lancet (2000) 355: 782–785

B.J. Mehigan, J.R.T. Monson and J.E. Hartley

Techniques in Coloproctology, Volume 4, Number 3 / December, 2000

17) Journal Article :

“Long-term results after stapled haemorrhoidopexy for fourth-degree haemorrhoids: a prospective study with median follow-up of 6 years”

E. Zacharakis, D. Kanellos, M. G. Pramateftakis, I. Kanellos, S. Angelopoulos, I. Mantzoros, D. Betsis and P. O. Nyström

...our early and long-term results after stapled haemorrhoidopexy for

fourth-degree haemorrhoids. Methods Our study covers the time period from 1998 to...

Techniques in Coloproctology, Volume 11, Number 2 / June, 2007

18) Journal Article :

"Updated meta-analysis of randomized controlled trials comparing conventional excisional haemorrhoidectomy with LigaSure for haemorrhoids"

M. Y. Mastakov, P. G. Buettner and Y. -H. Ho

...included from the major electronic databases using the search terms "ligasure" and "haemorrhoids". Duration of operation, blood loss during operation, postoperative pain score, wound healing...

Techniques in Coloproctology, Volume 12, Number 3 / September, 2008

19) Journal Article :

"Long-term results of rubber-band ligation for second-degree haemorrhoids: a prospective study"

I. Kanellos, I. Goulimaris, I. Vakalis and I. Dadoukis

...band ligation is a widely performed method of treatment for second-degree haemorrhoids. Initial results of rubber-band ligation are satisfactory, but symptoms often recur...

Techniques in Coloproctology, Volume 4, Number 2 / September, 2000

20) Journal Article :

"Outpatient haemorrhoidectomy in a colorectal surgical unit"

A. Ferrara, S.W. Larach, J.P. Cebrian, P. Loprete, P.R. Williamson, M. Arroyo and M.F. Trevisani

Abstract : The number of patients who undergo ambulatory surgery for haemorrhoids has been increasing over the past few years. The aim of present...

Techniques in Coloproctology, Volume 3, Number 2 / August, 1999

21) Journal Article :

"Rubber band ligation for piles can be disastrous in HIV-positive patients"

P. Buchmann and U. Seefeld

We report a patient with haemorrhoids treated with rubber band ligation who developed a huge supralevator abscess. A...

International Journal of Colorectal Disease, Volume 4, Number 1 / March, 1989

22) Journal Article :

"Drug utilization in breast-feeding women. A survey in Oslo"

I. Matheson, K. Kristensen and P. K. M. Lunde

...The disorders most extensively treated with drugs in this period were dyspepsia, haemorrhoids and inflammation of the breast. The finding that smoking was associated with...

European Journal of Clinical Pharmacology, Volume 38, Number 5 / May, 1990

23) Journal Article :

"Improvement in irritable bowel syndrome following ano-rectal surgery"

Bernard V. Palmer, John W. Lockley, Robert B. Palmer and Elena Kulinskaya

...problems by applying multiple Barron's bands to prolapsing mucosa and excising haemorrhoids, with or without a low lateral sphincterotomy. Patients and methods: 144 patients...

International Journal of Colorectal Disease, Volume 17, Number 6 / November, 2002

24) Journal Article :

"Hämorrhoidektomien nach Longo und Milligan-Morgan"

Haemorrhoidectomies according to Longo and Milligan-Morgan – a prospective comparison in 300 patients

Prospektive Vergleichsstudie mit 300 Patienten

J. J. Kirsch, G. Staude and A. Herold

...prospective study. Method: In 1998 and 1999, 300 patients with third-degree haemorrhoids were operated on either with a Milligan-Morgan or a Longo technique...

Der Chirurg, Volume 72, Number 2 / February, 2001

25) Journal Article :

“Open compared with closed haemorrhoidectomy: meta-analysis of randomized controlled trials”

Y. H. Ho and P. G. Buettner

...identified from the major electronic databases using the search terms “hemorrhoid*” and “haemorrhoid*.” Duration of operation, pain, length of hospital stay, time off work, time...

Techniques in Coloproctology, Volume 11, Number 2 / June, 2007

26) Journal Article :

“Multizentrische Erfahrungen mit der Stapler-Hämorrhoid-enoperation”

Alexander Herold, Jens J. Kirsch, Günther Staude, Thorolf Hager, Franz Raulf, Jens Michel, Jens-Uwe Bock, Jan Jongen, Peter Prohm, Norbert Wolf, Heinrich Müller-Lobeck and Klaus Gellert

...In April 1998 the circular stapler was introduced in Germany to treat haemorrhoids. Method: In September 1999 a retrospective evaluation was done on 1,099...

coloproctology, Volume 23, Number 1 / February, 2001

27) Book Chapter :

“Iatrogenic Sphincter Lesions”

Oliver Jones and Ian Lindsey

...categories by aetiology. The largest group comprises patients

undergoing proctological surgery for haemorrhoids, fissures, sepsis, rectoceles and local excision of rectal neoplasia. A second surgical...

Fecal Incontinence,

28) Journal Article :

"Transanal haemorrhoidal dearterialisation: nonexcisional surgery for the treatment of haemorrhoidal disease"

P. P. Dal Monte, C. Tagariello, P. Giordano, E. Cudazzo, A. Shafi, M. Sarago, M. Franzini and R. K. S. Phillips

...years), including 138 second-degree, 162 third-degree and 30 fourth-degree haemorrhoids. There were 23 postoperative complications (7 cases of bleeding, 5 thrombosed piles...

Techniques in Coloproctology, Volume 11, Number 4 / December, 2007

29) Journal Article :

"Iatrogenic rectal diverticulum in patients treated with transanal stapled techniques"

Diverticolo rettale iatrogeno in pazienti trattati con suturatrici meccaniche circolari endoanali (stapler)

M. E. Alabiso, R. Grassi, C. Fioroni and I. Marano

...of rectal diverticula developing in patients treated with endoanal circular staplers for haemorrhoids (Longo's stapled haemorrhoidectomy) or obstructed defaecation syndrome [stapled transanal rectal resection...

La Radiologia Medica, Volume 113, Number 6 / September, 2008

30) Journal Article :

“Agranulocytosis associated with calcium dobesilate”

Clinical course and risk estimation with the case-control and the case-population approaches

Luisa Ibáñez, Elena Ballarín, Xavier Vidal and Joan-Ramon Laporte

...dobesilate is used in the treatment of diabetic retinopathy, chronic venous insufficiency, haemorrhoids and other ill-defined vascular conditions. It has been associated with agranulocytosis...

European Journal of Clinical Pharmacology, Volume 56, Numbers 9-10 / December, 2000

31) Journal Article :

“Randomized clinical trial comparing LigaSure haemorrhoidectomy with open diathermy haemorrhoidectomy”

K. -Y. Tan, T. Zin, H. -L. Sim, P. -L. Poon, A. Cheng and K. Mak

...orrhoidectomy remains a very popular treatment modality for third and fourth degree haemorrhoids due to its cost effectiveness and good long-term results. The LigaSure...

Techniques in Coloproctology, Volume 12, Number 2 / June, 2008

32) Journal Article :

“Open versus closed day-case haemorrhoidectomy: is there any difference?”

Results of a prospective randomised study

A. Arroyo, F. Pérez, E. Miranda, P. Serrano, F. Candela, J. Lacueva, H. Hernández and R. Calpena

...group A) versus 100 patients undergoing Ferguson haemorrhoidectomy (group B) for symptomatic haemorrhoids, in whom medical treatment or rubber band ligation had failed.ResultsCharacteristics of...

International Journal of Colorectal Disease, Volume 19, Number 4 / July, 2004

33) Journal Article :

“Anorectal lesions in human immunodeficiency virus-infected patients”

T. Puy-Montbrun, J. Denis, R. Ganansia, F. Mathoniere, N. Lemarchand and N. Arnous-Dubois

...observed. Finally, wound healing was slowed in the patients operated on for haemorrhoids, fissures and suppuration. No statistical analysis could be performed because of the...

International Journal of Colorectal Disease, Volume 7, Number 1 / March, 1992

34) Journal Article :

“The protective value of plant fibre against many modern western diseases”

D. P. Burkitt

...have been incriminated in the causation of hiatus hernia, varicose

veins and haemorrhoids. By diluting faecal carcinogens and hastening faecal transit and increasing stool acidity...

Plant Foods for Human Nutrition (Formerly Qualitas Plantarum), Volume 29, Numbers 1-2 / July, 1979

35) Journal Article :

“Severe intra-abdominal bleeding following stapled mucosectomy due to enterocele: report of a case”

G. Aumann, S. Petersen, T. Pollack, G. Hellmich and K. Ludwig

Stapled rectal mucosectomy (SRM) became a widely accepted surgical procedure for haemorrhoids. One of the rare complications is severe bleeding. We report the case...

Techniques in Coloproctology, Volume 8, Number 1 / March, 2004

36) Journal Article :

“Randomised trial comparing LigaSure haemorrhoidectomy with the diathermy dissection operation”

G. Milito, M. Gargiani and F. Cortese

...of diathermy excision. Fifty-sixty consecutive patients with third- and fourth-degree haemorrhoids were randomly allocated to undergo either LigaSure haemorrhoidectomy (29 patients) or diathermy...

Techniques in Coloproctology, Volume 6, Number 3 / December, 2002

37) Journal Article :

“Klinik und Therapie des Hämorrhoidalleidens”

Konrad Arnold

Summary Distinction between internal and external haemorrhoids is explained from anatomical and clinical features

Langenbeck’s Archives of Surgery, Volume 332, Number 1 / December, 1972

38) Journal Article :

“Patient satisfaction and symptom relief after anal dilatation”

D. W. Oliver, M. W. C. Booth, V. F. M. Kernick, T. T. Irvin and W. B. Campbell

...method of treatment and has been used for both anal fissure and haemorrhoids. This study examined longer-term results among a cohort of 162 patients...

International Journal of Colorectal Disease, Volume 13, Numbers 5-6 / December, 1998

39) Journal Article :

“Can proctological procedures resolve perianal pruritus and mycosis?”

A prospective study of 23 cases

E. Pirone, A. Infantino, A. Masin, F. Melega, P. Pianon, G. Dodi and M. Lise

...underwent primary treatment of a concurrent anal disorder. The anal disorders included haemorrhoids (n =9), fissure (n =8), anal spasm without fissure (n =5), and...

International Journal of Colorectal Disease, Volume 7, Number 1 / March, 1992.

★ ★ ★

HYPOTHESIS

After review it was observed that, there is not a single modality of treatment which cures internal haemorrhoids completely. Yava Kshar pratisaran was an effective Ayurvedic regimen as far as the management of 'Abhyantar Arsha' was considered. There are some procedural problem in study like possibility of application to other than diseased site, variability in amount of Kshar, no assurance of shelf life due to hygroscopic naturure of Kshar and needed intervention of doctor. It was decided to fill the gap between previous study. Present clinical study was a extension of previous study i.e."To study the efficacy of Pratisarniya Yava Kshar in Management of Abhyantar Gudarsha, by Dr. Ukhalkar V.P., [M.S.(Shalya)], S.R.T.M.U. Nanded."

NULL HYPOTHESIS :

Application of all ointments (i.e. Yava Kshar ointment 5% base Sikta tail, Yava Kshar ointment 5% base petroleum jelly, Yava Kshar ointment 10% base petroleum jelly, Yava Kshar ointment of 10% (base Sikta tail), Faktu ointment, Trifgol powder, plane Sikta tail and plane petroleum jelly) at internal haemorrhoids are equally effective to cure the internal haemorrhoids.

★ ★ ★

PLAN OF WORK

Definition of Population under study

Selection of sample

Prospective Single-blind Randomized Controlled Interventional Experimental Clinical Study

Recording and maintaining of data in the form of C.R.F.

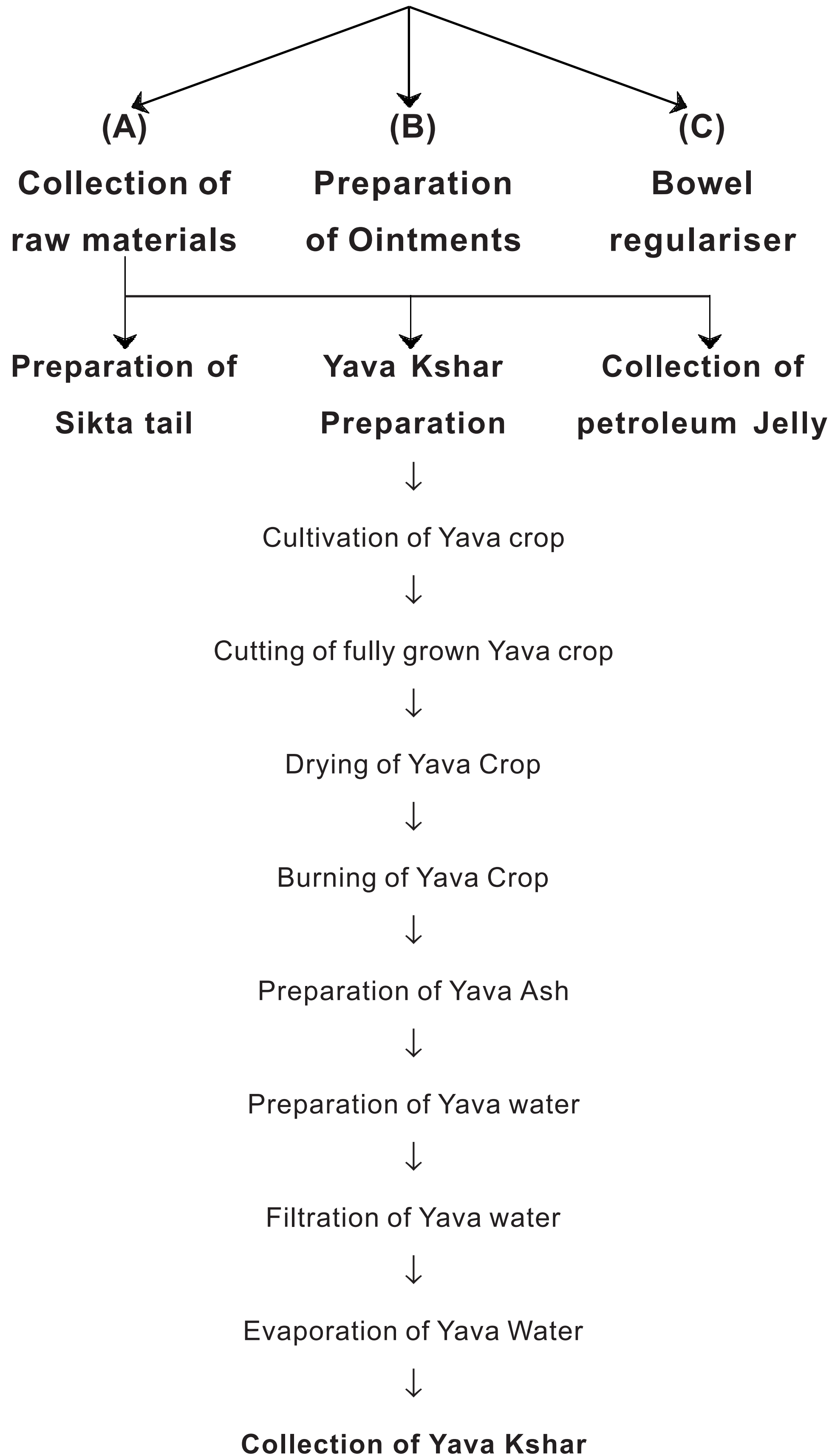
Follow ups on 3rd day, 10th day, 17th day and 24th day fixed on basis of pilot study

Unbiased Statistical Analysis of Observed Data

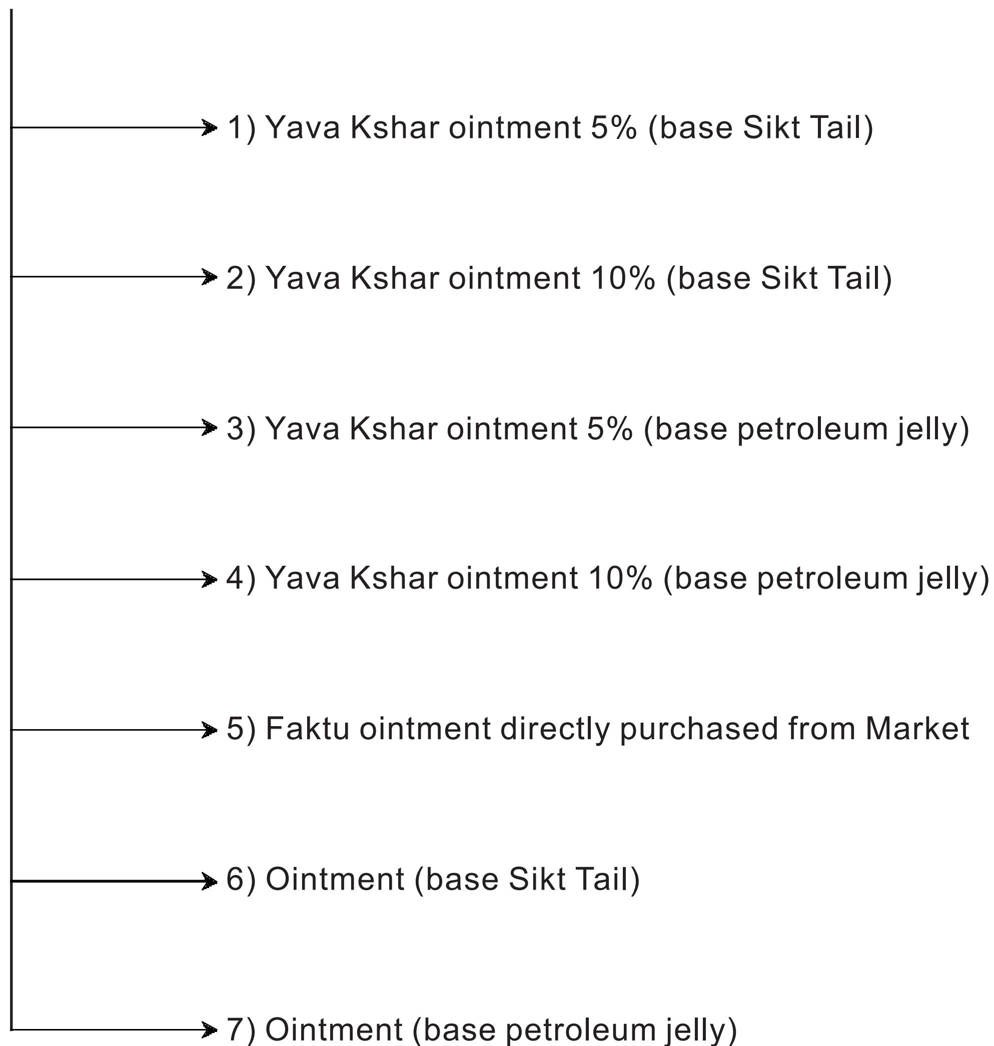
Interpretation of Statistical Analysis

Discussion

Summary and Conclusion


PREPARATION OF DRUG
(A)
Collection of raw materials
(B)
Preparation of Ointments
(C)
Bowel regulariser
Preparation of Sikta tail
Yava Kshar Preparation
Collection of petroleum Jelly
Cultivation of Yava crop
Cutting of fully grown Yava crop
Drying of Yava Crop
Burning of Yava Crop
Preparation of Yava Ash
Preparation of Yava water
Filtration of Yava water
Evaporation of Yava Water
Collection of Yava Kshar

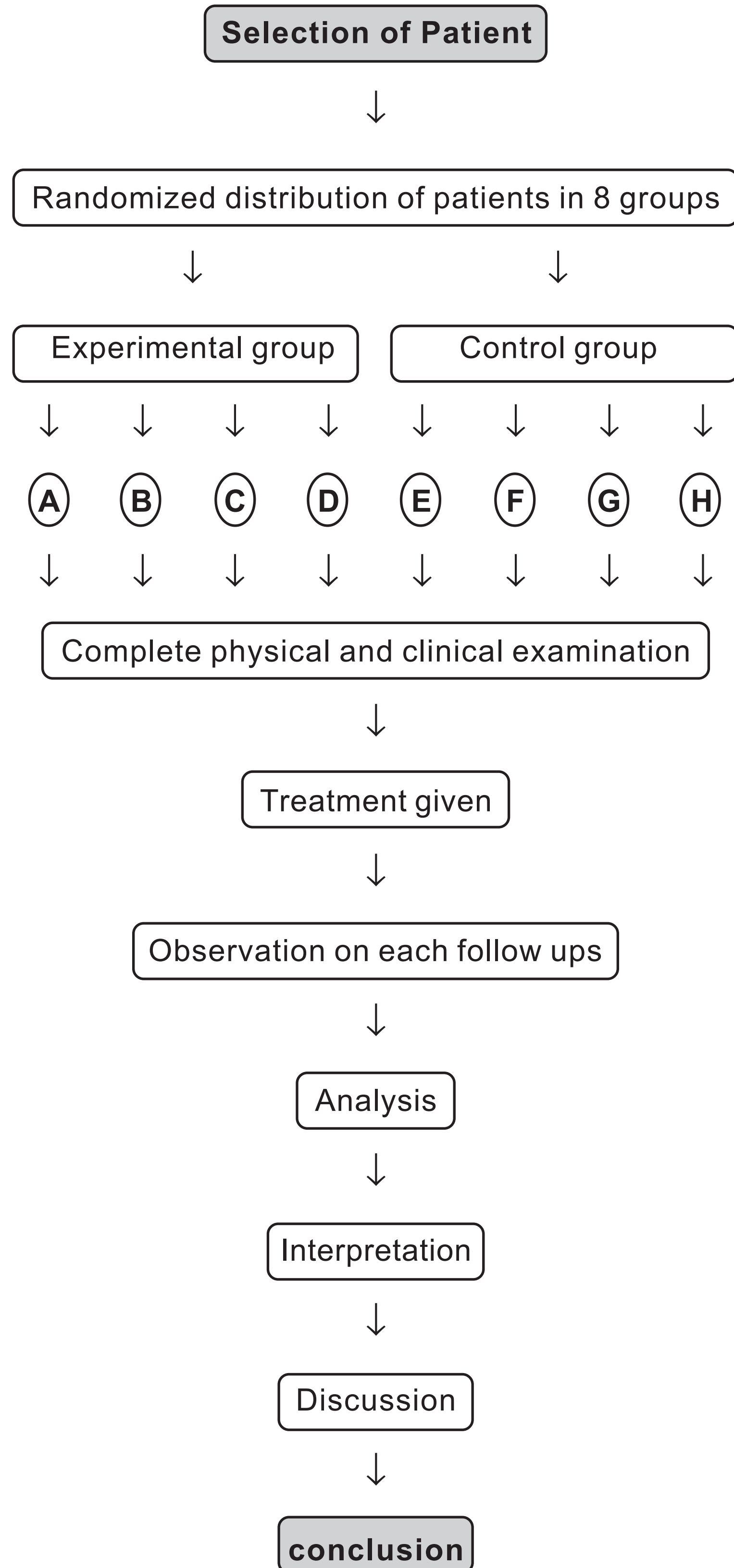
PREPARATION OF OINTMENTS



BOWEL REGULARISER

- Trifgol Powder purchased directly from Market

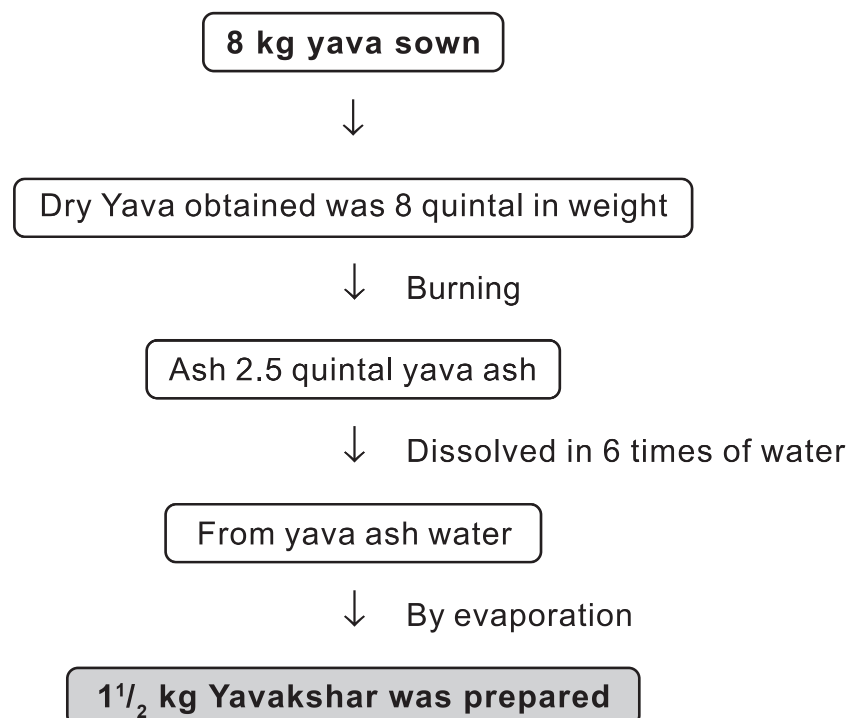
CLINICAL STUDY



PREPARATION OF DRUG

PREPARATION OF YAVA KSHAR:

Yava sown in land and yava was cultivated. It was grown fully approximately in 3 months. Then the soil was irrigated upto 8 days. After that the plants were pulled out along with roots. Plants were dried completely in sunlight in few days. The ash was obtained by burning the all dried yava plants.Then according to kshar Nirmanvidhi, which was described in Sushrut Samhita[107], that ash was dissolved in 6 times of water and maintained for one day. Next day that water was filtered by 12 folded fine cloth. The filtered water had appearance and smell like a cows urine. The filtered water was evaporated completely by heating it. Lastly the whitish yava kshar was obtained at bottom of container.



Result of Yava Kshar Analysis:

Name of sample	Yava Kshar
Moisture	38.42%
Total Ash	24.30%
Acid insoluble in Dil. HCl	3.7%
Specific Gravity	1.2156
Potassium	198mg/100gm
Sodium	23mg/100gm
Fluoride	15mg/100gm
pH Value	**10.60**

*Reports of Analysis at Shri Venkatesh Food Laboratories, Approved By AGMARK, Ministry of Agriculture, Department of Agriculture and Cooperation, Govt. of India.

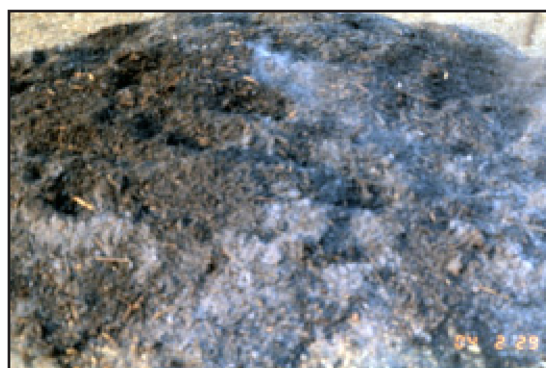
Different Stages of Preparation of Yavakshar

Yava Crop

Dried Yava Crop

Weighing of dry Yava

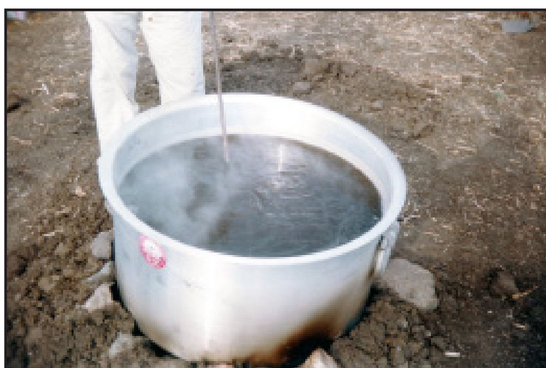
Burning of Yava



Burnt Yava

Filteration of Kshar water

Boiling of Kshar water



Evapouration of Kshar water

Reamaining kshar at base

Prepared Yavakshar

PREPARATION OF SIKTA TAILA[128] :

Sikta taila was prepared according to Rasatarangini which contains Bee Wax and Til taila.

PREPARATION OF OINTMENT :

By using base Petroleum jelly and Sikta Tail (Natural wax + Til Tail) different compositions were prepared by mixture and grinder machine. Compositions were as follow -

- Petroleum Jelly + Yava kshar 5% W/W
- Petroleum jelly + Yava kshar 10% W/W
- Sikth Tail + Yava kshar 5% W/W
- Sikth Tail + Yava kshar 10% W/W

Above said compositions were filled in different tubes using manual filling machine. Each tube was filled by 30 gms of ointment separately.

Result of Analysis of Yavakshar Ointments :

Name of Ointment	PileSikt 5%	PileGel5%	PileSikt10%	PileGel10%
Moisture	0.14%	0.13%	0.11%	0.12%
Total Ash	1.20%	1.19%	2.42%	2.27%
Acid insoluble in Dil. HCl	0.17%	0.14%	0.38%	0.25%
Specific Gravity	0.9379	0.9312	0.9352	0.956
Potassium	10mg/100gm	9mg/100gm	21mg/100gm	19mg/100gm
Sodium	2mg/100gm	1mg/100gm	3mg/100gm	2mg/100gm
Fluoride	1mg/100gm	1mg/100gm	2mg/100gm	2mg/100gm
Iodine Value	6.96	7.1	6.56	6.32
Melting point	34 C	33.4 C	34.6 C	35 C
Saponification value	255.46	258.8	261.35	259.67
Acid Value	2.62	2.52	2.35	2.41
Unsaponificable matter	0.59%	0.62%	0.68%	0.65%
* Reports Analysis at Shri Venkatesh Food Laboratories, Approved By AGMARK, Ministry of Agriculture, Department of Agriculture & Co-operation, Govt. of India.				

Different Stages for Preparation of Sikta Taila

Sikta

Adding Til taila

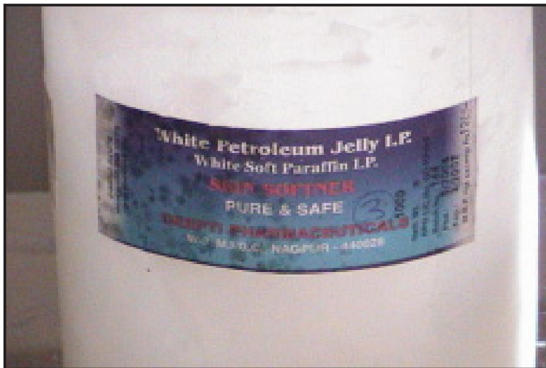
Boiling Sikta and Til taila

Filteration

Cooling Sikta taila

Prepared Sikta taila

Different Stages for Preparation of Yavakshar Ointment



Petroleum jelly

Sikta Taila

Mixing of Yavakshar and Petroleum jelly

Mixing of Yavakshar and Sikta Taila

Prepared Yavakshar Ointments

Filling of Yavakshar ointment

Weighing of Yavakshar ointment tubes

Yavakshar Ointment tubes ready to dispense

Govt. Ayurvedic And Unani Pharmacy, Nanded.

CLINICAL STUDY

The patients attending O.P.D. and I.P.D. of Shalyatantra department of Govt. Ayurved College and Hospital were selected for major clinical material. A written consent was obtained by counseling the patients of piles for participation in the study.

METHODOLOGY

The study was prospective single blind randomized controlled interventional experimental clinical trial. Total 219 patients were selected for this study which were divided randomly into eight groups. Each group consists of about 25 to 30 patients. In which group A, B, C and D were **experimental groups** and group E,F,G and H were **control groups.**

SELECTION OF POPULATION AND SAMPLES:

Selection criteria for patients:

- Patients of piles of both sex were included in this study.
- The study groups of age group between 21 years to 70 years age.
- The patients of IST, IInd and IIIrd degree piles included in this study.
- All cases were fresh and not received any local treatment.

Rejection Criteria for patients:

- The patients of piles having previous history of haemorrhoidectomy were rejected.

- Patients of piles which were diabetic, malignant. Having AIDS, Koch's with fistula in ano or having portal obstruction was rejected.
- Patients having Hb below 8 gm% were rejected.
- Pregnant woman was not included in this study.

The process of Yava Kshar pratisaran was modified according to nature of study.

Patient was advised **Mrudu-Virechan** in the form of bowel reguliser (**Trifgol powder**), and **sits bath** regularly. The patient was advised to apply Yava Kshar ointment with the help of applicator provided with ointment tube twice daily.

'A' Group was treated with local **Yava Kshar 5% ointment (base petroleum jelly)** with dietetic regime and bowel reguliser

'B' group was treated with local **Yava Kshar 5% ointment (base Sikta tail)** with dietetic regime and bowel reguliser

'C' Group was treated with local **Yava-Kshar 10% ointment (base petroleum jelly)** with dietetic regime and bowel reguliser

'D' group was treated with local **Yava Kshar 10% ointment (base Sikta tail)** with dietetic regime and bowel reguliser

'E' group was treated with popular allopathic brand name **'Faktu ointment'** (Contents Policruselin 5% + Cinchocaine 1%) Manufactured by GLAT company with dietetic regime and bowel reguliser. This group will stand as main control.

'F' Group received **only bowel reguliser** adopting standard dietetic regime.

'G' Group was treated with local **petroleum jelly** with dietetic regime and bowel reguliser.

'H' group was treated with local **Sikta tail** with dietetic regime and bowel reguliser.

DIETETIC REGIME:

- Rich fiber diet was advised.
- Avoid Nonvegetarian Diet
- Avoiding Spicy Diet

PARAMETERS:

Degree of Haemorrhoid:

I - Haemorrhoids projecting slightly in lumen of anal canal, when veins are congested at defecation.

II - Haemorrhoids prolapse out of the anus on straining, but return spontaneously to the anal canal when motion has been passed and the defection has ceased.

III - Haemorrhoids prolapse but don't reduce spontaneously and remain prolapsed afterwards and have to be replaced digitally.

IV - Completely irreducible haemorrhoids, usually are long standing and acquire a component of skin.

P/R Bleeding grade:

- **I** Grade – 0 to 5 drops
- **II** Grade – 6 to 15 drops

- **III** Grade – 16 and above drops

A special clinical record form (C.R.F.) was prepared to record the findings. Every patient was observed at **regular follow up on 0th, 3rd, 10th, 17th, 24th day** based on the basis of pilot study. For visual recording the **regular photographs** of selected patients from each group were taken for observing the local changes at internal haemorrhoid. Routine investigations of all patients and some specific investigations were carried out as and when required.

Assessment criteria was considered as -

Cured: When P/R bleeding and Degree of haemorrhoid both reduced.

Relieved: When any one from P/R bleeding and Degree of haemorrhoid is reduced.

Not cured: When neither P/R bleeding nor Degree of haemorrhoid is reduced.

★ ★ ★

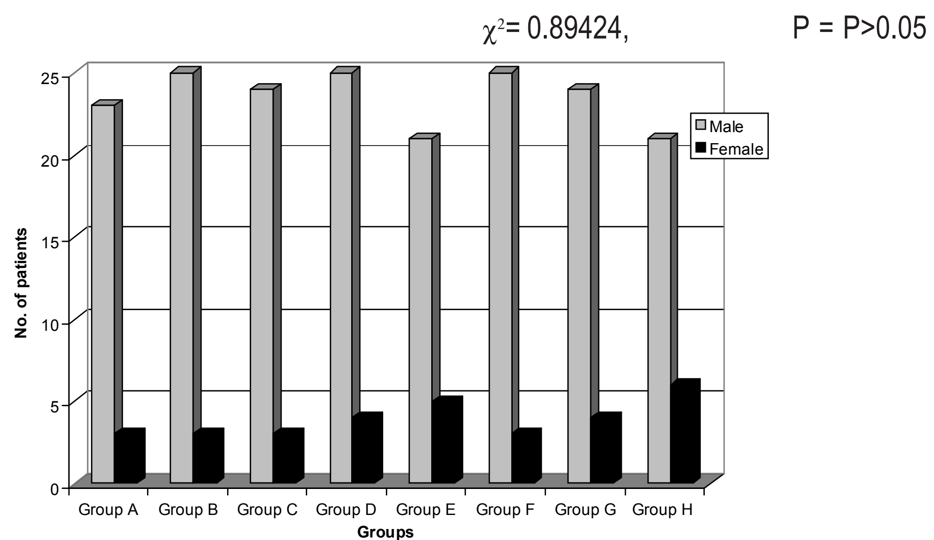
OBSERVATION

INCIDENCES :

1) Sex wise incidences of patients in all groups :

Groups	Male	Female	Total
A	23	3	26
B	25	3	28
C	24	3	27
D	25	4	29
E	21	5	26
F	25	3	28
G	24	4	28
H	21	6	27
Total	188	31	219

$\chi^2 = 0.89424$, P = P>0.05

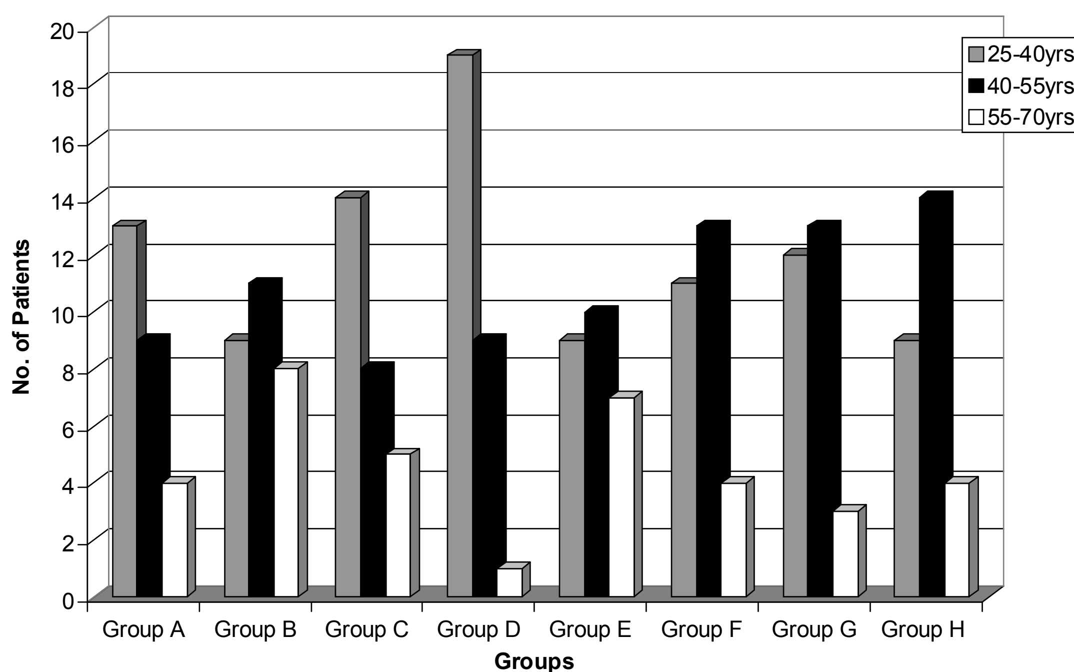


It was observed that maximum number of patients were male.

2) Age wise incidences of patients in all groups :

Groups	25-40	40-55	55-70	Total
A	13	9	4	26
B	9	11	8	28
C	14	8	5	27
D	19	9	1	29
E	9	10	7	26
F	11	13	4	28
G	12	13	3	28
H	9	14	4	27
Total	96	87	36	219

* Age is in years $\chi^2 = 0.25732$, P = $P > 0.05$

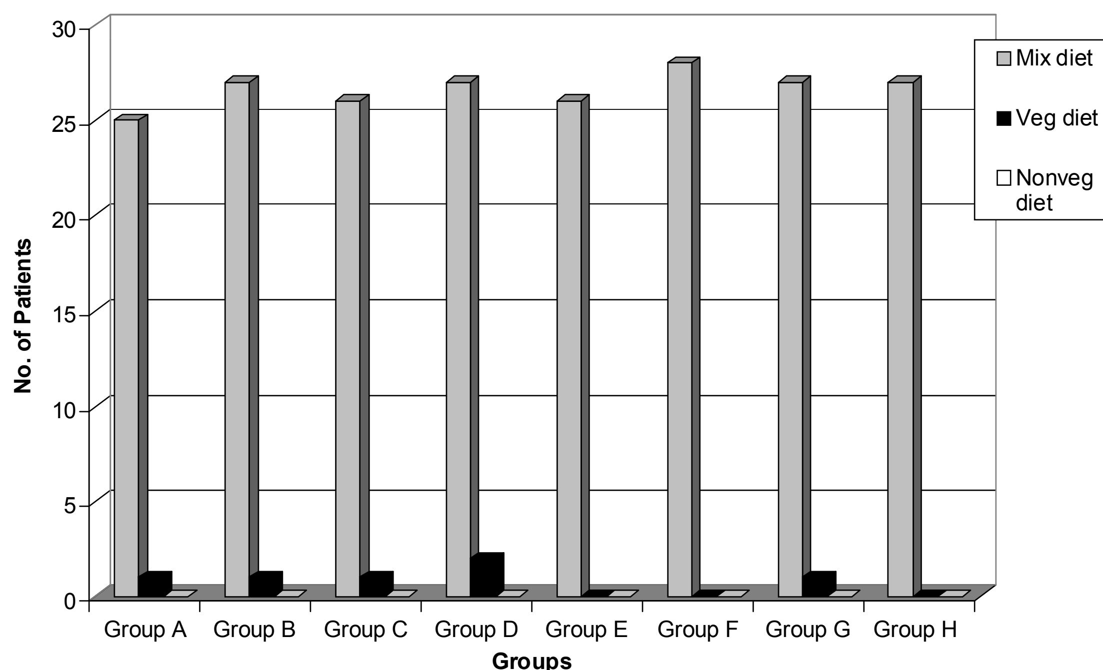


It was observed that maximum number of patients were from age group 25 to 40 years.

3) Diet wise incidences of patients in all groups :

Groups	Mix	Veg	Nonveg	Total
A	25	1	0	26
B	27	1	0	28
C	26	1	0	27
D	27	2	0	29
E	26	0	0	26
F	28	0	0	28
G	27	1	0	28
H	27	0	0	27
Total	213	6	0	219

$\chi^2 = 0.71847$, P = P> 0.05

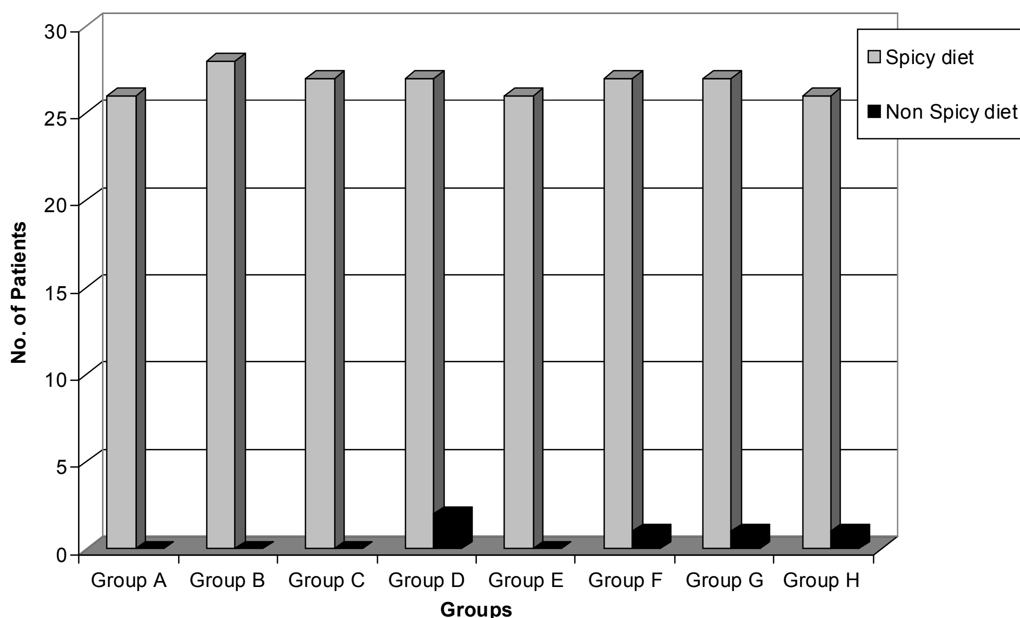


It was observed that maximum number of patients were from group having mix diet.

4) Diet wise incidences of patient in all groups :

Groups	Spicy	Non Spicy	Total
A	26	0	26
B	28	0	28
C	27	0	27
D	27	2	29
E	26	0	26
F	27	1	28
G	27	1	28
H	26	1	27
Total	214	5	219

$\chi^2 = 0.54715$, P = P > 0.05

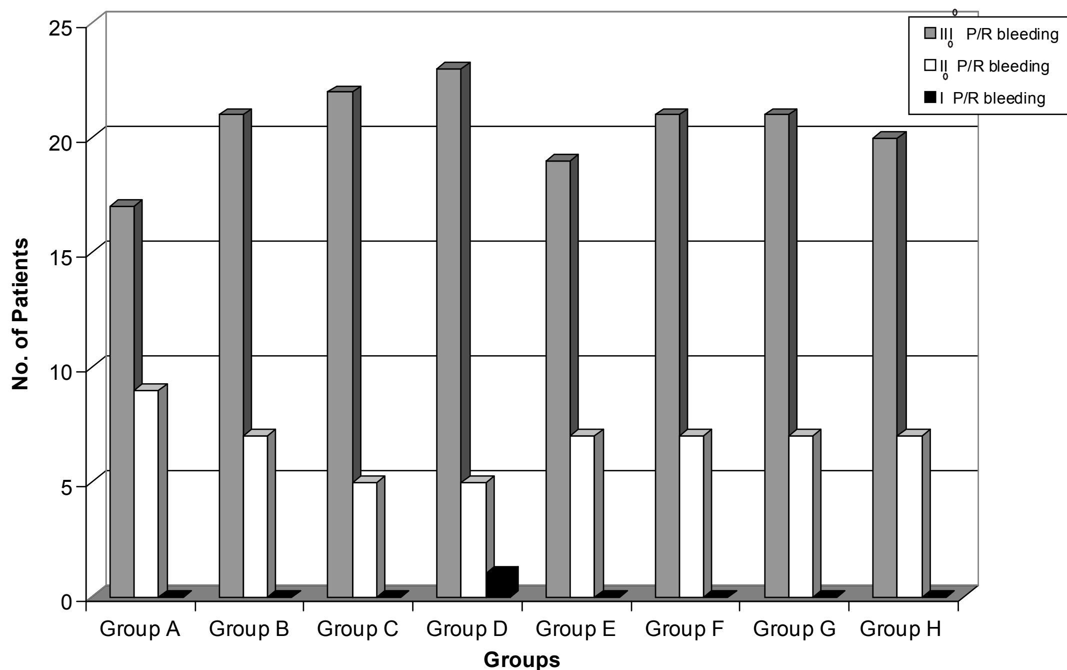


It was observed that maximum number of patients were from group having spicy diet. It was observed that the distribution of patient in all groups according to above said effective factors was equal. The observed difference was **statistically insignificant**. Hence all groups were **from the same population** and **comparable at baseline.**

5) Degree of P/R bleeding wise incidences of patients in all groups:

Groups	3rd	2nd	1st	Total
A	17	9	0	26
B	21	7	0	28
C	22	5	0	27
D	23	5	1	29
E	19	7	0	26
F	21	7	0	28
G	21	7	0	28
H	20	7	0	27
Total	**164**	**54**	**1**	**219**

$\chi^2 = 0.81024$ P = P > 0.05

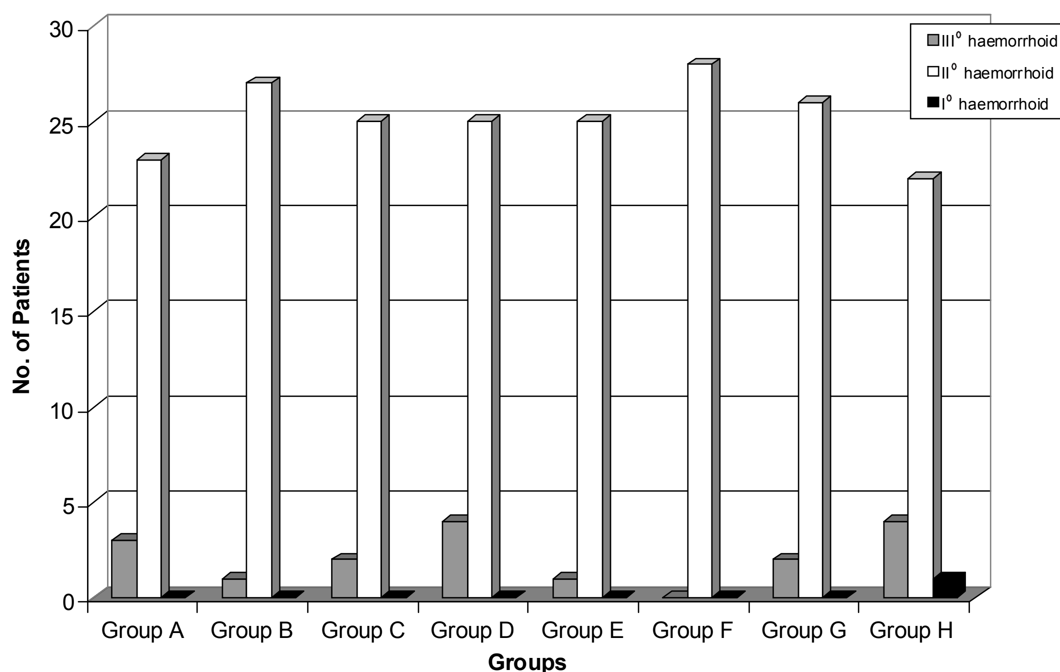


It was observed that in all groups incidence of 3rd grade P/R bleeding was maximum and incidence of 1st grade P/R bleeding was minimum. This may be due to negligence of patients in less severity.

6) Degree of haemorrhoid wise incidence of patient in all groups :

Groups	3rd	2nd	1st	Total
A	3	23	0	26
B	1	27	0	28
C	2	25	0	27
D	4	25	0	29
E	1	25	0	26
F	0	28	0	28
G	2	26	0	28
H	4	22	1	27
Total	**17**	**201**	**1**	**219**

$X^2 = 0.39132$ P = $P > 0.05$



It was observed that in all groups incidence of 2nd degree haemorrhoids were maximum due to inclusive criteria of groups. It was least in 1st degree haemorrhoids may be due to negligence of patients.

7) Table showing the mean of PR bleeding on each follow up in different Groups :

Group	0th day		3rd day		10th day		17th day		24th day	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
A	2.654	0.485	2.077	0.628	0.808	0.801	0.038	0.196	0	0
B	2.75	0.441	0.607	0.786	0.179	0.39	0.036	0.189	0	0
C	2.759	0.511	0.31	0.66	0.069	0.371	0.034	0.186	0	0
D	2.815	0.396	0.704	0.775	0.296	0.542	0.037	0.192	0	0
E	2.731	0.452	2.615	0.496	1.346	0.629	0.654	0.689	0.385	0.496
F	2.75	0.441	2.643	0.488	2.5	0.509	2.321	0.612	2.036	0.744
G	2.741	0.447	2.63	0.565	2.704	0.542	2.667	0.555	2.63	0.565
H	2.75	0.441	2.679	0.476	2.786	0.418	2.75	0.441	2.714	0.46

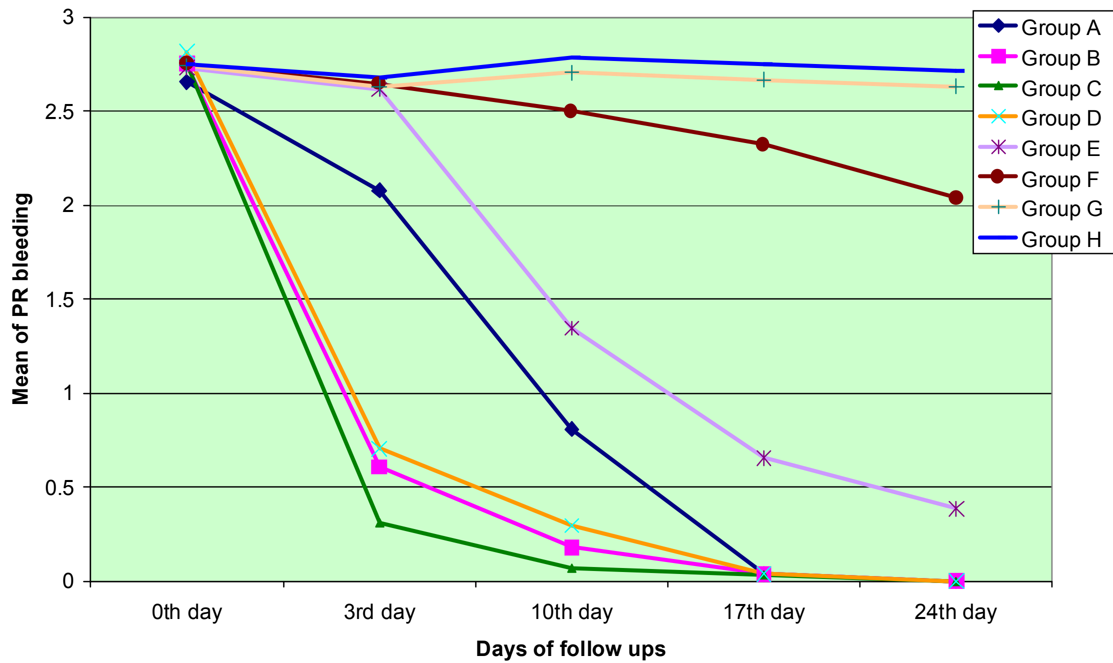
On 0th day:

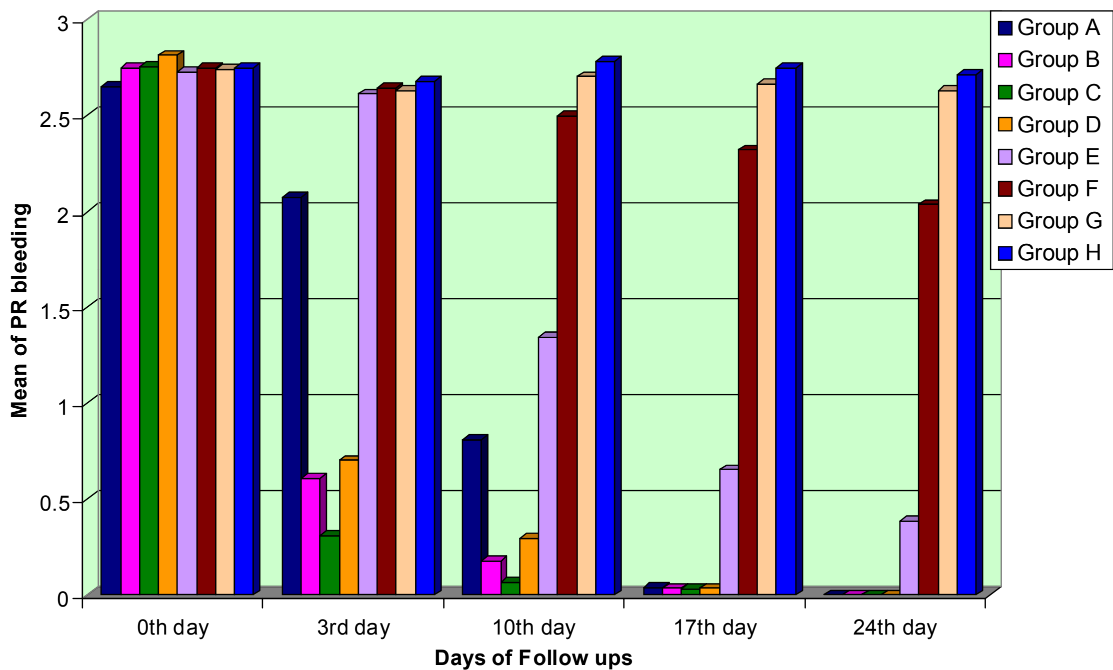
All group had nearly same mean of P/R bleeding.

On 3rd day:

Mean change in P/R bleeding occurred in group Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base Petroleum Jelly) and Yava Kshar ointment 10% (base Sikta tail). P/R bleeding was minimum in group treated with Yava Kshar ointment 10% (base Sikta tail), very slight change occurred in groups treated with Yava Kshar ointment 5% (base Petroleum Jelly), Faktu ointment, Trifgol, Petroleum Jelly and Sikta tail. Maximum P/R bleeding was in group treated with Petroleum jelly.

Graph showing the mean of PR bleeding on each follow up in different Groups :





Where: A = Yavakshar ointment 5% (base petroleum jelly) B = Yavakshar ointment 5% (base sikta taila) C = Yavakshar ointment 10% (base petroleum jelly) D = Yavakshar ointment 10% (base Sikta taila), E = Faktu ointment, F = Trifgol powder, G = Ointment (base petroleum jelly), H = Ointment (base Sikta taila)

On 10th day :

Decrease in P/R bleeding was observed in group Yava Kshar ointment 5% (base petroleum jelly), Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base petroleum jelly) and Faktu ointment. P/R bleeding was minimum in Yava khara ointment 10% (base Sikta tail) and then in Yava Kshar ointment 5% (base Sikta tail). Slight decrease observed in Trifgol. There was increase in P/R bleeding in group treated with Sikta tail and petroleum jelly.

On 17th day :

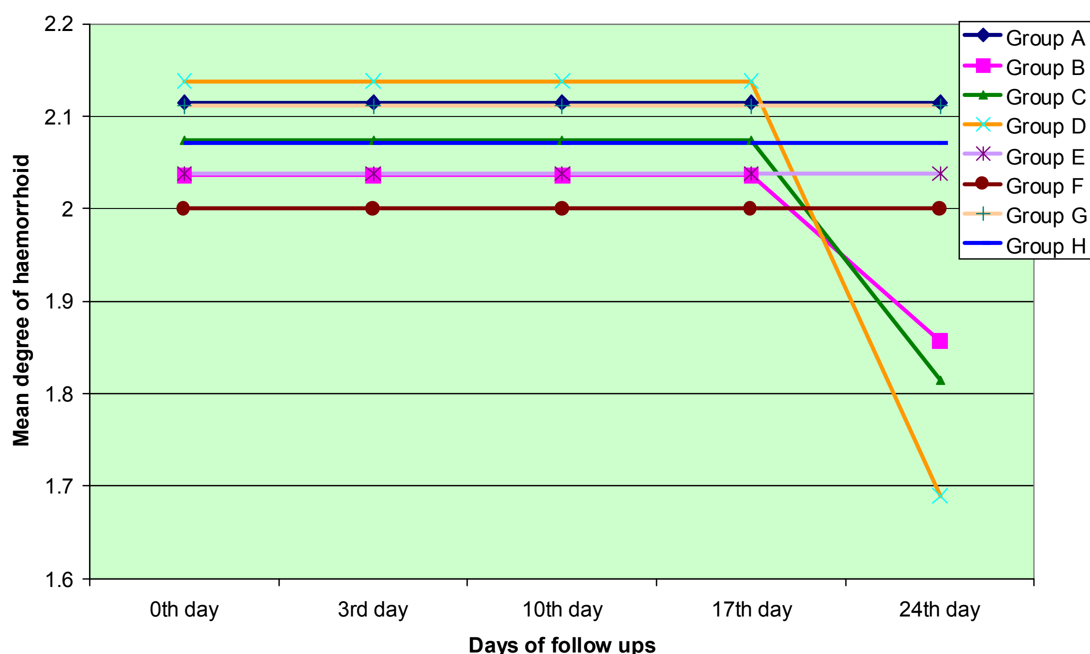
Negligible P/R bleeding was observed in groups treated with Yava Kshar ointment 5% (base petroleum jelly), Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), and Yava Kshar ointment 10% (base petroleum jelly). Slight P/R bleeding observed in patients treated with Faktu ointment. Very slight decrease in P/R bleeding was in groups Trifgol, Sikta tail, petroleum jelly this may be due to softening of stools.

On 24th day :

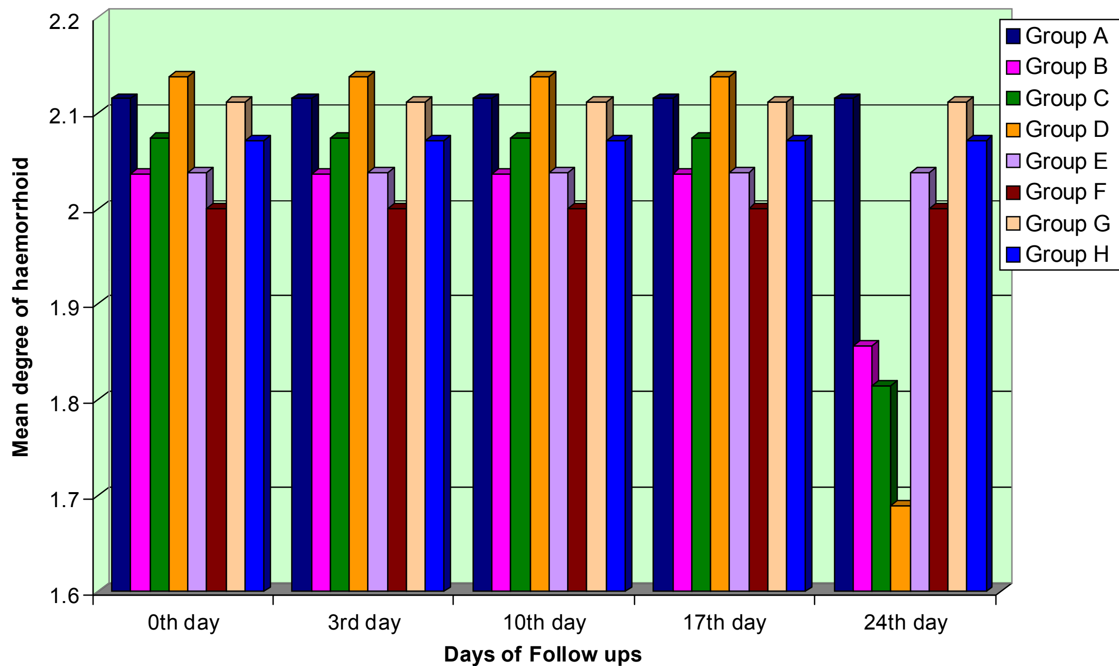
No P/R bleeding reported by patients of group Yava Kshar ointment 5% (base petroleum jelly). Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base petroleum jelly). Incidence of P/R bleeding was minimal in group treated with Faktu ointment. Negligible changes in P/R bleeding occurred in group Trifgol, Sikta tail, petroleum jelly, in which decrease was more in group Trifgol.

8) Table showing the mean degree of haemorrhoid on each follow up in different groups :

Group	0th day		3rd day		10th day		17th day		24th day	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
A	2.115	0.326	2.115	0.326	2.115	0.326	2.115	0.326	2.115	0.326
B	2.036	0.189	2.036	0.189	2.036	0.189	2.036	0.189	1.857	0.448
C	2.074	0.267	2.074	0.267	2.074	0.267	2.074	0.267	1.815	0.396
D	2.138	0.351	2.138	0.351	2.138	0.351	2.138	0.351	1.69	0.604
E	2.038	0.196	2.038	0.196	2.038	0.196	2.038	0.196	2.038	0.196
F	2.00	00	2.00	00	2.00	00	2.00	00	2.00	00
G	2.111	0.424	2.111	0.424	2.111	0.424	2.111	0.424	2.111	0.424
H	2.071	0.262	2.071	0.262	2.071	0.262	2.071	0.262	2.071	0.262



Where: A = Yavakshar ointment 5% (base petroleum jelly) B = Yavakshar ointment 5% (base sikta taila) C = Yavakshar ointment 10% (base petroleum jelly) D = Yavakshar ointment 10% (base Sikta taila), E = Faktu ointment, F = Trifgol powder, G = Ointment (base petroleum jelly), H = Ointment (base Sikta taila)



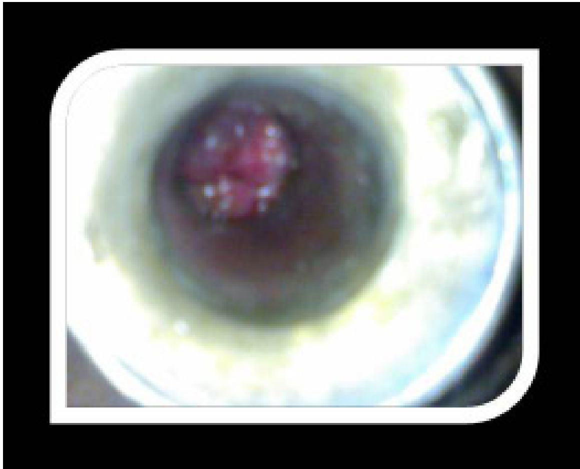
Where: A = Yavakshar ointment 5% (base petroleum jelly) B = Yavakshar ointment 5% (base sikta taila) C = Yavakshar ointment 10% (base petroleum jelly) D = Yavakshar ointment 10% (base Sikta taila), E = Faktu ointment, F = Trifgol powder, G = Ointment (base petroleum jelly), H = Ointment (base Sikta taila)

Till 17th day:

No change in degree of haemorrhoid was observed in all groups.

On 24th day:

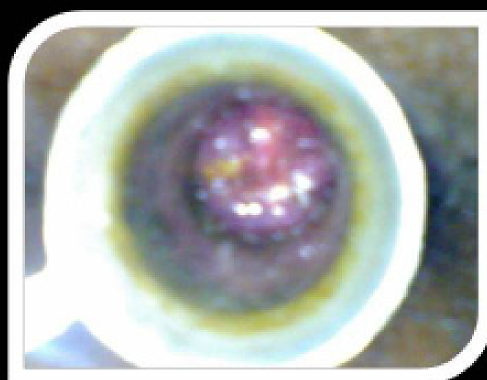
The changes were observed in group Yava Kshar ointment 5% base Sikta tail Yava Kshar ointment 10% base petroleum jelly and Yava Kshar ointment 10% base Sikta tail. Maximum changes were observed in Yava Kshar ointment 10% base Sikta tail. No changes observed in groups Yava Kshar ointment 5% base petroleum jelly, Faktu ointment, Trifgol powder, plane Sikta tail and plane petroleum jelly.

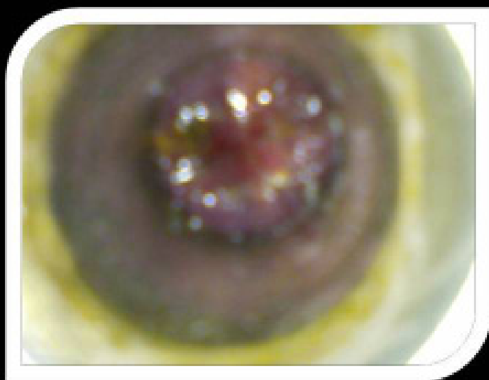


YAVAKSHAR OINTMENT 5% BASE PETROLEUM JELLY

Follow up 1st - 3rd day

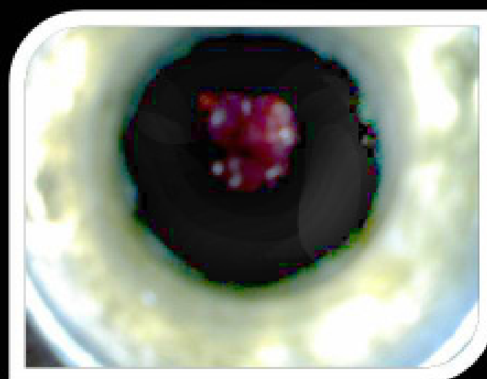
Follow up 2nd - 10th day



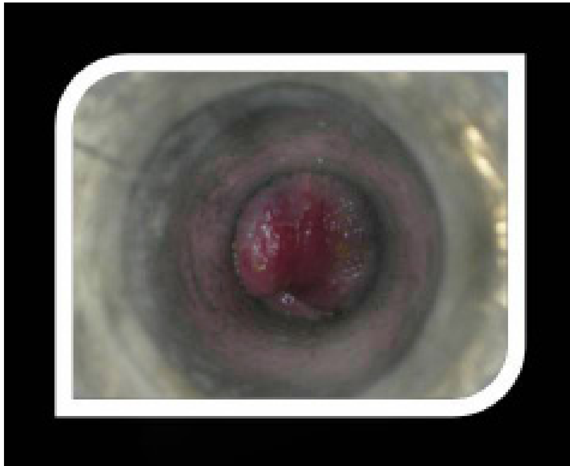


Follow up 3rd - 17th day

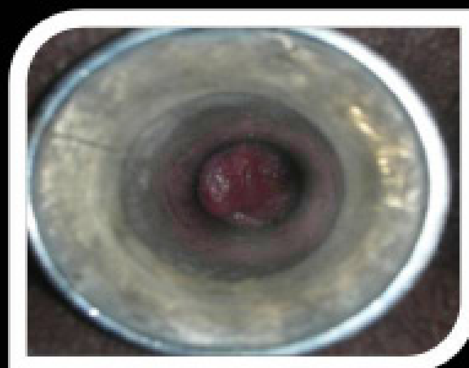
Follow up 4th - 24th day



YAVAKSHAR OINTMENT 5% BASE SIKTA TAILA

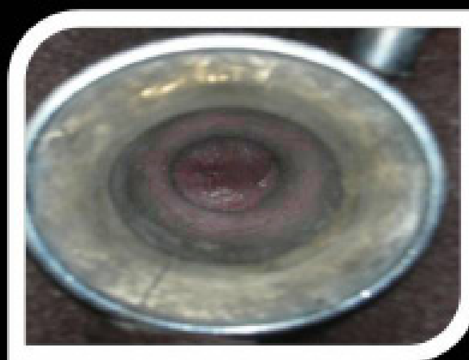


Follow up 1st - 3rd day



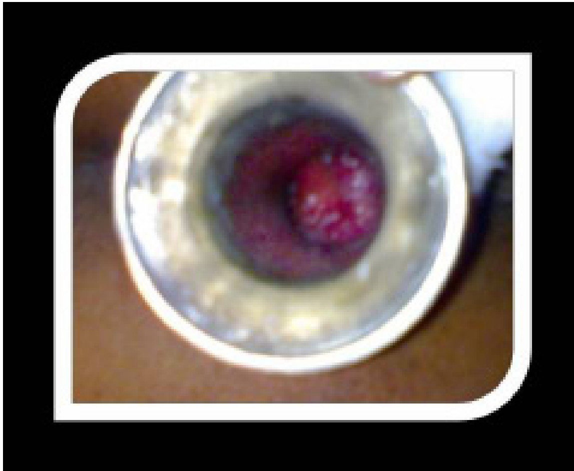
Follow up 2nd - 10th day

Follow up 3rd - 17th day



Follow up 4th - 24th day

YAVAKSHAR OINTMENT 10% BASE PETROLEUM JELLY



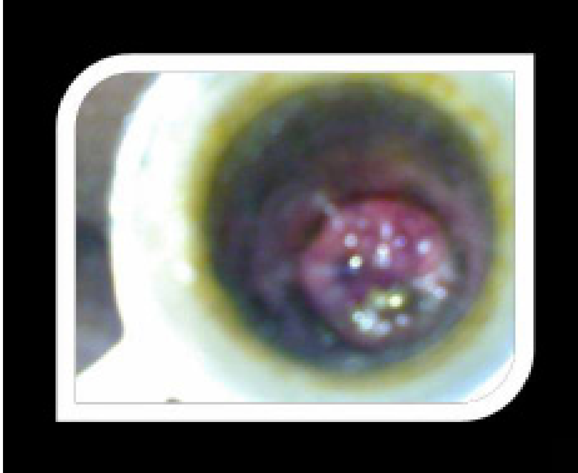
Follow up 1st - 3rd day

Follow up 2nd - 10th day

Follow up 3rd - 17th day

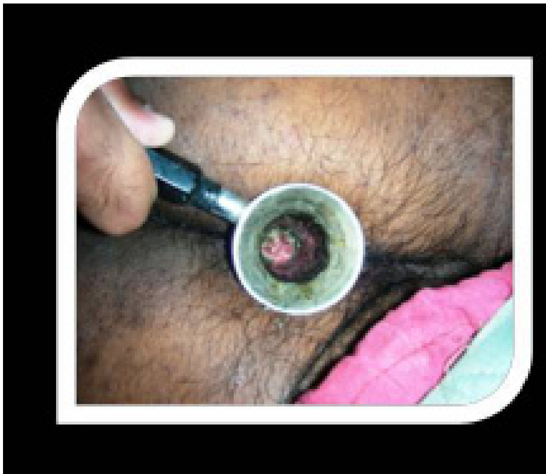
Follow up 4th - 24th day

YAVAKSHAR OINTMENT 10% BASE SIKTA TAILA



Follow up 1st - 3rd day

Follow up 2nd - 10th day



Follow up 3rd - 17th day

Follow up 4th - 24th day

STATISTICAL ANALYSIS AND INTERPRETATION

The **confidence limit** was fixed at **95%** and the **level of significance** was at **5%**. Paired and unpaired 't' **test** was applied for objective parameter and **chi square test** was applied for subjective parameter and ANOVA test was applied for compaison of effect of all ointments.

Analysis of P/R bleeding in each group was done by applying **'t' test** to difference of P/R bleeding between each follow up and then before and after treatment.

Analysis of incidence:

Attribute	X^2	P
Sex	0.89424	P> 0.05
Age	0.25732	P> 0.05
Diet (mix / veg.)	0.71847	P> 0.05
(Spicy / No spicy)	0.54751	P> 0.05
Degree of P/R bleeding	0.81024	P > 0.05
Degree of piles	0.39132	P > 0.05

It was observed that the distribution of patient in all groups according to above said effective factors was equal. The observed difference was the statistically insignificant. Hence all groups were from the same population and comparable at baseline.

Group Yava Kshar ointment 5% base petroleum jelly:

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment:

	$0^{th} - 3^{rd}$	$3^{rd} - 10^{th}$	$10^{th} - 17^{th}$	$17^{th} - 24^{th}$	BT – AT
Mean of difference	0.577	1.269	0.769	0.038	2.077
S.D.	0.578	0.724	0.765	0.196	0.628
S.E.	0.113355	0.141988	0.150029	0.038439	0.123161
t	5.09	8.937	5.126	0.989	16.864
P	**P< 0.05** **P < 0.001**	**P < 0.05** **P < 0.001**	**P<0.05** **P<0.01**	P> 0.05 P > 0.001	**P< 0.05** **P< 0.001**

Above observation and significance test shown that difference of P/R bleeding before and after treatment was **highly significant**. Hence it can be said that change occurred may be due to treatment.

Group Yava Kshar ointment 5% base Sikta tail :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	$0^{th} - 3^{rd}$	$3^{rd} - 10^{th}$	$10^{th} - 17^{th}$	$17^{th} - 24^{th}$	BT – AT
Mean of difference	2.143	0.429	0.095	0.048	2.714
S.D.	0.891	0.507	0.301	0.218	0.463
S.E.	0.168	0.096	0.057	0.041	0.087
t	12.756	4.469	1.667	1.171	31.195
P	**P< 0.05** **P< 0.001**	**P<0.05** **P<0.001**	P>0.05 P>0.001	P>0.05 P>0.001	**P<0.05** **P<0.001**

Above observation and significance test shown that difference of P/R bleeding before and after treatment was **highly significant**. Hence it can be said that change occurred may be due to treatment.

Group Yava Kshar ointment 10% base petroleum jelly :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	0th – 3rd	3rd – 10th	10th– 17th	17th– 24th	BT – AT
Mean of difference	2.111	0.407	0.259	0.037	2.815
S.D.	0.847	0.501	0.447	0.192	0.396
S.E.	0.163005	0.096417	0.086025	0.03695	0.07621
T	12.951	4.221	3.011	1.001	36.937
P	**P< 0.05** **P<0.001**	**P<0.05** **P<0.001**	**P<0.05** P>0.001	P>0.05 P>0.001	**P<0.05** **P<0.001**

Above observation and significance test shown that difference of P/R bleeding before and after treatment was **highly significant**. Hence it can be said that change occurred may be due to treatment.

Group Yava Kshar ointment 10% base Sikta tail :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	0th – 3rd	3rd – 10th	10th– 17th	17th– 24th	BT – AT
Mean of difference	2.448	0.241	0.034	0.034	2.759
S.D.	0.87	0.435	0.186	0.186	0.511
S.E.	0.162	0.081	0.035	0.035	0.095
T	15.111	2.975	0.971	0.971	29.042
P	**P< 0.05** **P< 0.001**	**P<0.05** P>0.001	P>0.05 P>0.001	P>0.05 P>0.001	**P<0.05** **P<0.001**

Above observation and significance test shown that difference of P/R bleeding before and after treatment was **highly significant.** Hence it can be said that change occurred may be due to treatment.

FAKTU OINTMENT :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	$0^{th} - 3^{rd}$	$3^{rd} - 10^{th}$	$10^{th} - 17^{th}$	$17^{th} - 24^{th}$	BT – AT
Mean of difference	0.115	1.269	0.692	0.269	2.231
S.D.	0.326	0.667	0.549	0.452	0.587
S.E.	0.063934	0.130809	0.107668	0.088644	0.11512
T	1.799	9.701	6.427	3.035	19.38
P	P> 0.05 P> 0.001	**P<0.05** **P<0.001**	**P<0.05** **P<0.001**	**P<0.05** P>0.001	**P<0.05** **P<0.001**

Above observation and significance test shown that difference of P/R bleeding before and after treatment was **highly significant.** Hence it can be said that change occurred may be due to treatment.

TRIFGOL :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	$0^{th} - 3^{rd}$	$3^{rd} - 10^{th}$	$10^{th} - 17^{th}$	$17^{th} - 24^{th}$	BT – AT
Mean of difference	0.107	0.143	0.179	0.286	0.607
S.D.	0.315	0.356	0.67	0.763	0.786
S.E.	0.059529	0.067278	0.126618	0.144193	0.14854
T	1.797	2.126	1.414	1.983	4.086
P	P> 0.05 P> 0.001	**P< 0.05** P> 0.001	P>0.05 P>0.001	P>0.05 P>0.001	**P<0.05** **P<0.001**

Above observation and significance test shown that difference of P/R bleeding before and after treatment was **highly significant.** Hence it can be said that change occurred may be due to treatment.

SIKTA TAIL :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	$0^{th} – 3^{rd}$	$3^{rd} – 10^{th}$	$10^{th} – 17^{th}$	$17^{th} – 24^{th}$	BT – AT
Mean of difference	0.111	-0.074	0.037	0.037	0
S.D.	0.32	0.267	0.192	0.192	0.392
S.E.	0.061584	0.051384	0.03695	0.03695	0.07544
T	1.802	-1.44	1.001	1.001	0
P	P>0.05 P>0.001	P> 0.05 P> 0.001	P>0.05 P>0.001	P>0.05 P>0.001	P>0.05 P>0.001

PETROLIUM JELLY :

Table showing the significance of difference in PR Bleeding on each follow up and after complete treatment :

	$0^{th} – 3^{rd}$	$3^{rd} – 10^{th}$	$10^{th} – 17^{th}$	$17^{th} – 24^{th}$	BT – AT
Mean of difference	0.071	-0.107	0.036	0.036	-0.036
S.D.	0.262	0.416	0.429	0.744	0.637
S.E.	0.049513	0.078617	0.081073	0.140603	0.120382
T	1.434	-1.361	0.444	0.256	-0.299
P	P> 0.05 P> 0.001	P> 0.05 P> 0.001	P> 0.05 P> 0.001	P> 0.05 P> 0.001	P>0.05 P>0.001

No difference occurred in these groups.

Treatments were **mostly ineffective.**

ANOVA TEST :

Difference in Degree Of Haemorrhoid due to Treatment:

	Petro5%	Sikta5%	Sikta10%	Petro10%	Faktu	Trifgol	PetroGel	SiktaTail
Mean	0	0.179	0.448	0.259	0	0	0	0
SD	0	0.39	0.506	0.447	0	0	0	0
SE	0	0.074	0.094	0.086	0	0	0	0
t	0	2.419	4.766	3.012	0	0	0	0
P	P>0.05	**P<0.05**	**P<0.05**	**P<0.05**	P>0.05	P>0.05	P>0.05	P>0.05
		P>0.001	**P<0.001**	P>0.001				

Grand Mean = 0.298 Degree of freedom (Total) = 83

Degree of freedom for Groups = 2 Degree of freedom for within Group Variation or error = 81

T1	T2	T3	
5	13	7	**T = T1 + T2 + T3 = 25**

SumSumX^2 = 25 SST = 17.47 SSTr = 8.535 SSE = SST - SSTr = 8.935

Source of Variation	Degrees of freedom	Sum of Squares	Mean sum of square	F
T/T	2	8.535	4.268	38.8
Error	81	8.935	0.11	
Total	**83**	**17.47**		

From the table we see that F value for degree of freedom 2, 81 is 3.15 and 4.98 for 0.05 and 0.001 level of significance. As F(2, 81) calculated is more than table value of F(2,81) there is significant difference in the three treatments i.e. Yavakshar ointment 5% (base sikta taila), Yavakshar ointment 10% (base petroleum jelly), Yavakshar ointment 10% (base sikta taila).

Difference in P/R Bleeding due to Treatment:

	Petro5%	Sikta5%	Sikta10%	Petro10%	Faktu	Trifgol	PetroGel	SiktaTail
Mean	2.077	2.714	2.759	2.815	2.231	0.607	-0.036	0
SD	0.628	0.463	0.511	0.396	0.587	0.786	0.637	0.392
SE	0.123	0.087	0.095	0.0762	0.1151	0.1485	0.1203	0.0754
t	16.864	31.195	29.042	36.937	19.38	4.086	-0.299	0
P	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	P>0.05	P>0.05
	P<0.001	**P<0.001**	**P<0.001**	**P<0.001**	**P<0.001**	**P<0.001**	P>0.001	P>0.001

Grand Mean = 2.207 Degree of freedom (Total) = 163

Degree of freedom for Groups = 5 Degree of freedom for within Group variation or error = 158

T1	T2	T3	T4	T5	T6
54	77	80	76	58	17

T = T1 + T2 + T3 + T4 + T5 + T6 = 362

$SumSumX^2 = 950$ SST = 146.049

SSTr = 898.225 SSE = SST - SSTr = -752.176

Source of Variation	Degrees of freedom	Sum of Squares	Mean sum of square	F
T/T	5	898.225	179.645	-37.7326
Error	158	-752.176	-4.761	
Total	**163**	**146.049**		

From the table we see that F value for degree of freedom 5, 158 is 2.21 and 3.02 for 0.05 and 0.001 level of significance. As F(5, 158) calculated is less than table value of F(5, 158) there is insignificant difference in the six treatments.

Difference in P/R Bleeding due to Treatment on 3rd day:

	Petro5%	Sikta5%	Sikta10%	Petro10%	Faktu	Trifgol	PetroGel	SiktaTail
Mean	0.577	2.143	2.448	2.111	0.115	0.107	0.071	0.111
SD	0.578	0.891	0.87	0.847	0.326	0.315	0.262	0.32
SE	0.1133	0.168	0.162	0.1630	0.0639	0.0595	0.0495	0.0616
t	5.09	12.756	15.111	12.951	1.799	1.797	1.434	1.802
P	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	P>0.05	P>0.05	P>0.05	P>0.05
	P<0.001	**P<0.001**	**P<0.001**	**P<0.001**	P>0.001	P>0.001	P>0.001	P>0.001

Grand Mean = 1.845 Degree of freedom (Total) = 109

Degree of freedom for Groups = 3 Degree of freedom for within Group Variation or error = 106

T1 T2 T3 T4

15 60 71 57 **T = T1 + T2 + T3 + T4 = 203**

$SumSumX^2 = 501$ SST = 122.936

SSTr = 431.386 SSE = SST - SSTr = - 308.45

Source of Variation	Degrees of freedom	Sum of Squares	Mean sum of square	F
T/T	3	431.386	143.795	- 49.4141
Error	106	-308.45	-2.91	
Total	**109**	**122.936**		

From the table we see that F value for degree of freedom 3,109 is 2.68 and 3.95 for 0.05 and 0.001 level of significance. As F(3,109) calculated is less than table value of F(3,109) there is insignificant difference in the four treatments.

Difference in P/R Bleeding due to Treatment on 10th day:

	Petro5%	Sikta5%	Sikta10%	Petro10%	Faktu	Trifgol	PetroGel	SiktaTail
Mean	1.269	0.429	0.241	0.407	1.269	0.143	-0.107	-0.074
SD	0.724	0.507	0.435	0.501	0.667	0.356	0.416	0.267
SE	0.1419	0.096	0.081	0.0964	0.1308	0.0672	0.0786	0.0513
t	8.937	4.469	2.975	4.221	9.701	2.126	-1.361	-1.44
P	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	**P<0.05**	P>0.05	P>0.05
	P<0.001	**P<0.001**	P>0.001	**P<0.001**	**P<0.001**	P>0.001	P>0.001	P>0.001

Grand Mean = 0.61 Degree of freedom (Total) = 163

Degree of freedom for Groups = 5 Degree of freedom for within Group Variation or error = 158

T1	T2	T3	T4	T5	T6
33	12	7	11	33	4

T = T1 + T2 + T3 + T4 + T5 + T6 = 100

SumSumX^2 = 142 SST = 80.65

SSTr = 95.655 SSE = SST - SSTr = - 15.005

Source of Variation	Degrees of freedom	Sum of Squares	Mean sum of square	F
T/T	5	95.655	19.131	- 201.379
Error	158	-15.005	-0.095	
Total	**163**	**80.65**		

From the table we see that F value for degree of freedom 5,163 is 2.29 and 3.17 for 0.05 and 0.001 level of significance. As F(5,163) calculated is less than table value of F(5,163) there is insignificant difference in the six treatments.

Difference in P/R Bleeding due to Treatment on 17th day:

	Petro5%	Sikta5%	Sikta10%	Petro10%	Faktu	Trifgol	PetroGel	SiktaTail
Mean	0.769	0.095	0.034	0.259	0.692	0.179	0.036	0.037
SD	0.765	0.301	0.186	0.447	0.549	0.67	0.429	0.192
SE	0.1500	0.057	0.035	0.0860	0.1076	0.1266	0.0810	0.0369
t	5.126	1.667	0.971	3.011	6.427	1.414	0.444	1.001
P	**P<0.05**	P>0.05	P>0.05	**P<0.05**	**P<0.05**	P>0.05	P>0.05	P>0.05
	P<0.001	P>0.001	P>0.001	P>0.001	**P<0.001**	P>0.001	P>0.001	P>0.001

Grand Mean = 0.57 Degree of freedom (Total) = 78

Degree of freedom for Groups = 2 Degree of freedom for within Group Variation or error = 76

T1	T2	T3	T4	T5	T6	
20	4	1	7	18	4	T = T1 + T2 + T3 + T4 + T5 + T6 = 54

SumSumX^2 = 75 SST = 57.11

SSTr = 30.838 SSE = SST - SSTr = 26.272

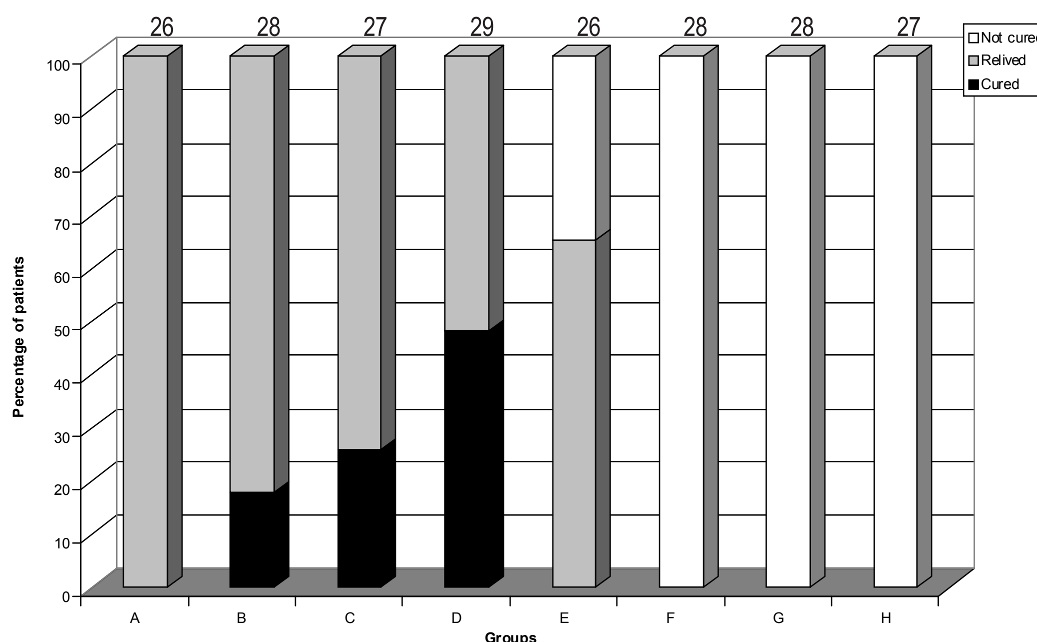
Source of Variation	Degrees of freedom	Sum of Squares	Mean sum of square	F
T/T	2	30.838	15.419	44.56358
Error	76	26.272	0.346	
Total	**78**	**57.11**		

From the table we see that F value for degree of freedom 5,163 is 2.29 and 3.17 for 0.05 and 0.001 level of significance. As F(5,163) calculated is less than table value of F(5,163) there is insignificant difference in the six treatments.

Result of treatment on Patient in all groups :

Groups	Cured	Relived	Not cured	Total
A	0.00% (0)	100.00% (26)	0.00% (0)	100.00% (26)
B	17.85% (5)	82.15% (23)	0.00% (0)	100.00% (28)
C	25.93% (7)	74.07% (20)	0.00% (0)	100.00% (27)
D	48.27% (14)	51.73% (15)	0.00% (0)	100.00% (29)
E	0.00% (0)	65.38% (17)	34.62% (9)	100.00% (26)
F	0.00% (0)	0.00% (0)	100.00% (28)	100.00% (28)
G	0.00% (0)	0.00% (0)	100.00% (28)	100.00% (28)
H	0.00% (0)	0.00% (0)	100.00% (27)	100.00% (27)
Total	**11.87% (26)**	**46.11% (101)**	**42.01% (92)**	100.00% **(219)**

( ) = number of patients χ^2 = 236.1, P<0.05



Where: A = Yavakshar ointment 5% (base petroleum jelly) B = Yavakshar ointment 5% (base sikta taila) C = Yavakshar ointment 10% (base petroleum jelly) D = Yavakshar ointment 10% (base Sikta taila), E = Faktu ointment, F = Trifgol powder, G = Ointment (base petroleum jelly), H = Ointment (base Sikta taila)

The above table shows that the result of treatment of group D were best. i.e. maximum number of patients were cured and all other relieved.

DISCUSSION

Haemorrhoid (pile) is the most frequently observed anal pathology. This disease has been recognized and treated since antiquity.

Much more modern information is available on the pathogenesis of haemorrhoid. The basic pathology appears to be centered around the absence of valves in the haemorrhoidal vessels followed by lack of supportive structures around the vein and precipitating or provoking factors like increased intra abdominal and intrarectal pressure, improper dietary habitat with addictions.

Normal anatomical structure involved in haemorrhoids present in every one after birth, which are thought to play some part in anal continence. Internal haemorrhoids are considered a disease after the symptoms like bleeding, protrusion, inflammation and thrombosis. The treatment must be aimed at -

1) Symptomatic relief and

2) The correction of anatomical deformity.

Both of the above are achieved by means of conservation or surgical methods. Now a day various non surgical methods are an alternative to surgical ones. They aim at tissue fixation with or without tissue destruction like sclerotherapy, photocoagulation / IRC (Infra Red Coagulation), and Barron’s Band Ligation.

This increasing number of therapies themselves proves that there

is no universally acceptable technique in the management of haemorrhoids. Since, the haemorrhoid problem is not a threat to life excepting few conditions, the least invasive treatment is most desirable.

Present clinical study was a extension of previous study i.e."To study the efficacy of Pratisarniya Yava Kshar in Management of Abhyantar Gudarsha, by Dr. Ukhalkar V.P., [M.S.(Shalya)], S.R.T.M.U. Nanded." Yava Kshar pratisaran was an effective Ayurvedic regimen as far as the management of 'Abhyantar Arsha' was considered. There are some procedural problem in study like possibility of application to other than diseased site, variability in amount of Kshar, no assurance of shelf life due to hygroscopic naturure of Kshar and needed intervention of doctor.

To overcome the above problems there was need to bring the Kshar in new dosages form i.e. Ointment. Hence some remolding of established modality of treatment was done in present study. To make it user friendly and less complicating. New drug dosage formation i.e. ointment in different percentage of Yava Kshar and different bases was included in this study.

Present study was Prospective single blind randomized controlled interventional experimental clinical trial.

Single blind: As patient was unknown about medicine.

Randomized: Randomization was done by lottery method, where every patient had equal chance to get distributed in one of study group.

Controlled: There were four control groups. In one of them Faktu Ointment was used as a control, which is one of widely used modality of treatment and was useful in accessing trial in terms of reducing grade of P/R

bleeding and Degree of Prolapse. In other two groups bases which were used as a Control. Those were natural base i.e. Sikt Tail and other synthetic base i.e. Petroleum Jelly which were used for preparation of ointment. In last control group bowel regulariser 'Trifgol Powder' was used. These controle were kept to overcome the confound relationship.

Study was carried out using following plan of work:

From cultivation of Yava crop to Preparation of Yava kshar was prepared by self to get pure raw drug for preparation of ointment. Ointment was prepared in Govt. Ayurved and Unani Pharmacy, Nanded. under guidance of expert and ointments were filled in tubes with applicator for the dispensing purpose.

Patients were selected according to selection and rejection criteria of study. Informed consent was taken from patients.

This study was conducted at Government Ayurved College and Hospital, Nanded from year 2001 – 2008, named as 'Evaluation of effects of Yava - Kshar Malhar - Ointment on Abhyantar Arsha (Internal piles)'

Patient was advised Mrudu – Virechan in the form of bowel reguliser (Trifgol powder), and sits bath regularly. The patient was advised to apply Yava Kshar ointment with the help of applicator provided with ointment tube twice daily.

- **'A' Group** was treated with local **Yava Kshar 5% ointment (base petroleum jelly)** with dietetic regime and bowel reguliser.
- **'B' group** was treated with local **Yava Kshar 5% ointment (base Sikta tail)** with dietetic regime and bowel reguliser.
- **'C' Group** was treated with local **Yava-Kshar 10% ointment (base petroleum jelly)** with dietetic regime and bowel reguliser.

- **'D' group** was treated with local **Yava Kshar 10% ointment (base Sikta tail)** with dietetic regime and bowel reguliser.
- **'E' group** was treated with popular allopathic brand name **'Faktu ointment'** (Contents Policruselin 5% + Cinchocaine 1%) Manufactured by GLAT company with dietetic regime and bowel reguliser. This group will stand as main control.
- **'F' Group** received **only bowel reguliser** adopting standard dietetic regime.
- **'G' Group** was treated with local **petroleum jelly** with dietetic regime and bowel reguliser.
- **'H' group** was treated with local **Sikta tail** with dietetic regime and bowel reguliser.

Dietetic Regime was used -

- Rich fiber diet was advised.
- Avoid Nonvegetarian Diet.
- Avoiding Spicy Diet.

All findings were noted at regular follow ups of all patients on 0th, 3rd, 10th, 17th and 24th day were taken which was fixed on the basis of pilot study. Photographs of some patients were taken for record at each follow up.

Observations noted were analyzed using **confidence limit** which was fixed at **95%** and the **level of significance** which was at **5%**. Paired and unpaired 't' **test** was applied for objective parameter and **chi square test** was applied for subjective parameter and **ANOVA test** was applied for compaison of effect of all ointments.

Total 219 well diagnosed patients suffering from II° internal haemorrhoids, not responding to conservative treatment were included in the study. The maximum incidence of Arsha in men of age 25 to 55 years was observed and only 31 female were participated in the trial. The less number of female patients could be due to ignorance and shyness.

About Incidences:

The male sex prevalence may be due haemorrhoid disease precipitating dietary habitat and addictions. As regards diet, those patients taking non-vegetarian and spicy diet were more sufferer than patient taking vegetarian and non-spicy diet. This may because of non-vegetarian spicy diet prone to develop constipation increases intrarectal resting pressure and provoking engorgement of the haemorrhoidal vessels. Constipated hard stool having maximum friction to the anal, congested haemorrhoidal mass and produces symptomatic mass and produces symptomatic haemorrhoids. Regularization of the dietary habit along with avoidance of constipation and friction by stool softening agent have their own importance. Therefore, identical ideal dietary regimen and stool softening agents advised in all the groups.

The patients were also scrutinised according to ‘addictions’. This observation shows that total maximum patients having some type of addiction and it was interpreted that these patients were more prone to develop internal haemorrhoid.

Degree of P/R Bleeding :

On 0th day :

All group had nearly same mean of P/R bleeding.

On 3rd day :

Mean change in P/R bleeding occurred in group Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base Petroleum Jelly) and Yava Kshar ointment 5% (base Sikta tail). Mean change in P/R bleeding was maximum in group treated with Yava Kshar ointment 10% (base Sikta tail), very slight change occurred in groups treated with Yava Kshar ointment 5% (base Petroleum Jelly), Faktu ointment, Trifgol, Petroleum Jelly and Sikta tail. Maximum P/R bleeding was in group treated with Petroleum jelly.

On 10th day :

Decrease in P/R bleeding was observed in group Yava Kshar ointment 5% (base petroleum jelly), Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base petroleum jelly) and Faktu ointment. P/R bleeding was minimum in Yava Kshar ointment 10% (base Sikta tail) and then in Yava Kshar ointment 5% (base Sikta tail). Slight decrease observed in Trifgol. There was increase in P/R bleeding in group treated with Sikta tail and Petroleum jelly.

On 17th day :

Negligible P/R bleeding was observed in groups treated with Yava Kshar ointment 5% (base petroleum jelly), Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), and Yava Kshar ointment 10% (base petroleum jelly). Slight P/R bleeding observed in patients treated with Faktu ointment. Very slight decrease in P/R bleeding was in groups Trifgol, Sikta tail, Petroleum jelly this may be due to softening of stools.

On 24th day :

No P/R bleeding reported by patients of group Yava Kshar ointment 5% (base petroleum jelly). Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base petroleum jelly). Incidence of P/R bleeding was minimal in group treated with Faktu ointment. Negligible changes in P/R bleeding occurred in group Trifgol, Sikta tail, Petroleum jelly, in which decrease was more in group Trifgol.

The probable mode of action of the drug may be due to corrosive action. As 'Yava kshar' i.e. potash alkali, reduces bleeding and stabilizes vascular endothelium by its Chemical cauterization effect. This action may help to control P.R. bleeding which is the most important clinical feature of the internal haemorrhoid.

Degree of haemorrhoids :

Till 17th day :

No change in degree of haemorrhoid was observed in all groups.

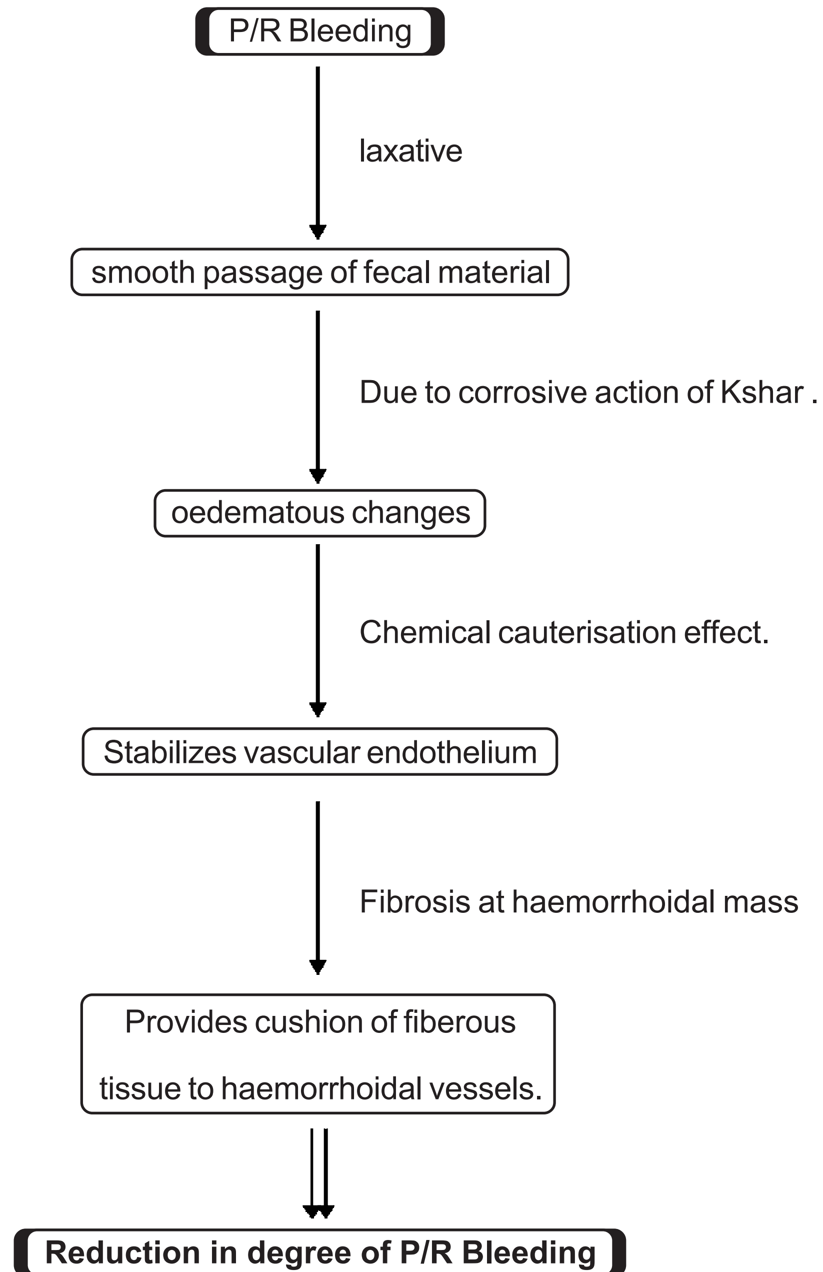
On 24th day :

The changes were observed in group Yava Kshar ointment 5% base Sikta tail, Yava Kshar ointment 10% base petroleum jelly and Yava Kshar ointment 10% base Sikta tail.

Maximum changes were observed in Yava Kshar ointment 10% base Sikta tail. No changes observed in groups Yava Kshar ointment 5% base petroleum jelly, Faktu ointment, Trifgol powder, plane Sikta tail and plane petroleum jelly.

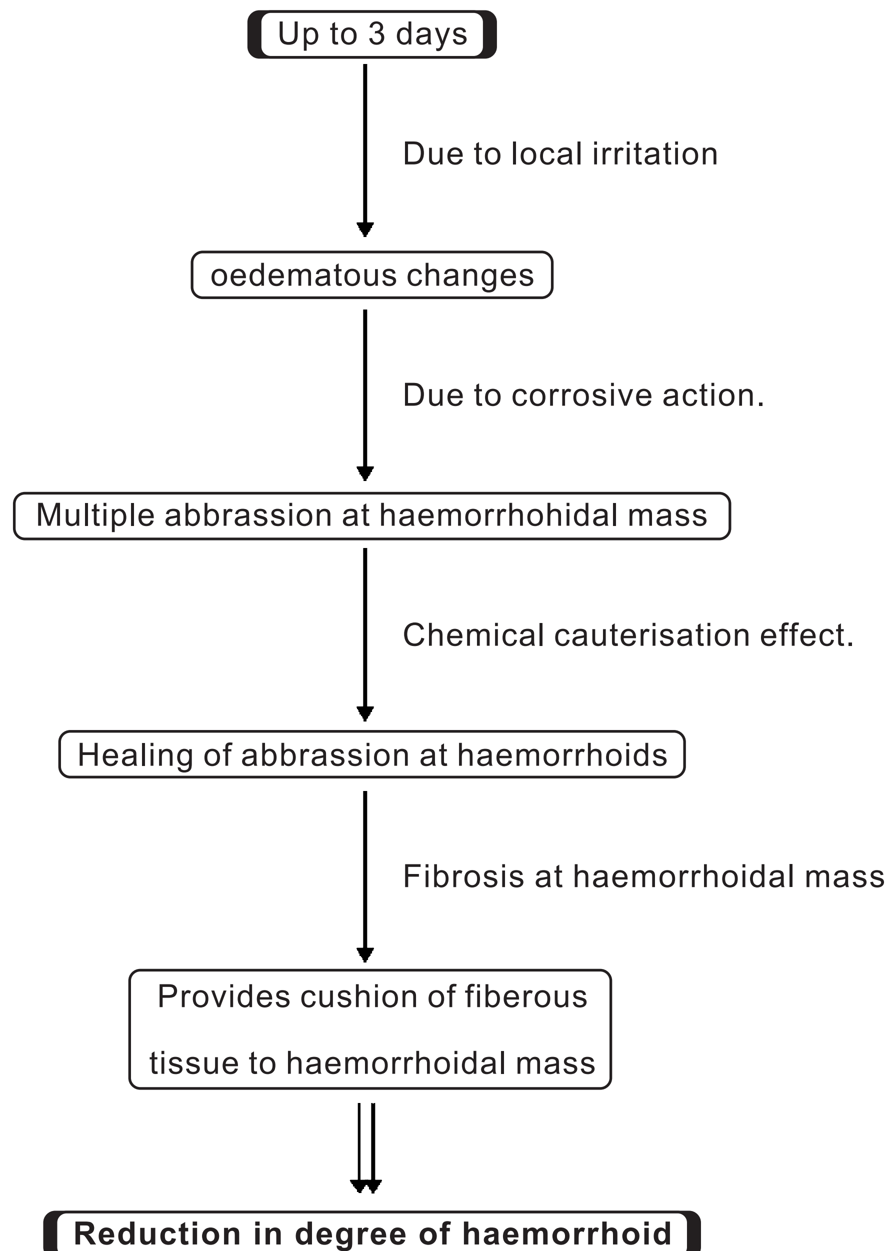
PROBABLE MODE OF ACTION

DEGREE OF P/R BLEEDING



PROBABLE MODE OF ACTION

DEGREE OF HAEMORRHOID



Probable mode of action:

Degree of P/R Bleeding:

Laxative helps in smooth passage of fecal material and reduces friction at haemorrhoidal mass which ultimately reduced injury to haemorrhoids. Due to corrosive action of Kshar oedematous changes occurs at the same time chemical cauterisation effect of Yavakshar ointment stabilizes vascular endothelium. Fibrosis at haemorrhoidal mass occurs which provides cushion of fiberous tissue to haemorrhoidal vessels which ends in reduction in degree of P/R Bleeding.

Degree of Haemorrhoid :

Up to 3 days due to local irritation oedematous changes occurs. Due to corrosive actions multiple abbrassion at haemorrhohidal mass occurs. Chemical cauterisation effect helps in healing of abbrassion at haemorrhoids and fibrosis at haemorrhoidal mass provides cushion of fiberous tissue to haemorrhoidal mass which ends in reduction in degree of haemorrhoid.

Though the difference in degree of haemorrhoid was not found to the marked extent, some other local effects were found. Which were supposed to support the haemorrhoidal plexuses and not to prolapse haemorrhoid. The fibrotic (blackish in colour) changes were observed at the site of haemorrhoid, which were recorded in photographs. It may be due to chemical cauterization. In delayed follow ups, it was observed that, the size of haemorrhoid was reduced but not reduced totally. May be after few months, it changes to normal mucosa. Hence it is effective for internal haemorrhoid.

Prolapsing haemorrhoidal mass and P.R. bleeding due to which there

was decreased chances of cloth soilage and improvement of local hygiene by seitz bath also. Due to decrease in prolapsing mass overall psychological disturbance of the sufferer was also minimizes as the patient becoming symptoms free.

At the same time having tikshna, ushna properties along with katu rasa causes '*Lekhan, Ksharan* and *Kshapan*' i.e. scrubbing of the tissue, decreases size of haemorrhoid. This action may helps to reduce the size of prolapsing haemorrhoid mass.

Assessment Of Drug Dose:

Different concentration of Yava Kshar in different ointment was helpful in accessing proper dose of Yava Kshar for local application with reducing complications. It was observed that Group having Yava kshar 10% had good results.

Assessment Of Different Bases:

Different bases were used i.e. Natural base (Sikta Taila) and synthetic base (Petroleum jelly). These helped in accessing utility of small dose of Kshar in different bases. As both these bases were tried as a control group and didn't show any significant action, it can be said that action was due to Yava Kshar and not due to bases.

It was observed that both bases were equaly effective for smooth passage of fecal material equally and group having Yava Kshar ointment base sikta tail had good results because of more solubility of Sikta taila comparative to Petroleum jelly.

Assessment Of Bowel Regulariser:

Due to laxative action of Trifgol powder it was found that, It was also effective to reduce P/R bleeding upto some extent.

Overall Yava Kshar with different bases are helpful in reducing P/R bleeding and prolapsing haemorrhoidal mass along with it helps in easy descend of the faecal column due to it's soothing local action.

Assessment of result of Treatment:

According to result of treatment in group A i.e. Yava Kshar ointment 5% base petroleum jelly all patients were relieved, i.e. 26 patients. In group B i.e. Yava Kshar ointment 5% base Sikta taila 23 patients were relieved and 6 patient had cured out of 29 patients. In group C i.e. Yava Kshar ointment 5% base petroleum jelly 20 patients were relieved and 7 patient had cured out of 27 patients. In group D i.e. Yava Kshar ointment 10% base Sikta taila 15 patients were relieved and 14 patient had cured out of 29 patients. In group E i.e. Faktu ointment 17 patients were relieved and 9 patient had not relieved out of 26 patients. In group F i.e. only Bowel regulariser all patients had not relieved out of 28 patients. In group G i.e. base Sikta taila all patients had not relieved out of 27 patients. And in group H i.e. base Petroleum Jelly all patients had not relieved out of 28 patients.

Yavakshar ointment 5% (base sikta taila), Yavakshar ointment 10% (base petroleum jelly), Yavakshar ointment 10% (base sikta taila) are statistically significant in reducing degree of Haemorrhoid. Faktu ointment is less effective in reducing degree of haemorrhoids. **Moreover it was found that Yavakshar ointment 10% having base sikta taila was most effective than other ointments** because more concentration of Yava Kshar and more solubility of

Sikta taila comparative to Petroleum jelly and by *medicinal scrubbing* i.e. *Lekhan, Ksharan* and *Kshapan* property of Yava Kshar.

Finally, all Yava Kshar ointments cures P/R bleeding within less time i.e. 3 to 7 days as compared to Faktu ointment i.e. to 14 days.

About the method :

- The patients were randomly selected and detail history with assessment criteria was recorded in the case record form.
- The method was user friendly as it didn't need intervention of doctor. Also not needed any special preoperative and post operative care as in established traditional method of Yava Kshar Pratisaran.
- Patient himself can apply ointment at home twice daily after defecation and can take sitz bath and bowel regulariser regularly.

Thus, Aim and Objectives of the concerned study was achieved.

SUMMARY

Introduction:

Dilatation of the veins of the internal rectal plexus constitutes the condition of the internal haemorrhoids which are covered by the mucus membrane. The external haemorrhoidal plexus are also formed in the same way which is placed below the dentate line and around the perianal region, are external haemorrhoids being covered with skin. The union of these two types is known as 'interno-external haemorrhoids.'

After detailed review of Ayurvedic, Modern literature, and previous work done it is clear that number of therapies are available for management of internal haemorrhoids, but there is no universally acceptable technique in the management of haemorrhoids. Since, the haemorrhoid problem is not a threat to life excepting few conditions, the least invasive treatment is most desirable.

Present clinical study was a extension of previous study i.e. "To study the efficacy of Pratisarniya Yava Kshar in Management of Abhyantar Gudarsha, by Dr. Ukhalkar V. P. [M.S.(Shalya)], S.R.T.M.U. Nanded and as there was some procedural problems, current study has some remoulding of established modality of treatment, to make it user friendly and less complicating and new drug dosage i.e. ointment formulation in different percentage and different bases was used.

Plan of Work:

Current study was Prospective single blind randomized controlled interventional experimental clinical trial and carried out at O.P.D. and I.P.D. of Department of Shalya Tantra, Government Ayurved College, Nanded.

The study was carried out in following steps:

Preparation of Yavakshar ointment:

This included cultivation of Yava crop, Preparation of Yava kshar, and Preparation of ointment. Cultivation of crop and preparation of Yava Kshar was done by self and Ointment with different concentration and different bases were prepared in Govt. Ayurved and Unani Pharmacy, Nanded. under guidance of expert. Ointments were filled in tubes with applicator for dispensing.

Methodology:

Patients were selected according to selection and rejection criteria of study. Total 219 pateints were selected and randomly distributed in 8 groups. Each group consists of about 25 to 30 patients. In which group A, B, C and D were experimental groups and group E,F,G and H were control groups.

- **'A' Group** was treated with local **Yava Kshar 5% ointment (base petroleum jelly)** with dietetic regime and bowel reguliser
- **'B' group** was treated with local **Yava Kshar 5% ointment (base Sikta tail)** with dietetic regime and bowel reguliser
- **'C' Group** was treated with local **Yava-Kshar 10% ointment (base petroleum jelly)** with dietetic regime and bowel reguliser
- **'D' group** was treated with local **Yava Kshar 10% ointment (base Sikta tail)** with dietetic regime and bowel reguliser

- **'E' group** was treated with popular allopathic brand name **'Faktu ointment'** (Contents Policruselin 5% + Cinchocaine 1%) Manufactured by GLAT company with dietetic regime and bowel reguliser. This group will stand as main control.
- **'F' Group** received **only bowel reguliser** adopting standard dietetic regime.
- **'G' Group** was treated with local **petroleum jelly** with dietetic regime and bowel reguliser.
- **'H' group** was treated with local **Sikta tail** with dietetic regime and bowel reguliser.

Dietetic Regime:

- Rich fiber diet was advised.
- Avoid Nonvegetarian Diet.
- Avoiding Spicy Diet.

Method:

The process of Yava Kshar pratisaran was modified according to nature of study. Patient was advised Mrudu – Virechan in the form of bowel reguliser (Trifgol powder), and sits bath regularly. The patient was advised to apply Yava Kshar ointment with the help of applicator provided with ointment tube twice daily after defication.

Parameters:

Degree of Haemorrhoid:

I - Haemorrhoids projecting slightly in lumen of anal canal, when veins are congested at defecation.

II - Haemorrhoids prolapse out of the anus on straining, but return spontaneously to the anal canal when motion has been passed and the defection has ceased.

III - Haemorrhoids prolapse but don't reduce spontaneously and remain prolapsed afterwards and have to be replaced digitally.

IV - Completely irreducible haemorrhoids, usually are long standing and acquire a component of skin.

P/R Bleeding grade:

- **I** Grade – 0 to 5 drops
- **II** Grade – 6 to 15 drops
- **III** Grade – 16 and above drops

Regualr follow ups of all patients on 0th, 3rd, 10th, 17th and 24th day were taken which was fixed on the basis of pilot study. Photographs of some patients were taken for record at each follow up.

OBSERVATION AND STATISTICAL ANLYSIS:

Observations noted were analyzed using **confidence limit** which was fixed at **95%** and the **level of significance** which was at **5%**. Paired and unpaired 't' **test** was applied for objective parameter and **chi square test** was applied for subjective parameter and ANOVA test was applied for compaison of effect of all ointments.

Total 219 well diagnosed patients suffering from **II**° internal haemorrhoids, not responding to conservative treatment were included in the study.

Incidences:

- It was observed that maximum number of patients were male.
- Themaximum incidence of Arsha in age 25 to 55 years was observed and only 31 female were participated in the trial.
- As regards diet, those patients taking non-vegetarian and spicy diet were more sufferer than patient taking vegetarian and non-spicy diet.
- Maximum patients having some type of habitat and it was interpreted that these patients were more prone to develop internal haemorrhoid.
- It was observed that in all groups incidence of 3rd grade P/R bleeding was maximum and incidence of 1st grade P/R bleeding was minimum.
- It was observed that in all groups incidence of 2nd degree haemorrhoids were maximum due to inclusive criteria of groups. It was least in 1st degree haemorrhoids.

Parameters:

Degree of P/R Bleeding:

On 0th day : All group had nearly same mean of P/R bleeding.

On 3rd day : Mean change in P/R bleeding was maximum in group treated with Yava Kshar ointment 10% (base Sikta tail),

On 10th day : P/R bleeding was minimum in Yava Kshar ointment 10% (base Sikta tail) and then in Yava Kshar ointment 5% (base Sikta tail).

On 17th day : Negligible P/R bleeding was observed in groups treated with Yava Kshar ointment 5% (base petroleum jelly), Yava Kshar

ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), and Yava Kshar ointment 10% (base petroleum jelly).

On 24th day : No P/R bleeding reported by patients of group Yava Kshar ointment 5% (base petroleum jelly). Yava Kshar ointment 5% (base Sikta tail), Yava Kshar ointment 10% (base Sikta tail), Yava Kshar ointment 10% (base petroleum jelly).

Degree of haemorrhoids:

Till 17th day : No change in degree of haemorrhoid was observed in all groups.

On 24th day : The changes were observed in group Yava Kshar ointment 5% base Sikta tail, Yava Kshar ointment 10% base petroleum jelly and Yava Kshar ointment 10% base Sikta tail. Maximum changes were observed in Yava Kshar ointment 10% base Sikta tail. No changes observed in groups Yava Kshar ointment 5% base petroleum jelly, Faktu ointment, Trifgol powder, plane Sikta tail and plane petroleum jelly.

Probable mode of action:

Degree of P/R Bleeding:

Laxative helps in smooth passage of fecal material and reduces friction at haemorrhoidal mass which ultimately reduced injury to haemorrhoids. Due to corrosive action of Kshar oedematous changes occurs at the same time chemical cauterisation effect of Yavakshar ointment stabilizes vascular endothelium. Fibrosis at haemorrhoidal mass occurs which provides cushion

of fiberous tissue to haemorrhoidal vessels which ends in reduction in degree of P/R Bleeding.

Degree of Haemorrhoid :

Up to 3 days due to local irritation oedematous changes occurs. Due to corrosive actions multiple abbrassion at haemorrhohidal mass occurs. Chemical cauterisation effect helps in healing of abbrassion at haemorrhoids and fibrosis at haemorrhoidal mass provides cushion of fiberous tissue to haemorrhoidal mass which ends in reduction in degree of haemorrhoid.

Though the difference in degree of haemorrhoid was not found to the marked extent, some other local effects were found. Which were supposed to support the haemorrhoidal plexuses and not to prolapse haemorrhoid. The fibrotic (blackish in colour) changes were observed at the site of haemorrhoid, which were recorded in photographs.

Hence it is effective for internal haemorrhoid.

It was observed that Group having Yava kshar 10% had good results.Group having Yava kshar base sikta tail had good results.Laative action of trifgol was helpful in reducing P/R bleeding

Interpretation of Result of Treatment:

According to result of treatment in group A i.e. Yava Kshar ointment 5% base petroleum jelly 26 patient were relieved, out of 26 patients. In group B i.e. Yava Kshar ointment 5% base Sikta taila 23 patients were relieved and 6 patient had cured out of 29 patients. In group C i.e. Yava Kshar ointment 5% base petroleum jelly 20 patients were relieved and 7 patient had cured out of 27 patients. In group D i.e. Yava Kshar ointment 10% base Sikta taila

15 patients were relieved and 14 patient had cured out of 29 patients. In group E i.e. Faktu ointment 17 patients were relieved and 9 patient had not relieved out of 26 patients. In group F i.e. only Bowel regulariser all patients had not relieved out of 28 patients. In group G i.e. base Sikta taila all patients had not relieved out of 27 patients. And in group H i.e. base Petroleum Jelly all patients had not relieved out of 28 patients.

Yavakshar ointment 5% (base sikta taila), Yavakshar ointment 10% (base petroleum jelly), Yavakshar ointment 10% (base sikta taila) are statistically significant in reducing degree of Haemorrhoid. **Moreover it was found that Yavakshar ointment 10% having base sikta taila was most effective than other ointments.**

Finally, all Yava Kshar ointments reduces P/R bleeding within less time i.e. 3 to 7 days as compared to Faktu ointment i.e. to 14 days.

Patient himself can apply ointment at home twice daily after defecation and can take sitz bath and bowel regulariser regularly.

The method was user friendly as it doesn't need intervention of doctor. Also don't need any special preoperative and post operative care as in established traditional method of Yava Kshar Pratisaran.

CONCLUSION

The above said relief was tested statistically and concluded as below:

It was found that the **P/R bleeding** was decreased significantly in each group ($p<0.05$) except in simple Sikta tail and simple petroleum jelly. The Faktu ointment and Trifgol required 10 days approximately to reduce the P/R bleeding where as other all Yava Kshar ointment required 3 days approximately to reduce P/R bleeding and it was highly significant.

Yavakshar ointment 5% (base sikta taila), Yavakshar ointment 10% (base petroleum jelly), Yavakshar ointment 10% (base sikta taila) are statistically significant in reducing degree of Haemorrhoid. Moreover **it was found that Yavakshar ointment 10% having base sikta taila was most effective than other ointments.**

Though the **degree of haemorrhoid** was not found to the marked extent, some other local effects were found, which were supposed to support the haemorrhoidal plexuses and not to prolapse haemorrhoid. The fibrotic (blackish in colour) changes were observed at the site of haemorrhoid, which were recorded in photographs. It may be due to chemical cauterization. In delayed follow ups, it was observed that, the size of haemorrhoid was reduced but not reduced totally. May be after few months, it changes to normal mucosa. Hence it is effective for internal haemorrhoid.

The procedure was user friendly. There was no need of intervention of

doctor and tedious pre operative and post operative care. No complications were observed.

Hence **it was concluded that the application of Yava Kshar ointment of 10% having base Sikta tail was more effective than other ointment** (i.e. Yava Kshar ointment 5% base Sikta tail, Yava Kshar ointment 5% base petroleum jelly, Yava Kshar ointment 10% base petroleum jelly, Faktu ointment, Trifgol powder, plane Sikta tail and plane petroleum jelly) **to cure the internal haemorrhoids. Procedure was user friendly and devoid of any complications.**

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RECOMMENDATION AND CONSTRUCTIVE SUGGESTIONS

- Long duration study for reduction in degree of haemorrhoids.
- Study at different places with different population.
- Pharmacodynamic and pharmacokinetic study of Yavakshar ointment.
- Animal study for fixation of optimum dose of Yavakshar.
- Animal study for establishment of cell level action.

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REFERENCES

References of Ayurvedic Literature :

१) प्रकुपितास्तु दोषा मेढ्रमभिप्रपन्नाः मांसशोणिते प्रदूष्य कण्डूं जनयन्ति, ततः कण्डुयनात् क्षतं समुपजायते, तस्मिंश्च क्षते दुष्टमांसजाः प्ररोहाः पिच्छिलरुधिरस्त्राविणो जायन्ते कूर्चकिनोऽभ्यन्तरमुपरिष्टाद्वा, ते तु शेफो विनाशयन्त्युपघ्नन्ति च पुंस्त्यं; योनिमभिप्रपन्नाः सुकुमारान् दुर्गन्धान् पिच्छिलरुधिरस्त्राविणश्छत्राकारान् करीरान् जनयन्ति, ते तु योनिमुपघ्नन्त्यार्तवं च; .... ॥१७॥

- सु.नि. २/१७

२) अर्धपञ्चाङ्गुलस्तस्मिस्तिस्रोऽध्यर्धाङ्गुलाः स्थिताः।
वल्यः प्रवाहिणी तासामन्तर्मध्ये विसर्जिनी॥

- अ.हृ.नि. ७/४

३) असृजः श्लेष्मणश्चापि यः प्रसादः परो मतः॥
तं पच्यमानं पित्तेन वायुश्चाप्यनुधावति॥२६॥
ततोऽ स्यान्त्राणि जायन्ते गुदं बस्तिश्च देहिनः॥

- सु.शा. ४/२६-२७

४) तत्र स्थूलान्त्रप्रतिबद्धमर्द्धपञ्चाङ्गुलं गुदमाहुः, तस्मिन् वलयस्तिस्रो ऽध्यर्द्धाङ्गुलान्तरसम्भूताः प्रवाहणी विसर्जनी संवरणी चेति॥
चतुरङ्गुलायताः सर्वास्तिर्यगेकाङ्गुलोच्छ्रिताः।

- सु.नि. २/५

५) शंङ्खावर्तनिभाश्चापि उपर्युपरि संस्थिताः॥
गजतालुनिभाश्चापि वर्णतः सम्प्रकीर्तिताः।

६) अ) रोमान्तेभ्यो यवाध्यर्द्धो गुदोष्ठः परिकीर्तितः ॥

प्रथमा तु गुदौष्ठादङ्गुलमात्रे ॥७॥

- सु.नि. २/६

ब) बाह्या संवरणी तस्या गुदोष्ठो बहिरङ्गुले ।

यवाध्यर्धप्रमाणेन रोमाण्यत्र ततः परम् ॥

- अ.हृ.नि. ७/५

७) पञ्च पेशीशतानि भवन्ति। तासां चत्वारि शतानिशाखासु, कोष्ठे षट्षष्टिः, ग्रीवां प्रत्यूर्ध्वं चतुस्त्रिंशत॥ .... तिस्त्रः पायौ .... ॥

- सु.शा. ५/४५ - ४७

८) नवस्नायुशतानि। तासां शाखासु षट्शतानि, द्वे - शते त्रिंशच्च कोष्ठे, ग्रीवा प्रत्यूर्ध्वं सप्ततिः। एकैकस्थां तु पादाङ्गुल्यां षट् निचितास्तानिस्त्रंशत्, ... तावत्य एव जङ्घायां, दश जानुनि, चत्वारिंशदूरौ, दशवङ्क्षणे, ... च व्याख्यातौ, षष्टिः कट्यां, ... मूर्ध्नि चतुस्त्रिंतशत्; एवं नव स्नायुशतानि व्याख्यातानि॥

- सु.शा. ५/२९

९) श्रोण्यां पञ्च, तेषां गुदभगानतम्बेषु चत्वारि........।

- सु.शा. ५/२०

१०) तासां तु नाभिप्रभवाणां धमनीनामूर्ध्वगा दश, दशचाधोगामिन्यः चतस्त्रस्तिर्यग्गाः ॥

- सु.शा. ९/४

११) तत्र वातवाहिन्यः शिरा .... व्याख्यातौ। विशेषतस्तु कोष्ठे चतुस्त्रिंशत् तासां गुदमेढ्राश्रिताः श्रोण्यामष्टौ, ... वातवहानां सिराणां व्याख्यातं भवति। एषएव विभागः शेषाणामपि। .... एवमेतानि सप्त शिराशतानि सविभागानि व्याख्यातानि ॥७॥

- सु.शा. ७/६

१२) दशप्राणायतननानि, तद्यथा मूर्धा, कण्ठः हृदयं, नाभि, गुदं, बस्ति, ओजः, शुक्र, शोणितं, मांसमिति। तेषु षट् पूर्वाणि मर्मसंख्यातानि ।।

- च.शा. ७/९

१३) (अ) सप्तोत्तरं मर्मशतं .... ।।३।।

- सु.शा. ६/३

(ब) सद्यः प्राणहराण्येकोनविंशतिः ..... ।।९।।

- सु.शा. ६/९

(क) श्रृङ्गाटकान्यधिपतिः शङ्खौ कण्ठसिरा गुदम्।
हृदयं बस्तिनाभी च घ्नन्ति सदयोहतानि तु ।।

- सु.शा. ६/९

१४) गुदोपस्तम्भविधुरश्रृङ्गाटानि नवादिशेत्।
मर्माणि धमनीस्थानि...... ।।

- अ.हृ.शा. ४/४२

१५) .... पुरीषवहे द्वे, तयोर्मूलं पक्वाशयो गुदं च,...... ।

- सु.शा. ९/१२

१६) तत्रं वातवर्चोनिरसनं स्थूलान्त्रप्रतिबध्दं गुदं नाम मर्म, तत्र सद्योमरणम्।

- सु.शा. ६/२६

१७) मलस्याधः पीडनात प्रथमा प्रवाहिणी, गुदविस्फारणेन मलविसर्जनाद् द्वितीया विसर्जनी, गुदसङ्कोचन्याख्यपेशीद्वयकृता चक्राकारा वलिस्तु संवरणी नाम्।.......

- सु.नि. २/६, ८ विमर्श

१८) दोषास्त्वङ्मांसमेदांसि सन्दूष्य विविधाकृतीन्।
मांसाङ्कुरानपानादौ कुर्वन्त्यर्शांसि तात्र जगुः ।।

- अ.हृ.नि. ७/२

१९) (अ) संस्कृत शब्दार्थ कौस्तुभ (पृष्ठ क्र. ८१९)

(ब) अमरकोष - द्वितीय खण्ड, मनुष्यर्ग (पृष्ठ क्र. २२०)

२०) अरिवत्प्राणिनो मांसकीलका विशसन्ति यत्।

अर्शांसि तस्मादुच्यते गुदमार्गविरोधतः ॥.......

- अ.हृ.नि. ७/१

२१) अरिवत् प्राणान् श्रृणाति हिनस्ति।

- मा.नि. ७/१ मधुकोश टीका

२२) द्विविधान्यर्शांसि कानिचित् सहजानि।

कानिचिज्जातस्योत्तरकालजानि ॥

- च.चि. १४/५

२३) (अ) तत्र बीजं गुदवलिबीजोपतप्तमायतनमर्शसां सहजानाम्।

- च.चि. १४/५

(ब) तत्र हेतुः सहोत्थानां वलीबीजोपतप्तता।

अर्शसां, ... ॥

- अ.हृ.नि. ७/६

२४) तत्र द्विविधो बीजोपतप्तौ हेतुः - मातापित्रोरपचारः, पूर्वकृतं च कर्म; .... ॥५॥

.... बीजतप्तिस्तु मातापित्रपचारतः ॥६॥

दैवाच्च, ... ।

- अ.हृ.नि. ७/ ६-७

२५) सहजानि दुष्टशोणितशुक्रनिमित्तानि, ... ॥१६॥

- सु.नि. २/१६

२६) .... गुरूमधुरशीताभिष्यन्दिविदाहिविरुद्धाजीर्णप्रमिताशनासात्म्यभोजन

.... ततस्तास्वर्शांसि प्रादुर्भवन्ति ।।९।।

- च.चि. १४/९

२७) तत्रानात्मवतां यथोक्तैः प्रकोपणैर्विरूद्धाध्यशनस्त्रीप्रसङ्गोत्कटुकासन पृष्ठ यानवेगविधारणादिभिर्विशेषैः प्रकुपितादोषा एकशो द्विशः समस्ताः शोणितसहिता वा यथोक्तं प्रसृताः प्रधानधमनीरनुप्रपदयाधो गत्वा गुदमागम्य प्रदूष्य गुदवलीर्मांसप्ररोहाञ्जनयन्ति, विशेषतो मन्दाग्नेः, तथा तृणकाष्ठोपललोण्ठवस्त्रादिभिः शीतोदकसंस्पर्शनाद्वा कन्दाः परिवृद्धिमासाद्यन्ति, तान्यर्शांसीत्याचक्षते ।।

- सु.नि. २/४

२८) दोषप्रकोपहेतुस्तु प्रागुक्तस्तेन सादिते ।

अग्नौ मलेऽतिनिचिते पुनश्चातिव्यवायतः ।।

यानसङ्क्षोभविषमकठिनोत्कटकासनात् ।

.... आमगर्भप्रपतनाद्गर्भवृद्धिप्रपीडनात् ।।

- अ.हृ.नि. ७/१० - १४

२९) कषायकटुतिक्तानि..........

..... वातातपस्पर्शो हेतुर्वातार्शसां मतः ।।

- च.चि. १४/१२, १३

३०) कटुष्णलवणक्षार.........

.... पित्तोल्बणानां विज्ञेयः प्रकोपे हेतुरर्शसाम् ।।

- च.चि. १४/१६

३१) मधुरस्निग्धशीतानि लवणाम्लगुरूणि च ।

अव्यायामो दिवास्वाप्नः शय्यासनसुखे रतिः ।।

प्राग्वातसेवा शीतौ च देशकालावचिन्तनम् ।

श्लैष्मिकाणां समुदिदष्टमेतत् कारणमर्शसाम् ।।

- च.चि. १४/१८, १९

३२) (अ) तेषां तु भविष्यतां पूर्वरूपाणि अन्नेऽश्रद्धा कृच्छ्रात् पक्तिरम्लीका

परिदाहो विष्टम्भः पिपासा सक्थिसदनमाटोपः कार्श्यमुद्गार बाहुल्यमक्ष्णोः

कासश्वासौ बलहानिर्भ्रमस्तन्द्रा निद्रेन्द्रियदौर्बल्यं च ॥........

- सु.नि. २/९

(ब) विष्टम्भोऽन्नस्य दौर्बल्यं कुक्षेराटोप एव च।

कार्श्यमुद्गारबाहूल्यं सक्थिसादोऽल्पविट्कता ॥

ग्रहणीदोषपाण्डूवर्तेराशङ्का चोदरस्य च।

पूर्वरूपाणि निर्दिष्टान्यर्शसामभिवृद्धये ॥

- च.चि. १४/२१, २२

(क) तत्पूर्वलक्षणं मन्दवन्हिता ॥

विष्टम्भः सक्थिसदनं...........।

.... आशङ्का ग्रहणीदोषपाण्डुगुल्मोदरेषु च ॥

- अ.हृ.नि. ७/१५-२१

३३) निवर्तमानोऽपानो..........

पाण्डूपीतं हरिद्रक्तं पिच्छिलं चोपवेश्यते।

- अ.हृ.नि. ७/२१-२७

३४) सर्षपमसूरमाषमुद्ग............

.... सामान्याद् वातपित्तकफप्रबलानि ॥

- च.चि.१४/१०

३५) तैरुपहतो जन्मप्रभृति भवत्यतिकृशो विवर्णः क्षामो ....

.... इत्युक्तानि सहजान्यर्शांसि ॥८॥

- च.चि. १४/८

३६) (अ) सहजानि दुष्टशोणितशुक्रनिमित्तानि; ....।

.... सततमन्त्रकुजाटोपहृदयोपलेपारोचकप्रभृतिभिः पीड्यते ॥१५॥

- सु.नि. २/७

(ब) तत्र सहजान्यर्शांसि कानिचिदणूनि, कानिचिन्महान्ति, कानिचिदीर्धाणि, कानिचिद्ध्रस्वानि, कानिचिद् वृत्तानि, कानिचिद् विषमविसृतानि, कानिचिदन्तः कुटिलानि, कानिचिद बहिः कुटिलानि, कानिचिज्जटिलानि, कानिचिदन्तर्मुखानि, यथास्वं दोषानुबन्धवर्णानि ॥

- च.चि. १४/७

(क) तत्र बीजं गुदवलिबीजोपतप्तमायतनमर्शसां........

.... तत्र सहजानि सह जातानि शरीरेण, अर्शांसीत्यधिमांस विकाराः ॥

- च.चि. १४/५

३७) (अ) तत्र मारूतात् परिशुष्कारूणविवर्णानि...........

.... कृष्णत्वङ्नखनयनदशनवदनमूत्रपुरीषश्च पुरूषो भवति ॥

- सु.नि. २/११

(ब) शुष्कम्लानकठिनपरूष रूक्षश्यावानि,...........

.... वातोल्बणान्यर्शांसीति विद्यात् ॥

- च.चि. १४/११

(क) गुदाङ्कुरा वन्हनिलाः..........

.... गुल्मप्लीहोदराष्ठीलासंभवस्तत एव च।

- अ.हृ.नि. ७/२८, ३३

३८) (अ) पित्तान्नीलाग्राणि तनूनि.........

.... पीतत्वङ्नखनयनदशनवदनमूत्रपुरीषश्च पुरूषो भवन्ति ॥

- सु.नि. २/१२

(ब) मृदुशिथिलसुकुमाराण्यस्पर्शसहानि,..........

.... पित्तोल्बणान्यर्शांसीति विद्यात् ॥

- च.चि. १४/१४

(क) पित्तोत्तरा नीलमुखा.........

.... यवमध्या हरित्पातहारिद्रत्वङ्नखादयः ।

- अ.हृ.नि. ७/३४, ३६

३९) (अ) श्लेष्मजानि श्वेतानि महामूलानि स्थिराणि वृत्तानि स्निग्धानि पाण्डूनि करीरपनसास्थिगोस्तनाकाराणि न भिदयन्ते न स्त्रवन्ति........

.... शुक्लत्वङ्नखनयनदशनवदनमूत्रपुरीषश्च पुरूषो भवन्ति ॥

- सु.नि. २/१३

(ब) तत्र यानि प्रमाणवन्ति, उपचितानि, श्लक्ष्णानि...........

.... शुक्लनखनयनवदनत्वङ्मूत्रपुरीषस्य श्लेष्मोल्बणान्यर्शांसीति विदयात् ॥

- च.चि. १४/१७

(क) श्लेष्मोल्बणा महामूला................ न स्त्रवन्ति न भिदयन्ते पाण्डुस्निग्धत्वगादयः ।

- अ.हृ.नि. ७/३७, ४२

४०) (अ) रक्तजानि न्यग्रोधप्ररोहविद्रुम............

.... शोणितातियोगोपद्रवा भवन्ति ॥.........

- सु.नि. २/१४

(ब) रक्तोल्बणा गुदे कीलाः पित्ताकृतिसमन्विताः ।

.... हीनवर्णबलोत्साहो हतौजा कलुषेन्द्रियः ॥

- अ.हृ.नि. ७/४३, ४५

४१) (अ) विट् श्यावं कठिनं रूक्षं..........

.... तत्रानुबन्धो वातस्य हेतुर्यदि च रूक्षणम् ॥

- च.चि. १४/१७१, १७२

(ब) शकृच्छयावं खरं रूक्षमधो निर्याति नानिलः ॥

कट्युरूगुदशुलं च हेतुर्यदि च रूक्षणम् ।

तत्रानुबन्धो वातस्य श्लेष्मणो यदि विट्श्लथा ॥

श्वेता पिता गुरूः स्निग्धा सपिच्छः स्तिनितो गुदः ।

हेतुःस्निग्धगुरूर्विद्याद्यथास्वं चास्त्रलक्षणात् ॥

- अ.हृ.चि. ८/९४-९७

४२) शिथिलं श्वेतपीतं च विट्..........

.... श्लेष्मानुबन्धो विज्ञेयस्तत्र रक्तार्शासां बुधैः ।

- च.चि. १४/१७३, १७४

४३) (अ) सन्निपातजानि सर्वदोषलक्षणयुक्तानि ॥

- सु.नि. २/५

(ब) संसृष्टलिङगः संसर्गात्........

- अ.हृ.नि. ७/४२

(क) हेतुलक्षणसंसर्गाद् विदयात् द्वन्द्वोल्बणानि च ।

सर्वो हेतुस्त्रिदोषाणां सहजैर्लक्षणैः समम् ॥.......

- च.चि. १४/२०

४४) यथा दुष्टेन दोषेण यथा चानुविसर्पता ।

निर्वृत्तिरामयस्यासौ सम्प्राप्तिर्जातिरागतिः ॥८॥

- अ.हृ.नि. १/८

४५) तत्रानात्मवतां यथोक्तैः ....

.... तान्यर्शांसीत्याचक्षते ॥४॥

- सु.नि. २/४

४६) (अ) प्रकुपितो वायुरपानस्तं मलमुपचितमधोगमासाद्य

गुदवलिष्वाधत्ते, ततस्तास्वर्शांसि प्रादुर्भवन्ति ।।

- च.चि. १४/९

(ब) दोषास्त्वङ्मांसमेदांसि सन्दूष्य विविधाकृतीन् ।

मांसाङ्कुरानपानादौ कुर्वन्त्यर्शांसि ताञ्जगुः ।।

- अ.हृ.नि. ७/२

४७) (अ) षडर्शांसि भवन्ति वातपित्तकफशोणितसन्निपातैः सहजानि चेति ।।

- सु.नि. २/३

(ब) द्विविधान्यर्शांसि कानिचित् सहजानि ।

कानिचिज्जातस्योत्तरकालजानि ।।

- च.चि. १४/५

(क) द्विविधान्यर्शांसीति शुष्काण्याद्रार्णि च ।।७।।

- च.सू. १९/७

(ड) सहजन्मोत्तरोत्थानभेदाद्द्वेधा समासतः । शुष्कस्त्राविविभेदाच्च......... ।।

- अ.हृ.नि. ७/३

४८) (अ) तेषां प्रशमने यत्नमाशु कुर्याद् विचक्षणः ।

तान्याशु हि गुदं बद्धा कुर्युर्बद्धगुदोदरम् ।।

- च.चि. १४/३२

(ब) दुर्नाम्नामित्युदावर्तः परमोऽयमुद्रवः ।

वाताभिभूतकोष्ठानां तैर्विनाऽपि स जायते ।।

- अ.हृ.नि. ७/५२

४९) बाह्यमध्यवलिस्थानां प्रतिकुर्याद्भिषग्वरः ।

अन्तर्वलिसमुत्थानां प्रत्याख्यायाचरेत् कियाम् ।।

- सु.नि. २/१७

५०) त्रिदोषाण्यल्पलिङ्गानि याप्यानि तु विनिर्दिशेत।

द्वन्द्वजानि द्वितीयायां वलौ यान्याश्रितानि च॥

कृच्छ्रसाध्यानि तान्याहुः परिसंवत्सराणि च।

सन्निपातसमुत्थानि सहजानि तु वर्जयेत्॥

- सु.नि. २/२५,२६

५१) (अ) सहजानि त्रिदोषाणि यानि ....

.... अर्शांसि सुखसाध्यानि न चिरोत्पतितानि च॥

- च.चि. १४/२८-३१

(ब) सहजानि त्रिदोषाणि यानि ....

.... अर्शांसि सुखसाध्यानि न चिरोत्पतितानि च॥

- अ.हृ.नि. ७/५३-५५

५२) हस्ते पाद मुखे नाभ्यां गुदे वृषणयोस्तथा।

शोथो हृत्पार्श्वशूलं च यस्यासाध्योऽर्शसो हि सः॥

- सु.चि. ६/१

५३) चतुर्विधोऽर्शसां साधनोपायः। तद्यथा - भेषजं क्षारोऽग्नि शस्त्रमिति।

- सु.चि. ६/१

५४) तत्राहुरेके शस्त्रेण कर्तनं हितमर्शसाम्।

दाहं क्षारेण चाप्येके, दाहमेके तथाऽग्निना॥

- सु.चि. १४/३३

५५) तत्र, अचिरकालाजातान्यल्पदोषलिङ्गोपद्रवाणि भेषज साध्यानि,

मृदुप्रसृतावगाठान्युच्छ्रितानि क्षारेण, कर्कशस्थिरपृथुकठिनान्यग्निना,

तनुमूलान्युच्छ्रितानि क्लेलदवन्ति च शस्त्रेण।

तत्र भेषज साध्यानामर्शसामदृश्यनां तु भेषजं भवति॥

- सु.चि. ६/३

५६) तत्र, वातप्रायेषु स्नेहस्वेद वमन विरेचनास्थापनानुवासनमप्रतिषिध्दं, पित्तजेषु विरेचनम्, एवं रक्तजेषु संशमनं, कफजेषु श्रृगंबेरकुलत्थोपयोग:, सर्वदोषहरं यथोक्तं सर्वजेषु, यथास्वौषधिसिद्धं च पय: सर्वेष्ठिति॥

- सु.चि. ६/१६

५७) (अ) स्निग्धशीतं हितं वाते रुक्षशीतं कफानुगे।

चिकित्सितमिदं तस्मात् संप्रधार्य प्रयोजयेत्॥१७५॥

- च.चि. १४/१७५

(ब) अथ रक्तार्शसां वीक्ष्य मारुतस्थ कफस्य वा।

अनुबन्धं तत: स्निग्धं रुक्षं वा योजयेद्धितम्॥९४॥

- अ.हृ.चि. ८/९४

५८) तत्र, बलवन्तमातुरमर्शोभिरूपद्रुतमुपस्निग्धं ....

.... वामात् पृष्ठजं, ततोऽग्रजमिति॥

- सु.चि. ६/४

५९) क्षारमात्रा नखोत्सेधप्रमाणाऽऽद्या प्रकीर्तिता।

द्विगुणा मध्यमा मात्रा त्रिगुणा महती मता॥

पित्ते श्लेष्मणि वाते च यथासंख्यं प्रयोजयेत्॥

- सु.चि. ६/५

६०) परं च यत्नमास्थाय गुदे क्षाराग्निशस्त्राण्यवचारयेत्, तद्विभ्रमाध्दि षाण्ढयशोफ दाहमद मूर्च्छाटोपानाहातीसार प्रवाहणानि भवन्ति मरणं वा॥

- सु.चि. ६/१०

६१) महान्ति च प्राणवतश्चित्वा दहेतु ....

.... एव सर्वस्थानगतानामर्शसां दहनः कल्पः ।।

- सु.चि. ६/७

६२) महद्वा बलिनच्छित्वा वीतयन्त्रमथातुरम् ।।

- अ.हृ.चि. ८/७

६३) रक्ते दुष्टे भिषक तस्माद्रक्तमेवावसेचयेत् ।।

जलौकोभिस्तथा शस्त्रैः सूची भिर्वा पुनः पुनः ।

अवर्तमानं रूधिरं रक्तार्शोभ्यः प्रवाहयेत् ।।

- च.चि. १४/६०-६१

६४) (अ) वेगावरोधस्त्रीपृष्ठयानान्युत्कुटुकासनम् ।

यथास्वं दोषलं चान्नमर्शःसु परिवर्जयेत ।।

- सु.चि. ६/२२

(ब) भित्वा विबन्धाननुलोमनाथ यन्मारूतस्याग्निबलायच्च ।

तदन्नपानौषधमर्शसेन सेव्यं विवर्ज्य विपरीतमस्मान् ।।

- अ.हृ.चि. ७/१६३

References of Modern Literature :

65) Hightower and Henry D. Janowitz in Physiological Basis of medical practice edited by Jorn R. Brobeck.

The Williams and Wilkins Company Baltimore (1979).

66) Goligher J.C. (1992), Surgery of Anus, Rectum and Colon.

5th Edition, Bailliere Tindall, London, Page no. 98-149.

67) Hughes Edward, Cuthbertson Alan and Killingback K. Mark (1983)

Colorectal Surgery, Churchill Livingstone, 1st Edition.

68) Joshi P.N. (1989) Haemorrhoids Indian J. Surgery,

Page no. 478 – 88.

69) Miles (1919 and 1939) Quoted by Ref. No. 65.

70) Graham Stewart C.W. (1963)

What causes haemorrhoids?

Dis Colon and Rect. 6 : 333 – 39.

71) Dultsev V.V. and Rivkin V.L. (1989)

Treatment of haemorrhoids at Moscow Research Institute of Proctology. Int. Surg., 74 : 7 – 9.

72) Denninson A.R., Whery D.C., Morris D.L. (Dec. 1988)

Haemorrhoids non-operative management, SCNA, Vol.65, No.6: 1401 – 1409.

73) Jacobs D.M., Bubrick M.P. and Onstad D.M. (1980)

The relationship of haemorrhoids to portal hypertension, Dis. Colon and Rectum 23, 567.

74) Rangabashyam N and Manohar V (1978)

Aetiopathogenesis of haemorrhoids in Madras.

Ind. J. Surg., 305 – 9.

75) Burkitt Dennis P (June, 1972)

Varicose veins, deep vein thrombosis and haemorrhoids

Epidemiology and Suggested aetiology, Br. Med. J., 2 : 556 – 61.

76) Hancock B.D. and Smith K. (1975),

The internal anal spincter and lord's procedure for haemorrhoids.

Br. J. Surg. Vol. 62, 833 – 36.

77) i) Arthur H. Douthwatte,

French index of Differential Diagnosis,

9th Edition, Bristol – John Wright and sons Ltd., (1967)

ii) Radiology – Internal Haemorrhoids,

Diagrams with double contrast barium enema examination.

Levive M.S. et al Radiology (Oct 1991) 177 (1) : 141 – 1

78) A.C. Ivy and Grossman, Digestive system in Cowdry's Problems of ageing, Edited by Albert Lansing,The Williams and Wilkins Co. Baltimore (1952).

79) Webster D.J.T., Gough D.C.S. and Craven J.L. (1978)

The use of bulk evacuants in patients with haemorrhoids.

Br. J. Surg., 65, 291.

80) Kilbourne Norman M.R.B., Buckmann P. and Minervini S. et al. (1979), Prospective trial of minor surgical pricedures and high fibre diet for haemorrhoids. B. M. J. 2, 967 – 69.

81) Kilbourne Norman J. (1934); Internal haemorrhoids : Comparative value of treatment by operative and by injection methods.

82) Graham Stewart C.W. (1962)

Injection treatment of haemorrhoids.

B.M.J. Vol. 1, 213 – 216.

83) Barron J. (1963)

Office ligation of internal haemorrhoids

A.M.J. Surg., 105 : 563 – 70.

84) Barron J. (1963)

Recent advances in surgery. Page No. 531 – 33

85) lord P.H. (1968)

A new regime for the treatment of haemorrhoids;

Proc. R. Soc. Med., 61, 935. – (1969)

A day – case procedure for the cure of third degree haemorrhoids

Br. J. Surg. 56, 747.

86) Major cherian T.K. (1977)

Lord's Procedure for haemorrhoids

Ind. J. Surg. July, 1977, 345 – 48.

87) Lewis M.I. and De la Cruz et al (1969)

Cyro surgical haemorrhoidectomy preliminary report.

Dis. Colon and Rectum 12, 37, IV.

88) Lioyd Williams K, Haq and Elem and (1973)

Cryo destruction of haemorrhoids.

B.M.J. 1, 666 – 68.

89) Neiger A (1979)

Haemorrhoids in everyday practice.

Proctology, 27, 22.

90) Ambrose N.S., Alexander Williams J and Hares M.M. (1983); Prospective randomized comparison of photocoagulation and rubber band ligation in treatment of haemorrhoids.
B.M.J. Vol. 286 : 1389 – 91.

91) Templeton J.L., Spence R.A.J. and Kennedy T.L. et al (1983) Comparison of infrared coagulation and rubber band ligation for I[st] and IInd degree haemorrhoids – A prospective randomized trial., B.M.J. 286, 1387.

92) Zinberg S.S., Stern D.H. Furman D.S. and Witteles J.M. (1989) A personal experience in comparing three non non-operative techniques for trating haemorrhoids.
Am.J. Gastroenterology, 845, 488 – 92.

93) Denninsor A.R. Whiston. R.J. and Ronney M.D. (1989)
Trends in treatment of haemorrhoidal disease.
Am. J. Gastroenterology, Vol. 84, Page No. 5 : 478 – 80

94) Millcigan (1937)
Quoted muby Ref. No. 65.

95) Parks A.G. (1955)
De haemorrhoids;
Guy's Hosp. Resp., 104, 135 – 36
(1956) Surgical treatment of haemorrhoids
Br. J. Surg. 43 – 337.

96) Petit, J.L. (1774) Quoted by Ref No. 65

97) Mitchell (1871) Quoted by Ref. No. 65 and 80

98) Ferguson, J.A. and Heaton, J.R. (1959)

Closed haemorrhoidectomy.

Dis Colon Rectum 2, 176

99) Whitehead W. (1882)

Surgical treatment of haemorrhoids; Br. Med. J. 1, 149

(1887) Three hundred cases of haemorrhoids cured by excision.

100) Cusack, S.J. (1846) Dublin Q.I.

Med. Sci., 2, 562

Reference of Drug review :

१०१) (अ) पाक्यं क्षारो यवक्षारो यावशूको यवाग्रजः।

यवक्षारो लघुः स्निग्धः सुसूक्ष्मो वह्निदीपनः ॥२५२॥

निहन्ति शूलवातामश्लेष्मश्वासगलामयान।

पाण्ड्वर्शोग्रहणीगुल्मानाहप्लीहहृदामयान॥

- भा.प्र., हरीतक्यादि वर्ग

(ब) यवक्षारः स्मृतः पाक्यो यवजो यवसूचकः।

यवशूको यवाह्वश्च यवापत्यं यवाग्रजः॥

- रा.नि., पिप्पल्यादि वर्ग पान नं.१८६

१०२) (अ) यवक्षारः कटूष्णाश्च कफवातोदरात्तिनुत्।

आमशूलाश्मरीकृच्छ्र - विषदोषहरः सरः ॥२५६॥

- रा.नि., पिप्पल्यादि वर्ग पान नं.१८६

(ब) यवक्षारस्वजिकाक्षार क्षारपाकिमटङ्कणक्षारप्रभृतयः॥

गुल्मार्शोग्रहणीदोष प्रतिश्यायविनाशनाः॥

क्षारास्तु पाचनाः सर्वे रक्तपित्तकराः सराः ॥३३२॥

ज्ञेयौ वह्निसमौ क्षारौ स्वर्जिकायावशुकजौ॥

शुक्रश्लेष्मविबन्धार्शोगुल्मप्लीहविनाशनौ ॥३२३॥

- सु.सू. ४६/३२२-३२३

१०३) क्षौमं प्लोतं पिचुं फेनं यावशूकं ससैन्धवम्।
कर्कशानि च पत्राणि लेखनार्थे प्रदायेत् ॥३९॥

- सु.चि. १-३९

यावशूकं यवक्षार: ॥

- डल्हण टीका

१०४) गुल्महृद्ग्रहणीपाण्डुप्लीहानाहगलामयान्।
श्वासार्श: कफकासांश्च शमयेद्यवशूकज: ॥

- अ.हृ.सू. ६/५०

१०५) (अ) यव: कषायो मधुर: शीतलो लेखनो मृदु:।
व्रणेषु तिलवत्पथ्यो रूक्षो मेघाऽग्निवर्धन: ॥२८॥
कटुपाकोऽनभिष्यन्दी स्वर्यो बलकरो गुरू:।
बहुवातमलो वर्णस्थैर्यकारी च पिच्छिल: ॥२९॥
कष्ठत्वगामयश्लेष्मपित्तमेद: प्रणाशन:।
पीनसश्वासकासोरुस्तम्भलोहिततृट्प्रणुत् ॥
अस्मादतियवो न्यूनस्तोक्यो न्यूनतरस्तत: ॥३०॥

- भा.प्र. धान्यवर्ग शुकधान्यानि

(ब) रूक्ष शीतो गुरू: स्वादु: सरो विड्वातकृद्यव: ॥
वृष्य: स्थैर्यकरो मूत्रमेद: पित्तकफाञ्जयेत्।
पीनसश्वासकासोरुस्तम्भकण्ठत्वगामयान् ॥१४॥
न्यूनो यवादनुयव:

- अ.हृ.सू. ६/१४

(क) रुक्ष: शीतोऽगुरू: स्वादुर्बहुवातशकृद्यव:।
स्थैर्यकृत् सकषायश्च बल्य: श्लेष्मविकारनुत्॥
रुक्ष: कषायानुरसो मधुर: कफपित्तहा।
मेद: क्रिमिविषघ्नश्च बल्यो वेणुयवो मत:॥२०॥

- च.सू. २७/१९-२०

१०६) (अ) तत्र क्षरणात् क्षणनाद्वा क्षार:॥४॥

- सु.सू. ११/४

(ब) शस्त्रानुशस्त्रेभ्य: क्षार: प्रधानतम: छेद्यमेद्यलेख्यकरणात्,
त्रिदोषघ्नत्वात्, विशेषक्रियाऽवचारणाच्च॥३॥

- सु.सू. ११/३

(क) नानौषधिसमवायात् त्रिदोषघ्न:, शुक्लत्वात् सौम्य:,
तस्य सौम्यस्यापि सतो दहनपचनदारणादिशक्तिरविरुद्धा।
स खलाग्नेयौषधिगुणभूयिष्ठत्वात् कटुक उष्णस्तीक्ष्ण:
पाचनो विलयन: शोधनो रोपण: शोषण: स्तम्भनो लेखन:
कृम्यामकफकुष्ठविषमेदसामुपहन्ता पुंस्त्वस्य चातिसेवित:॥५॥

- सु.सू. ११/५

(ड) तत्र, प्रतिसारणीय: .... भगन्दरार्बुदअर्शो ....
.... कृमिविषादिषूपदिश्यते।

- सु.सू. ११/७

(इ) तस्मिन्निपतिते व्याधौ कृष्णता दग्धलक्षणम्।
तत्राम्लवर्ग: शमन: सर्पिर्मधुकसंयुत:॥२१॥

- सु.सू. ११/२१

अम्लेन सह संयुक्त: सतीक्ष्णलवणो रस:॥२६॥
माधुर्य्यं भजतेऽत्यर्थं तीक्ष्णभावं विमुञ्चति।

१०७) ततः क्षारद्रोणमुदकद्रोणैः षड्भिरालोड्य - मूत्रैर्वा यथोक्तैरेकविंशतिकृत्यः परिस्राव्य, महति कटाहे शनैर्दर्व्याऽवघट्टयन् विपचेत्। स यदा भवत्यच्छो रक्तस्तीक्ष्णः पिच्छिलश्च तमादाय महति वस्त्रे परिस्त्राव्येतरं विभज्य पुनरग्नाधिश्रयेत्। तत एव च क्षारोदकात् कुडवमध्यर्धं वाऽपनयेत्॥

- सु.सू. ११/१३

१०८) यष्टीमधु तथा यष्टीमधुकं क्लीतकं तथा।
अन्यत्वलीतनक तत्तु भवेत्तोये मधूलिका॥१४५॥
यष्टी हिमा गुरूः स्वः द्वीचक्षुष्या बलवर्णकृत्।
सुस्निग्धा शुक्रला केश्या स्वर्या पित्तानिलास्त्रजित्।
व्रणशोथविषच्छर्दितृष्णाग्लानिक्षयापहा॥१४६॥

- भा.प्र. हरितक्यादि वर्ग

१०९) (अ) निम्बुकमल्पं वातघ्नं दीपनं पाचनं लघु॥१३६॥
निम्बुकं कृमि समूह नाशनं - तीक्ष्णमल्ममुदरग्रहापहम्।
वातपित्तकफशूलिने हितं कष्टनष्टरुचिरोचनं परम्॥१३७॥
त्रिदोषवह्निक्षयवातरोग - निपीडितानां विषविह्वलानाम्।
मन्दानले बद्धगुदे प्रदेयं - विषूचिकायां मुनयो वदन्ति॥१३८॥

- भा.प्र. आमादिफल वर्ग

(ब) निम्बुफल प्रथितमल्मरसं कटुष्णं गुल्मामवातहरमग्नि - विवृद्धिकारि।
चक्षुष्यमेतदथ कासकफार्तिकण्ठविच्छर्दिहारि परिपक्वमतीव रुच्यम्॥

- रा.नि.

११०) (अ) घृतं तु मधुरं सौम्यं मृदु शीतवीर्यम् अल्प अभिष्यन्दि स्नेहनम् उदावर्त उन्माद अपस्मार शूल ज्वर आनाह वातपित्त प्रशनम् अग्निदीपनं स्मृति मति मेधा कान्ति स्वर लावण्य सौकुमार्यो ओजः तेजोबलकरम् आयुष्यम् वृष्यं मेध्यं वयः स्थापनं गुरू चक्षुष्यं श्लेष्माभिवर्धनं पाप्मालक्ष्मीप्रशमनंविषहरं रक्षोघ्नश्च॥

- सु.सू. ४५/९६

(ब) सर्पि: पुराणं सरं कटुविपाकं त्रिदोषापहं मूर्च्छा मद उन्माद उदर ज्वर गर शोष अपस्मार योनि श्रोत्र अक्षि शिर: शूलघ्नं दीपनं बस्ति नस्य अक्षिपूरणेषु उपदिश्यते ।।

- सु.सू. ४५/१०७

(क) घृतम् आज्यम् हवि: सर्पि: पवित्रं नवनीतजम्।
आमृतम् च अभिपारश्च जीवनीयं प्रकीर्तितम्।।

- ध.नि. १३४

(ड) विपाकं मधुरं शीतं वातपित्त विषापहम्।
चक्षूष्यं बल्यम् अग्रयेश्च गव्यं सर्पिगुणोत्तरम्।।

(इ) सर्पि: पुराणं तिमिर श्वास पीनस कासनुत्।
मुर्च्छा कुष्ठ विषोन्माद ग्रहापस्मार नाशनम्।।
योनिकर्णाक्षिशिरसां शुलघ्नं शोफजित्परम्।
हन्ति दोषत्रयं भेदि व्रणशोधनरोपणम्।
उग्रग्रंथि पुराणम् स्याहु दशवषापितं घृतम्।
लाक्षारसनिभं शीतम् तद्वत् सर्व ग्रहापहम्।।

- ध.नि.

(फ) घृतम् आज्यं हवि: सर्पि: कथ्यन्ते तदगुणा अथ।
घृतम् रसायनम् स्यादू चक्षुष्यं वह्नि दीपनम्।

शीतवीर्य विपालक्ष्मीपापपित्तनिलापहम्।
अल्पभिष्यन्दि कान्त्योजस्तेजो - लावण्यवृद्धिकृत।।
स्वरस्मृतिकरं मेध्यम् आयुष्यम् बलकृद् गुरू।
उदावर्त्तज्वरोन्माद शूलानाहव्रणान हरेत्।
स्निग्धं कफकरं रक्ष: क्षयवीसर्प रक्तनुत्।।

- भा.प्र. १८/१-६

(ज) गव्यं घृतं विशेषेण चक्षुष्यं वृष्यम् अग्निकृत।
स्वादुपाककरं शीतं वातपित्त कफापहम्।।

मेधालावण्य कान्त्योजस्तेजोवृद्धिकरं परम्।

अलक्ष्मी पाप रक्षोघ्नं वयसं: स्थापकं गुरूं॥

बल्यं पवित्रम् आयुष्यम् सुमङ्गल्यं रसायनम्।

सुगन्धं रोचनं चारु सर्वान्येषु गुणाधिकम्॥

- भा.प्र. घृतवर्ग १८/६

(ह) शीतं स्वादु कषायाम्लं नवनीतं नवोद्घृतम्।

यक्ष्मार्शोऽर्दित पित्तासृग्वातजिद्ग्राहि दिपनम्।

क्षीरोद्भवं तु संग्राहि, रक्तपित्ताक्षिरोगजित्॥

- अ.सं.सू. ६

(य) शस्तं धीस्मृतिमेधाग्निबलायुश्शुक्रचक्षुषाम्।

बाल वृद्ध प्रजाकान्ति सौकुमार्यस्वरार्थिनाम्॥

क्षतक्षीण परीसर्पशस्त्राग्निग्लपितात्मनाम्

वातपित्तविषोन्माद शोषा लक्ष्मीज्वरापहम्

स्नेहनामुत्तमं शीतं वयस: स्थापनं परम्॥

सहस्त्रवीर्यं विधिभिघृतं कर्मसहस्रकृत्॥

- अ.सं.सू. ६

110) Potassh Carbonas Impura

Dr. K.M. Nadkarni's

Indian Material Medica, Vol. IInd, Third edition, Page 88 – 90.

Editor – Revised and enlargod by A.K. Nadkarni.

111) Hordeum – Vulgare Linn.

Indian Medicinal Plants, Kirtikar – Basu., Vol IV,

IInd edition, Page no. 2702 to 2704.

112) Drayaguna Vidnyan

V.M. Gogate

113) Priyavat Sharma

Second part; Edition 1996, Page No. 253

११४) स्निग्धोष्णो मधुरस्तिक्तः कषायः कटुकस्तिलः।

त्वच्यः केश्यश्च बल्यश्च वातघ्नः कफपित्तकृत्॥

च.सु. २७

११५) ईषत् कषायो मधुरः सतिक्तः सांग्रहिकः पित्तकरस्तवोष्णः।

तिलो विपाको मधुरो बलिष्ठः स्निग्धो व्रणालेपन एव पथ्यः॥

दन्त्योऽग्निमेधाजननोऽल्पमूत्रस्त्वच्योऽथ केश्योऽ निलहा गुरूश्च।

तिलेषु सर्वेष्वसितः प्रधानो मध्यः सितो हीनतरास्तथाऽन्ये॥

- सु.सू. ४६

११६) हरीतकी पञ्चरसाऽलवणा तुवरा परम्।

रुक्षोष्णां दीपनी मेध्या स्वादुपाका रसायनी।

चक्षुष्या लघुरायुष्या बृहणीचानुलोमनी॥

श्वासकासप्रमेहार्श कुष्ठशोथोदरकृमीन्॥

- भा.प्र. हरितक्यादि वर्ग २०

११७) हरीतकी पथ्यानाम श्रेष्ठा।

- च.सू. २५/४०

११८) विजया रोहिणी चैव पूतना चामृताभया।

जीवनी चेतकी चेती पथ्यायाः सप्तजातयः॥

- भा.प्र. हरितक्यादि वर्ग

११९) स्वादुत्तिक्तकषायत्वात् पित्तहत् कफहतु सा।

कटुतिक्तकषायत्वातम्लत्वाद वातहच्छिवा ।।

- भा.प्र. हरितक्यादि वर्ग २३,२४

१२०) नवा स्निग्धा घना वृत्ता गुर्वी क्षिप्ता च याम्भसि।
निमज्जेत सा सुप्रशस्ता कथितातिगुणप्रदा।
नवादिगुणयुक्तत्वं तथैवात्र द्विकर्षत्ता हरितक्या
फले यत्र द्वय तच्छ्रेष्ठमुच्यते ।।

- भा.प्र. हरितक्यादि वर्ग २९

१२१) भेदनं लघु रुक्षोष्णं वैस्वर्यकृमिनाशनम्।
चक्षुष्य स्वादुपाक्याक्षं कषायं कफपित्तजित्।
बैभीतको मदकरः कफमारुतनाशनम्।।

- सु.सू. ४६

१२२) बिभीतक स्वादुपाकं कषायं कफपित्तनुत।
उष्णवीर्य हिमस्पर्श भेदन कासनाशनम्।
रुक्षं नेत्रहितं केश्यं कृमिवैस्वर्यनाशनम्।

- भा.प्र. हरितक्यादि वर्ग ३५

१२३) बिभीतकमज्जा तृट्छर्दीकफवातहरी लघुः।
कषायो मदकृच्चाय धायीमज्जापि तद्गुणा ।।

- भा.प्र. हरितक्यादि वर्ग ३६-३७

१२४) रसासृङ्मांस मेदोजान दोषान् हन्ति बिभीतकम्।
स्वरभेद कफोत्क्लेदपित्त रोगविनाशनम्।।

- च.सू. २७/१४८

१२५) हरीतकीसमं धात्रीफलं किन्तु विशेषतः।
रक्तपित्तप्रमेहघ्नं परं वृष्य रसायनम्।।

- भा.प्र. हरितक्यादि वर्ग ३९

१२६) विद्यादामलके सर्वान रसान लवणवर्जितान्।

- च.सू. २७/१४७

१२७) अम्ल समधुरं तिक्तं कषायं कटुकं सरम्।

चक्षुष्यं सर्वदोषघ्न वृष्यमामलकीफलम्।।

हन्ति वातं तदम्लत्वातपित्तं माधुर्यशैत्यतः।

कफ रुक्षकषायत्वंफलेभ्योऽभ्यधिकं च यत्।।

- सु.सू. ४६/१४३-१४४

१२८) भागैकं विमलं सिक्थं तैलन्तु रसभागिकं।

आदाय वङ्गलिप्तायां स्थालिकायां विधापयेत्।।

पचेत्तावन्मन्दवन्हौ यावत्सिक्थं द्रवीभवेत्।

स्थालिकामथ यत्नेन धरण्यामवतारयेत्।

तावत्प्रचालयेत् दर्व्या यावचेति प्रगाढताम्।

सिक्थ तैल समायोगात्सिक्थतैलमिदंस्मृतम्।।

- र.त.४/५९-६१

Web References :

129) www.wikipedia.com

130) www.dabur.com

131) www.google.com

BIBLIOGRAPHY

Sr.No.	Name of Books	Author Name	Publication
1.	Sushruta Samhita	Vd. P. V. Sharma	Chaukambha Vishvabharati, Varanasi.
2.	Sushrut Dullhan Tika	Vd. Yadavji T. Acharya	Chaukhambha Publication, Varanasi.
3.	Charak Samhita	Dr. Brahmnand Tripathi	Chaukhambha Publication, Varanasi.
4.	Ashtanghriday	Kaviraj A. Gupta	Chaukhambha Publication, Varanasi.
5.	Ashtangsangraha	Kaviraj A. Gupta	Chaukhambha Publication, Varanasi.
6.	Bhaishajya Ratnavali	Dr. Ambikadatta Shashri	Chaukhambha Publication, Varanasi.
7.	Madhav Nidan	Vd. Ravidatta Tripati	Chaukhambha Publication, Varanasi.
8.	Sharangdhar Samhita	Prayagdatta Sharma	Chaukhambha Publication, Varanasi.
9.	Dravyaguna Vidnyan	Acharya P. Sharma	Chaukhambha Publication, Varanasi.
10.	Short Practice of Surgery	Bailey and love's Dr. R.C.G. RUSSELL	K. M. Varghese Company. 24th Edit.
11.	Text Book of Surgery	Dr. S. Das	Published by Dr. Das Culcutta. 5th Edit.
12.	A Practical Guide to Operative Surgery	Dr. S. Das	Published by Dr. Das Culcutta 4th Edit.
13.	Schwartz's Principles of Surgery	Dr. F. Charles Brunicardi	The McGraw-Hill Company. 8th Edit.

Sr.No.	Name of Books	Author Name	Publication
14.	SURGERY OF THE ANUS RECTUM AND COLON	Dr. John Goligher	A.I.T.B.S. Publishers and Company. 5th Edit.
15.	Hamilton Bailey's SURGREY EMERGENCY	Dr. Brian W. Ellis.	Hodden Arnold Publishers. 13th Edit.
16.	Christopher's TEXT BOOK OF SURGERY	Dr. Loyal Davis	W. B. Saunders Company. 8th Edit.
17.	NMS (National Medical Series for Independent study	Dr. Bruce E. Jarrel	Lippincot Williams & Wilkins Publishers. 4th Edit.
18.	Boyd's Text Book of Pathology	A. C. Ritchie	Lea and Febiger, Philadelphia, London
17.	The Indian Material Medica	A. K. Nadkami	Popular Book Dept. of Bombay
18.	Indian Medicinal Plants	Kirtikar and Basu	2nd Edition
19.	Welth of India Raw Materials-II	Counsil of Science and Industrial Research, Delhi.	
20.	Synopsis of Surgical Anatomy	GAG Decker	Varghese Publishing House, Dadar, Mumbai.
21.	Gray's Anatomy	Gray Dyson.	Reter L. Williams Mary
22.	Human Physiology	Dr. C. Chatterjee	Medical Allied Agency 10th Edit.
23.	Surgical Handicraft	Dr. Pye's	J.A.R. Smith and D.H. Johnston.
24.	Methods in Biostatistics	Dr. B. K. Mahajan	Jaypee Bothers, Medical Publishers (Pvt.) Ltd.
25.	To study the efficacy of Pratisarniya Yava Kshar in Management of Abhyantar Gudarsha	Dr. Ukhalkar V. P.	Disertation for M.S.(Shalya), S.R.T.M.U. Nanded.

★ ★ ★

ABBREVIATIONS

सु.सू. (S.Su.)	-	Sushruta Sutrasthana
सु.शा. (S.Sha.)	-	Sushruta Sharirsthana
सु.नि. (S.Ni.)	-	Sushruta Nidansthana
सु.चि. (S.Chi.)	-	Sushruta Chikitsasthana
च.सू. (C.Su.)	-	Charak Sutrasthana
च.चि. (C.Chi.)	-	Charak Chikitsasthana
अ.हृ.सू.(A.Hr.Su.)	-	Ashtang Hridaya Sutrasthana
अ.हृ.नि.(A.Hr.Ni.)	-	Ashtang Hridaya Nidansthana
अ.हृ.चि.(A.Hr.Chi.)	-	Ashtang Hridaya Chikitsasthana
मा.नि.(M.N.)	-	Madhava Nidan
भै.र. (Bh.R.)	-	Bhaishajya Ratnavali
भा.प्र. (B.P.)	-	Bhavprakash
यो.र. (Y.R.)	-	Yogratnakar
शा.पू.खं.	-	Sharangdhar Samhita Purvakhanda
S.D.	-	Standard Deviation
S.E.	-	Standard Error
B.T.	-	Before Treatment
A.T.	-	After Treatment
Hb%	-	Haemoglobine Percentage
B. T.	-	Bleeding Time

C. T.	-	Clothing Time
T. L. C.	-	Total Leucocyte Count
D. L. C.	-	Differential Leucocyte count
E. S. R.	-	Erythryocyte Sedimentation Rate

★ ★ ★

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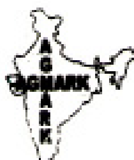

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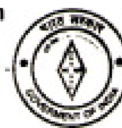

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Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Ukhalkar V. P. Nanded.

2) Name of Sample : Pilesikt 5 % ointment.

3) Reference No. : ----

4) Date of Receipt : 17-12-08

5) Quantity : ----

Results of Analysis :

1) Moisture	0.12 %
2) Specific gravity	0.9386
3) Melting point	34 °C
4) Saponification value	255.46
5) Acid value	2.62
6) Unsaponifiable matter	0.59 %
7) Iodine value	6.96

Remark :- The results is given as above.

Date : 20-12-08

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

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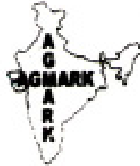

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Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Ukhalkar v. p. Nanded.
2) Name of Sample : Pile Gel 5 % ointment
3) Reference No. : ---
4) Date of Receipt : 17-12-08
5) Quantity : ---

Results of Analysis :

1) Moisture	0.14 %
2) Specific gravity	0.9438
3) Melting point	33.4 °C
4) Saponification value	258.80
5) Unsaponifiable matter	0.62
6) Iodine value	7.10
7) Acid value	2.52

Remark :- The results is given as above.

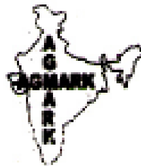
Date : 20-12-08

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories



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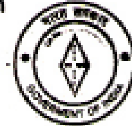

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Ministry of Agriculture Department of Agriculture & Co-operation
(Govt. of India)

Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Wkhalkar V. P. Nanded.
2) Name of Sample : Pilesikt 10 % ointment
3) Reference No. : ----
4) Date of Receipt : 17-12-08
5) Quantity : ---

Results of Analysis :

1) Moisture	0.10 %
2) Specific gravity	0.9312
3) Melting point	34.6 °C
4) Saponification value	261.35
5) Unsaponifiable matter	0.68 %
6) Iodine value	6.56
7) Acid value	2.35

/

Remark;- The results is given as above.

/

Date : 20-12-08

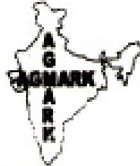
For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories

APPROVED BY AGMARK



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(GOVT. OF INDIA)
(Oil, Oilseeds, Oilseed Cake & Allied Food Product Testing)
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Umarekar Building, Shivaji Nagar, Nanded 431602 [M.S.]

Approved by
AGMARK
Ministry of Agriculture Department of Agriculture & Co-operation
(Govt. of India)

Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Ukhalkar V. P. Nanded
2) Name of Sample : Pile Gel 10 % ointment.
3) Reference No. : ---
4) Date of Receipt : 17-12-08
5) Quantity : ---

Results of Analysis :

1) Moisture	0.11 %
2) Specific gravity	0.9256
3) Melting point	35 °C
4) Saponification value	259.67
5) Unsaponifiable matter	0.65 %
6) Iodine value	6.32
7) Acid value	2.41

Remark;- The results is given as above.

Date : 20-12-08

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories

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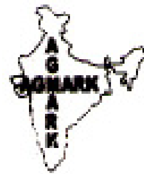
(GOVT. OF INDIA)



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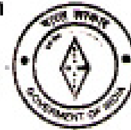

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Ministry of Agriculture Department of Agriculture & Co-operation
(Govt. of India)

Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Ukhalkar V. P. Nanded.
2) Name of Sample : Yeva Kshar (loose Sample)
3) Reference No. : --
4) Date of Receipt : 17/12/2008
5) Quantity : ---

Results of Analysis :

1) Moisture	38.42 %
2) Total ash	24.30 %
3) Ash insoluble in dil HCL.	3.70 %
4) Specific gravity	1.2156
5) PH Value	10.60
6) Potassium	198 mg/100g.
7) Sodium	23 mg/100g.
8) Fluoride	15. mg/100g.

REMARK:- The resultd is given as above.

Date :20/12/2008

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories

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(Govt. of India)

Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : M/S, Dr. Ukhalkar V. P. Nanded.
2) Name of Sample : Pilesikt 5 % ointment.
3) Reference No. : ---
4) Date of Receipt : 29-12-08
5) Quantity : ----

Results of Analysis :

1) Moisture	0.14 %
2) Total ash	1.20 %
3) Acid insoluble in dil. HCL	0.17 %
4) Specific gravity	0.9379
5) Pottassium	10mg/100g.
6) Sodium	2mg/100g.
7) Fluoride	1mg/100g.

Remark:- The results is given as above.

Date : 05-01-09

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories

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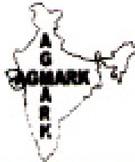

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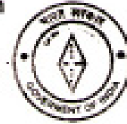

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Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Wkhalkar V. P. Nanded.

2) Name of Sample : Pile Gel 5 % ointment.

3) Reference No. : ---

4) Date of Receipt 29-12-08

5) Quantity : ---

Results of Analysis :

1) Moisture	0.13 %
2) Total ash	1.19 %
3) Acid insoluble in dil HCL	0.14 %
4) Specific gravity	0.9312
5) Potassium	9mg/100g
6) Sodium	1 mg/100g.
7) Fluoride	1 mg/100g.

Remark;- The results is given as above.

Date : 5-01-09

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories

APPROVED BY AGMARK

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Approved by
AGMARK
Ministry of Agriculture Department of Agriculture & Co-operation
(Govt. of India)

Sample Not Drawn By Venkatesh Lab.

Certificate of Analysis

Sr. No.

Particulars of Sample Submitted :

1) Name of Party : Dr. Ukhalkar V. P. Nanded.

2) Name of Sample : Pilesikt 10 % ointment.

3) Reference No. : ---

4) Date of Receipt : 29-12-08

5) Quantity : ---

Results of Analysis :

1) Moisture	0.11 %
2) Total ash	2.42 %
3) Acid insoluble in dil HCL.	0.38 %
4) Specific gravity	0.9352
5) Pottassium	21mg/100g.
6) Sodium	3mg/100g.
7) Fluoride	2mg/100g.

Remark:- The results is given as above.

Date : 05-01-09

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

Shri. Venkatesh Food Laboratories

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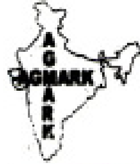

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1) Name of Party : Dr. Ukhalkar V. P. Nanded.

2) Name of Sample : Pile Gel 10 % ointment.

3) Reference No. : ----

4) Date of Receipt : 29-12-08

5) Quantity : ---

Results of Analysis :

1) Moisture	0.12 %
2) Total ash	2.27 %
3) Ash insoluble in dil HCL.	0.25 %
4) Specific gravity	0.9256
5) Pottassium	19mg/100g.
6) Sodium	2mg/100g.
7) Fluoride	2mg/100g.

Remark:- The results is given as above.

Date : 04-01-09

For : Shri Venkatesh Food Laboratories

Director

N.B. :- It is distinctly understood that the report furnished above will not be utilised for legal or commercial purpose.

CONSENT FOR PARTICIPATION

I have been fully explained the treatment and its possible complications by the doctor and I agree with it. I know that, I would be responsible if some complication occur during the trial. I conform that I have been fully explained the details of the consent form and I am ready to voluntarily participate in the trial.

Patient's Name / Initials : ____________________

Signature or thumb impression of Patient : ____________________

Date : / / 200

Investigator's Name : **Dr. V. P. Ukhalkar**

Investigator's Signature: ____________________

Date : / / 200

Name of Witness : ____________________

Signature of Witness : ____________________

Date : / / 200

संमतीपत्र

माझ्यावर / माझ्या नातेवाईकावर करण्यात येत असलेल्या औषधोपचार आणि त्यातील संभाव्य धोक्यांची सविस्तर महिती मला डॉक्टरांनी दिलेली असून त्यांच्या मताशी मी सहमत आहे. औषधोपचारामुळे जर काही दुष्परिणाम झाल्यास त्याची संपूर्ण जबाबदारी माझी स्वतःची राहील याची मला जाणीव आहे.

या संमती पत्रातील मजकूर मला निटपणे समजावून सांगितला असून मला तो पूर्णपणे समजला आहे व औषधोपचार करुन घेण्यास मी स्वखुशीने तयार आहे.

रुग्णाचे नाव : ________________________________

रुग्णाची सही / अंगठ्याचा ठसा : ________________________________

दिनांक :   /   / २००

संशोधकाचे नाव : **डॉ. वि. प. उखळकर**

संशोधकाचे सही : ________________________________

दिनांक :   /   / २००

साक्षीदाराचे नाव : ________________________________

साक्षीदाराची सही : ________________________________

दिनांक :   /   / २००

CASE RECORD FORM

Swami Ramanand Teerth Marathwada University, Nanded – 431 606

EVALUATION OF EFFECT OF YAVA-KASHAR MALAHAR OINTMENT ON ABHYANTAR ARSHA (INTERNAL PILES)

Department of Shalyatantra

Government Ayurved College and Hospital, Nanded

PhD Scholar	Guide
Vd. V. P. Ukhalkar	**Dr. G. S. Lavekar**

Name of the Patient: ____

Address: _____________________________________Age: _______yrs

Reg. No.: _______________ Sex: Male / Female Date: / /

Occupation: ____

SADYO LAKSHANA (PRESENTING COMPLAINTS): Duration

Bleeding per rectum:

Prolapse:

Pain:

Pruritus:

Discharge / Soilage:

OTHER ASSOCIATED SYMPTOMS:

Sensation of incomplete evacuation

Weakness

RUGNA – ITIHAS (HISTORY):

Past History:

Family History:

Dietic History: Vegetarian / Non-Vegetarian / Mix Spicy / Non-spicy

PERSONAL HISTORY:

Appetite:

Addiction: Tobacco / Cigarette / Bidi / Alcohol / Tea

PAST TREATMENT HISTORY

GENERAL EXAMINATION:

Pulse B.P. Mala

Mutra Jivha

SYSTEMIC EXAMINATION:

R.S.:

CVS:

CNS:

Per abdomen:

Distention: Lump:

Liver: Ascitis:

Spleen: Other:

LOCAL EXAMINATION:

PER RECTAL EXAMINATION:

a) **Externally:**

External Piles: Position:

Sentinal Piles: Position:

Other anal Pathology

b) **Digitally:**

Tender / Non tender Regular / Irregular Pedunculated / Sessile

c) **Proctoscopy:**

Internal Hemorrhoid: Grade: Clockwise Position:

Bleeding per rectum:

Per defecation: Post defecation:

Post defecation: Amount:

INVESTIGATIONS:

Blood:	Hb%	TLC	DLC	BT	CT
Urine:	Alb.	Sugar	Micro	BS	BP

DIAGNOSIS: Abhyantar Gudarsha (Internal Hemorrhoid): Position:

MODALITY OF TREATMENT:

a) Application of Yava-kshar ointment 5% (base Petroleum jelly) 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

b) Application of Yava-kshar ointment 5% (base sikta taila) 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

c) Application of Yava-kshar ointment 10% (base Petroleum jelly) 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

d) Application of Yava-kshar ointment 10% (base sikta taila) 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

e) Application of Faktu ointment 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

f) Dietic regime and Bowel regulariser (Trifgol).

g) Application of Base Petroleum jelly 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

h) Application of Base sikta taila 2 times a day after defecation with Dietic regime and Bowel regulariser (Trifgol).

FOLLOW UP	1st	2nd	3rd	4th
Signs and Symptoms				
1) Bleeding P/R				
2) Degree of Piles				
SYMPTOMS:				
Observation				
1) Prolapse				
2) Pain				
3) Pruritus				
4) Discharge/Soilage				

FOLLOW UP AFTER TREATMENT:

COMPLICATION (if any):

Early:

Late:

RESULT: Cured / Not cured / Referred

Special advice:

PhD Scholar **Guide**

“Evaluation of effects of Yava - Kshar Malhar - Ointment on Abhyantar Arsha (Internal piles)”

DISSERTATION

Submitted for the degree of
Doctor of Philosophy (Ayurved)

By

Dr. Vijay Padmakarrao Ukhalkar

M.S.(Shalya)(Ayurved)

Under the Guidance of

Dr. Lavekar G. S.

M.D.(Shalyatantra), Ph.D.(Shalyatantra)

Ex-Dean, Govt. Ayurved College, Nanded

Director General,

C.C.R.A.S., New Delhi

Faculty of Ayurved

Swami Ramanand Teerth Marathwada University,
Nanded - 431 006 (India)

2009

Govt. Ayurved College,

Nanded.

Certificate

This is to certify that the work done by

Dr. Vijay Padmakarrao Ukhalkar

on the subject

"Evaluation of Effects of Yavakshara Malhar - Ointment on Abhyantar Arsha (Internal piles)",

which is submitted as his Dissertation for Ph.D. Award in Shalya Tantra, Faculty of Ayurveda in Swami Ramanand Teerth Marathwada University, Nanded was carried out in the department of **Shalyatantra, G.A.C., Nanded** under the guidance of **Dr. Lavekar G. S.,** M.D., Ph.D., Ex. Dean, Govt Ayurved College, Nanded, Director General, C.C.R.A.S., Department of AYUSH, Ministry of Health, Government of India, New Delhi; as per approved synopsis.

Date :

Place :

Dr. P. T. Jamdade
Prof. & Head,
Dept. of Surgery, GMC, Nanded
Chairperson,
Institutional Ethical Committee
Government Ayurved College,
Nanded (Maharashtra)

Govt. Ayurved College,

Nanded.

Declaration

I **Dr. Vijay Padmakarrao Ukhalkar**

do Solemnly declare that I am registered in

Swami Ramanad Teerth Marathwada University, Nanded

for **Ph.D.** and not with any other university.

I have not submitted my research work entitled

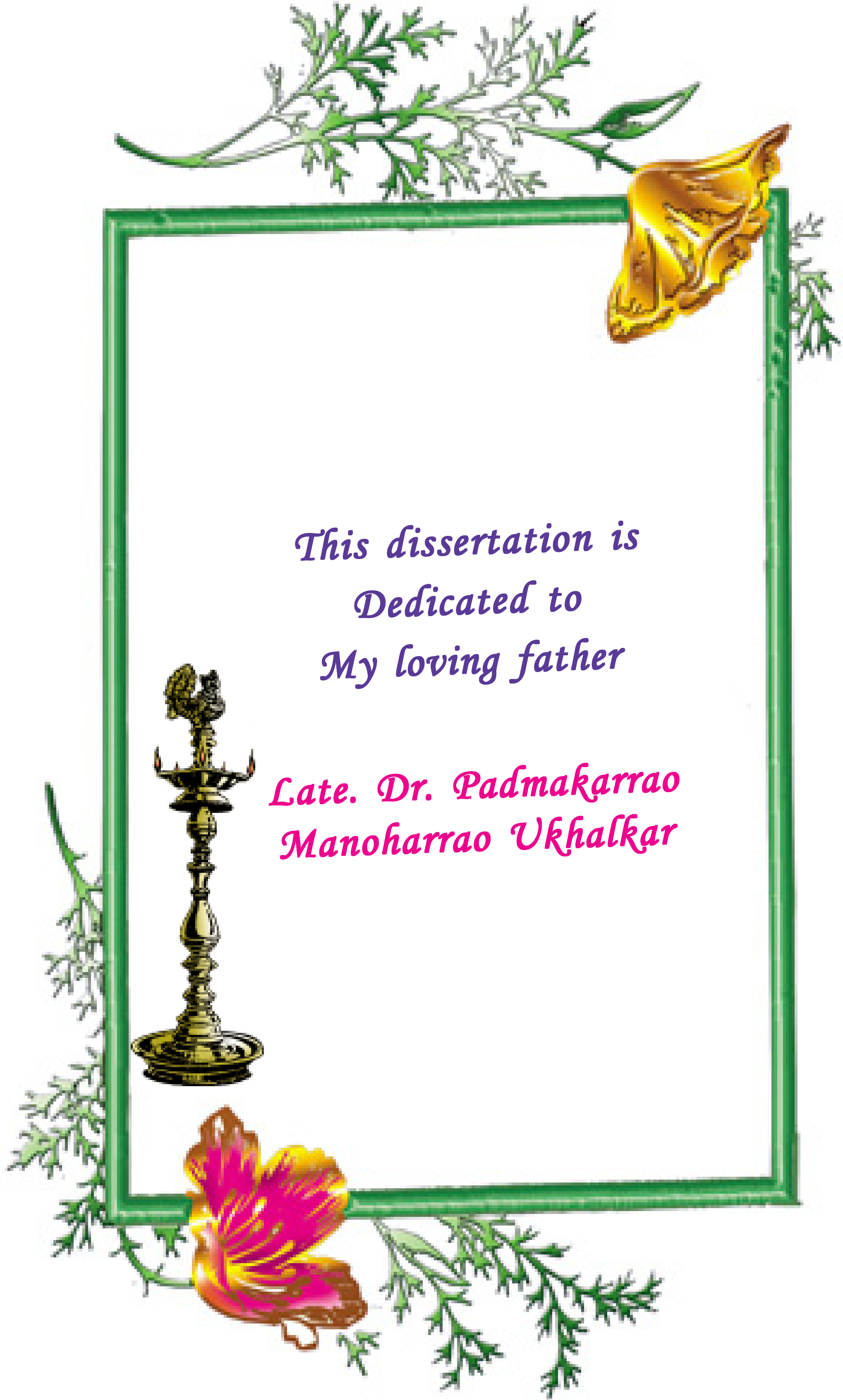
"Evaluation of Effects of Yavakshara Malhar - Ointment on Abhyantar Arsha (Internal piles)",

to any other exam or to any other Uiniversity.

Date :

Place :

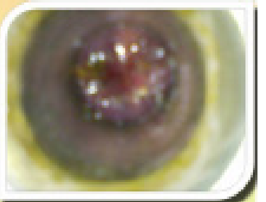
Dr. Ukhalkar V. P.
Lecturer
Dept. of Shalyatantra
Government Ayurved College,
Nanded (Maharashtra)



This dissertation is
Dedicated to
My loving father

Late. Dr. Padmakarrao
Manoharrao Ukhalkar

Introduction



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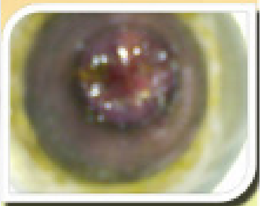
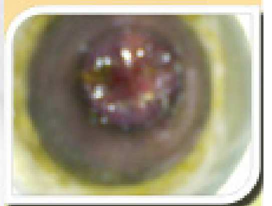
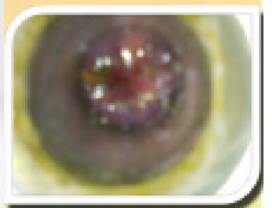


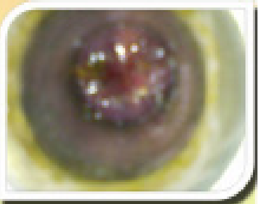
Review of Ayurvedic Literature



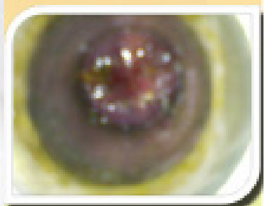
Review of Modern Literature



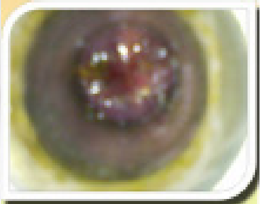
Drug Review



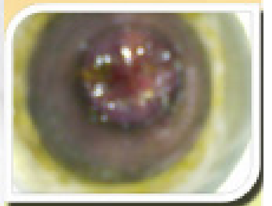
Review of Previous Work



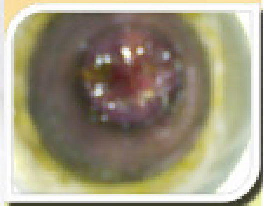
Hypothesis

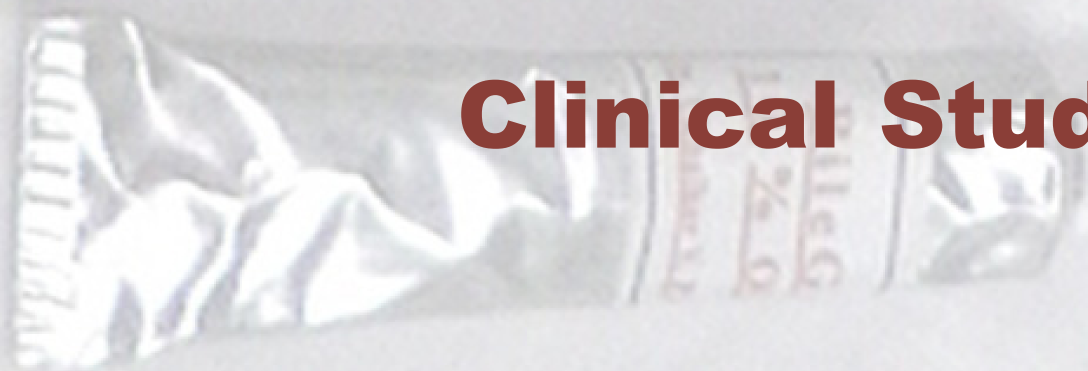


Plan of Work

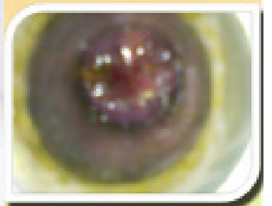


Preparation of Drug

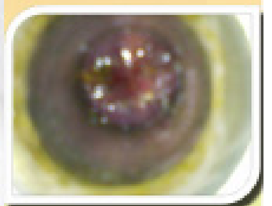




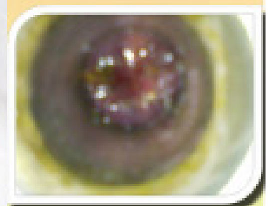
Clinical Study



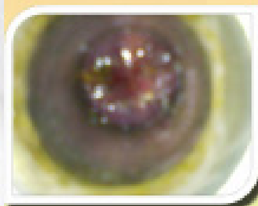
Observations



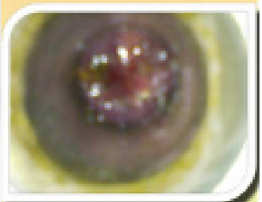
Statistical Analysis and Interpretation



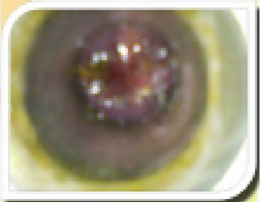
Discussion



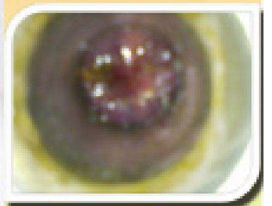
Summary



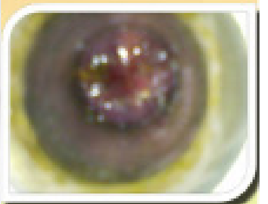
Conclusion



Recommendation and Constructive Suggestions



References



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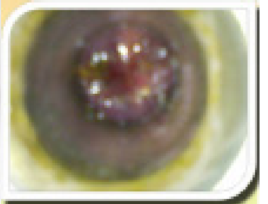
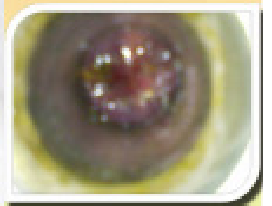


Appendix



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INDEX

1.	Introduction	1
2.	Aim and Objectives	3
3.	Review of Ayurvedic Literature	4
	Sharir Rachana of Anal Canal (Guda)	4
	Sharir Kriya of Anal Canal (Guda)	5
	Description of Arsha Vyadhi	5
	(Nidana, Purvaroop, Roop, Samprapti, Chikitsa, etc.)	
4.	Review of Modern Literature	28
	Anatomy of Anal Canal	28
	Physiology of Defecation	37
	Haemorrhoids or Piles	38
	(Aetiology, Pathology, Classification, Degree of internal Haemorrhoids, Symptomatology, Differential Diagnosis, Examination, Treatment)	
5.	Drug Review	68
	Yava Kshar	69
	Yava	72
	Petroleum jelly	73
	Sikta Taila	76
	Beewax	76
	Til (Taila)	79
	Trifgol (Isabgol, Triphala)	81
	Faktu ointment	90

6.	Review of Previous Work	92
7.	Hypothesis	121
8.	Plan of Work	122
9.	Preparation of Drug	126
	Preparation of Yava Kshar	126
	Preparation of Sikta taila	130
	Preparation of ointment	130
10.	Clinical Study	135
	a. Methodology	135
	b. Parameters	137
11.	Observation	139
12.	Statistical Analysis and Interpretation	154
13.	Discussion	165
14.	Summary	178
15.	Conclusion	186
16.	Recommendations and constructive suggestions	188
17.	References	189
18.	Bibliography	215
19.	Appendix	
	a. Abbreviations	217
	b. Report of Analysis	219
	c. Consent Form	228
	d. Case Record Form	230
	e. Master Chart	- - -

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