



ETHNO-MEDICINAL SURVEY ON FOLKLORE PRACTITIONERS IN MANAGEMENT OF HEMORRHOIDS IN THE TALUKS OF BELAGAVI.

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Abstract: *Arshas* (Hemorrhoids) is one of the major Ano-rectal ailments that has been more prevalent in humans due to various life-style and day-to-day routine habits. With increasing in the number of cases in hemorrhoids there is a need for medicines that effectively control the disease. One of the methods of knowing about the native plants available is ethno-medicinal survey in folklore practitioners. So, two taluks Bailhongal and Saundatti of Belagavi district was chosen for its richness in flora and folklore practitioners. Survey was done during June 2024 to November 2024 regarding their folklore practices in management of Hemorrhoids with a semi-structured questionnaire made by ICMR-NITM, Belagavi. In this a total of 12 practitioners were approached and data was collected from them with a total of sixteen medicinal plants in the disease management. The statistical data was made according to the Use value (UV) and Fidelity level (FL) of the plant data available with, *Cassia angustifolia* having 0.58 UV and 43.7% of FL was the highest among the 16 plants collected during the survey followed by this *Plumbago zeylanica*. Various different formulations were used by them in the treatment with *churna* (powder) – 57%, *swarasa* (extract juice) – 22% and *Kshira* (latex) – 7% as its percentage of use in treating the disease. Further scope of the study lies in performing the In-vitro, In-vivo and followed by that clinical trial on the available plant and formulation data.

IndexTerms – *Arshas*, Folklore practices, Medicinal plant.

I. INTRODUCTION

Ethno-medicinal survey has been a source of knowledge regarding both plant and formulations used in a particular disease. The wide usage of plants in case of majority of the diseases is not only done by traditional practitioners i.e. AYUSH practitioners but also by the folklore practitioners who have been natives of the local villages and use the local flora in the management of the respective diseases. The folklore practitioners have been managing various diseases such as jaundice, asthma, renal calculi and hemorrhoids for many years.

Hemorrhoids one of the most common ano-rectal ailment is calculated to have a prevalence of about 50% of the population in India at some point of their lifetime and 5% in this may have the occurrence of at any point of their lifetime. ^[1] With this whooping rise in the prevalence of disease there is a need for increase in the number of medicines also so as to manage it effectively. In *Ayurveda*, the medicinal plants used in the management of the disease is also based on the plants prevalent on the region where the patient is located.

Western ghats which is having a wide range flora with about 5800 species and among these 3900 species fall under the state of Karnataka. Here, there is wide variety of plants in which many are classified into Rare and Endangered, Belagavi comes under the Western ghats and has a variety of flora in this region at places like Jamboti, Hukkeri, Chikodi, Bailhongal and Saundatti due to it continues water flow from various sources such as Malaprabha, Shirur and Hidkal dam which form the main water source for these plants and trees. It has an average rainfall about 2000mm with a total forest area about 2834.27 sq. kms. ^[2]

Though there have been many Ethno-medicinal surveys that have been conducted on tribes and on other disease. An exclusive survey on Hemorrhoids in taluks of Belagavi is not yet conducted. Belagavi has about 200 to 350 folklore practitioners in total. Ethnomedicinal survey on practitioners who manage Hemorrhoids will give a step-up in assessment of the folklore medicine followed by addition of those practices into ASU pharmacopeia after performing the specified research.

II. MATERIAL & METHODS:

STUDY AREA

Belagavi contains 9 taluks in it, among these 2 taluks i.e., Bailhongal & Saundatti were chosen due to its rich source of water that is needed for the growth of the plants. Saundatti is 78 kilometers away from Belagavi city, while Baihongal is 44 kilometers away.

Many clans, tribes, and castes, including Agasa, Banjara, Bant, Beda, Bedara, Bhois, Gonda, Gouli, Halakki, Vokkaliga, Holayas, Kurubaru, Naikdas, Kumbis, Kunabi, Siddhi, and Valmiki, are represented in both study areas, which have a combined population of 119,411 according to the 2011 census ^[3] ^[4]. At 15.817°N 74.867°E and 15.7833°N 75.1167°E, respectively, are the two taluks. Saundatti is roughly 16 km² in size and situated at an elevation of 858 (2,815 ft), whereas Bailhongal is roughly 15.30 km² in area and 664 (2,178 ft) ^[5] ^[6].



Fig.1

SELECTION OF TRADITIONAL PRACTITIONERS:

The traditional practitioners who were willing to offer information about their treatment regimen, diagnosis, and consequences of haemorrhoids were selected because this survey is about haemorrhoids.

SAMPLING METHOD:

Initially, it was impossible to calculate the sample size because the number of key informants was unknown. In order to complete the survey, we used snowball sampling, which involves contacting a small number of well-known traditional practitioners first, then contacting more traditional practitioners based on their recommendations. To find out which traditional practitioners are active in the taluk, however, the government school staff, medicine dealers, and locals were approached and information regarding them was collected.

SAMPLING SIZE:

Following the selection of taluks and key informants, the contact information, address, and practice location were obtained from local government school employees, NGOs, taluk villagers, traditional medicine dealers, and aayas, among others. Following communication with the traditional practitioners, they were briefed on the survey methodology and asked for their informed consent.

A semi-structured questionnaire created by ICMR-NITM, Belagavi, was used for the survey. It asked about the plants, how they were stored, any side effects, whether they used any animal products in their treatment, whether they made any dietary or lifestyle changes, and whether this was their full-time job. Between June 2024 and November 2024, the survey was carried out in both Bailhongal and Saundatti taluks, with three visits to each practitioner.

Plant identification involved a series of walks with practitioners to the field and forest where the plants were collected, followed by the collection of samples from the field and identification by a taxonomist. With the assistance of flora books, photographs of the plants taken during the survey, and plants collected during the survey, local names of the plants were verified and followed by their botanical or source names.

DATA ANALYSIS:

During the survey, information was gathered about the practitioners age, plants used to treat Haemorrhoids, their habitat and the applications of those plants. The fidelity level and use value of the plants used to treat piles were examined and put into a table based on the data that was gathered. The two primary data sets in the plant statistics are: 1) Fidelity level (FL) 2) Use Value (UV).

FIDELITY LEVEL:

The fidelity level (FL) was computed to determine which kind of medicinal plant informants preferred for treating Haemorrhoids. $FL = (N_p/N) \times 100$ where N is the total number of use-reports for that plant species and N_p is the number of use-reports per plant used to treat Haemorrhoids. For example, the fidelity level of *Ela* (*Elattaria cardomum*) is determined as $FL = 2/16 \times 100$, $FL = 12\%$, if practitioners cite it 2 times, with $N_p = 2$ and $N = 16$. ^[7]

USE VALUE:

Key informants or traditional healers are used to determine use value. The formula for calculating use value is $UV = Ncp/TN$, where TN is the total number of informants and Ncp is the number of plant citations. For example, if practitioners quote *Ela* (*Elattaria cardomum*) 2 times, then Ncp is 2 and TN is 12, then $UV = 2/12 \times 100$, $UV = 0.16$, is the use value. ^[7]

III. RESULTS & DISCUSSION:**ETHNO-MEDICINAL SURVEY:**

A total of 52 key informants were contacted and a total of 12 practitioners who treated haemorrhoids were identified. These 12 were contacted and the places of them were identified and among this 75% of the practitioners belonged to Bailhongal and 25% of the practitioners were belonging to Saundatti. Almost 50% of the practitioners were between the age of 61-80 years. Remaining 50% were from the age of 35 to 50 years, among this total 83.34% were male folklore practitioners and 16% were female.

Almost all the practitioners learnt their practice from their fathers and most of them are continuing as they are interested in their respective region. The practitioners started their learning at the age of 10 years this got continued for about 5 – 7 years. They learnt several manuscripts written by their forefathers regarding the cause, symptoms, pathogenesis and treatment of the disease. These manuscripts are written in local languages such as Kannada, Marathi and Hindi. Among this 41.67% of the practitioners treat almost all the disease and using various plants and 25% of the practitioners are specialised in Piles. The disease speciality is depicted in Fig.2

The practitioners divide the Haemorrhoids into two types: i) with bleeding and ii) without bleeding. The treatment for both were different mostly in case of without bleeding Haemorrhoids application of the formulation was done while in case of with bleeding mostly the dressing of the wound was done with cotton and pad followed by which the medication was given. Most of the practitioners advised regarding the dietary regimen during the treatment and after the treatment. It was advised that meat, excess spicy, dry, and salty foods should not be consumed for 30 to 45 days. Almost 58.34% of the practitioners were using animal products such as ghee, butter and buttermilk either in diet or in medicine. Forest and farms were the source of medicine for almost 52.14% of the practitioners. Most of them told that the medicinal plants were abundantly available during the post rainy season but they faced difficulty during summer in collection of the plants.

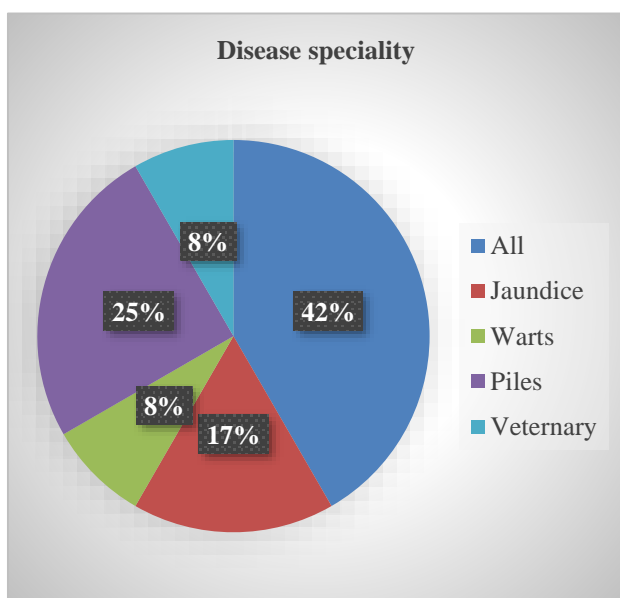


Fig.2

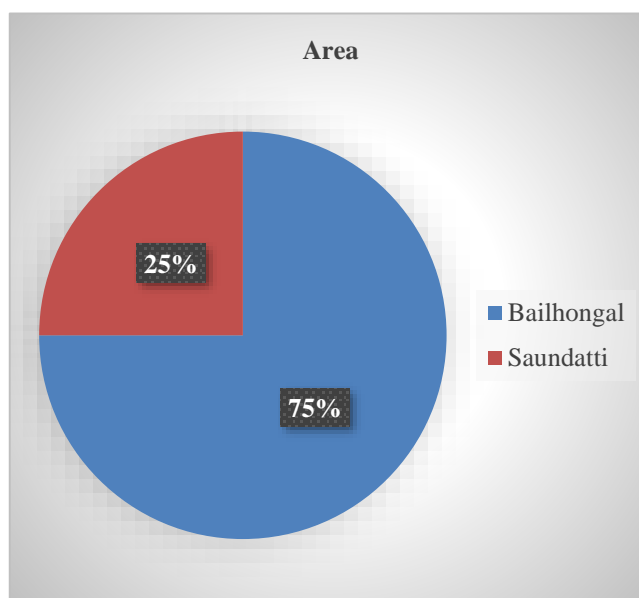


Fig.3

EVALUATION OF THE USED PLANTS:

16 plants from 16 different families were found during this survey consisting of Guttiferae, Liliaceae, Lauraceae, and Plumbaginaceae etc. 58.12% of the plants used were herbs among the collected data of the plants followed by this tree species were about 31.25% of the habit of the plants and this information is given in fig.4. Among this 31% of the useful part were fruit, 19% were gums, resin and seeds, this is mentioned in fig.5.

Rather than commonly used plants such as *Chitraka* (*Plumbago zeylanica*), *Nagakesara* (*Mesua ferrea*), *Ela* (*Elattaria cardomum*) and *Apamarga* (*Achyranthes aspera*), there were some plants which were used rather than the commonly used plants such as *Ananas*

cosmosus, *Nadi hingu* (*Gardernia gummifera*) and *Hingu* (*Ferula foetida*). These plants which were used by them didn't have any classical reference in case of *Arshas* (Haemorrhoids). Phytochemical or in-silico examination of these plants will provide us with further information about their method of action.

The Use value and Fidelity level of the plants are made and presented in a table form in table.1. *Cassia angustifolia* is having the highest use value and fidelity level among the 16 plants followed by this *Plumbago zeylanica* with a use value of 0.34 & 25% of fidelity level.

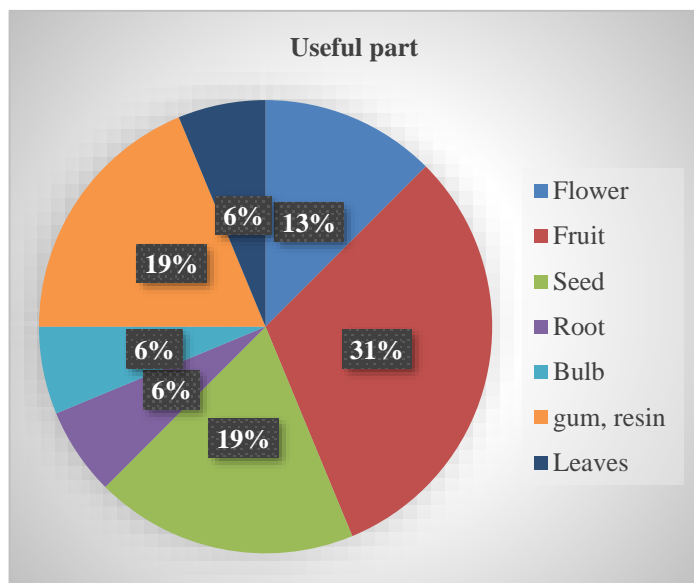


Fig.4

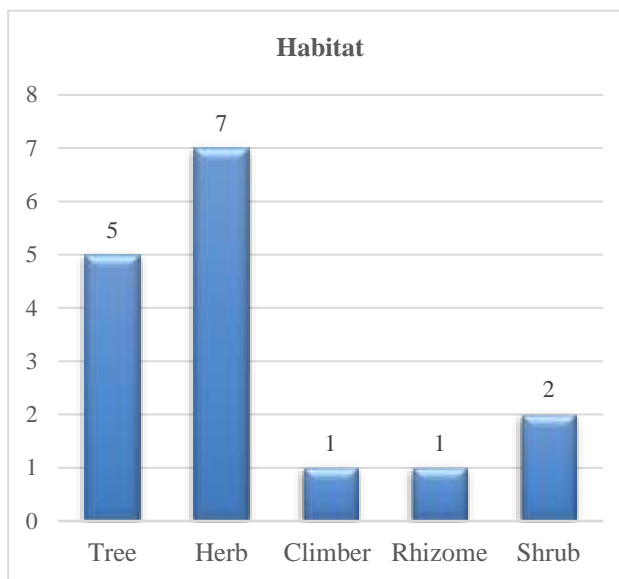


Fig.5

EVALUATION ON RASA PANCHAKA & FORMULATION:

Around 56% of the plants had *Katu rasa pradhana* (spicy taste), followed by this was *Madhura & Kashaya* with 19% and 12% respectively. *Katu rasa* has *Agnidipaka* (appetizer), *Bhuktam soshayati* (helps in absorption), *swayatham hanti* (reduces inflammation), *vraha avasaadayati* (stops excess growth of wounds) and *mamsa vilikhati* (scrapes away unwanted growth in muscle tissue) these properties are primarily required in management of *arshas* (haemorrhoids), since the *adhista* of *arshas* (haemorrhoids) is *mamsa* (muscles), usage of *katu rasa* (spice taste) helps in management of *arshas* (haemorrhoids). Rather than this *Kashaya rasa* (Astringent taste) which has *ropana* (healing action) and *lekhana* (scraping the unwanted tissues) helps in healing and removing the unwanted tissues of the haemorrhoids. *Madhura rasa* which has *kshinata sandhanakara* (healing) property aids in the management of *arshas* (haemorrhoids) symptom that is *karshyata* (emaciation), the *rasa pradhanata* (taste predominance) is given in fig.6 in a pie chart representation. [8]

Pachana (digestion) & *Deepana* (appetizing) [9] are the function of *ushna virya dravyas* (drugs with hot potency) and 75% plants collected during survey had *ushna virya*. *Ropana* (healing) & *Lekhana* (scraping away unwanted tissues) are the properties of *laghu guna* (lightness) [10]. *Kapha vata hara doshaghata* (plants that pacify *Kapha* and *vata dosha*) containing plants are almost 62% in this survey proving that it is very effective in the management of *sushka arshas* since *Acharya Charaka* considered *Kapha* and *Vataja* type of *arshas* as the variety of *sushka arshas* [11]. *Arshas* (haemorrhoids) being a *shoola pradhana vyadhi* (pain-based disease) is to be managed with drugs having the property of alleviating the pain, the formulations and the plant data collected during the survey proved that most of the plants have the properties of alleviating both pain and inflammation. Around 18% of the plants have *sara* or *anulomana* (laxative) property which helps in the constipation, one of the symptoms in haemorrhoids.

Grahi (absorbent) *guna* is almost present in 31.25% of the plants so as to reduce the symptoms of *grahani* (IBS/Ulcerative colitis), *takra* (buttermilk) which was advised by almost 58.34% of the practitioners is very much useful in *arshas* (haemorrhoids) especially with *Kapha & vata* predominance. It was almost advised to take 10-15 days in a quantity of 100-200ml twice a day by practitioners. *Palandu* (*Allium cepa*) which is advised as *yusha* (gruel) in *Charaka Samhita* [12] here it is practiced as external application i.e. the *swarasa* (extract juice) is applied in the haemorrhoids.

Churna (powder) was the highest used formulation with 54% followed by *swarasa* (extract juice) with 34% and 7% for both *Bhasma* (ash) & *Kshira* (latex). 78.36% of the formulations were internal administration and this is attached in fig.7. Among total of 13 preparations six preparations are single drug preparation. Most of the practitioners said that they use these formulations until the pile mass is visible outside, once it is visible outside, they suggest their patients to go to the nearest hospital for further treatment. On a note, these practitioners treat the haemorrhoids only if it is first- and second-degree piles, once it reaches the third degree the patient is referred. The details regarding the formulations are given in Table.2 for further reference.

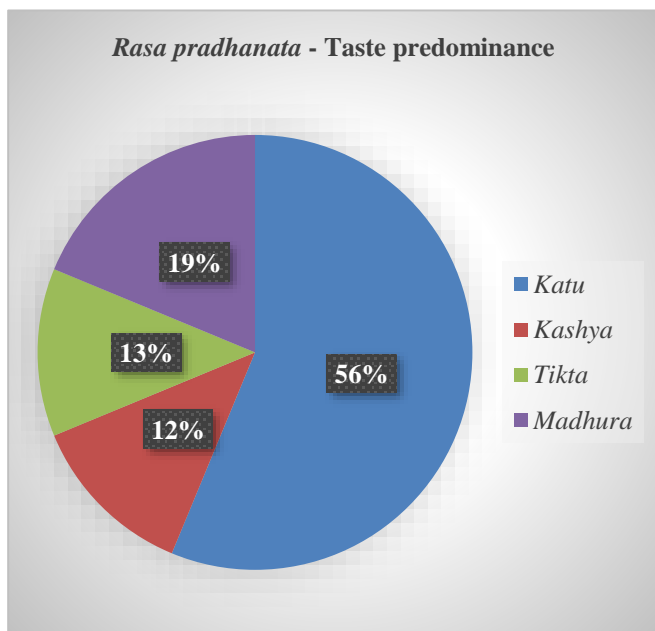


Fig.6

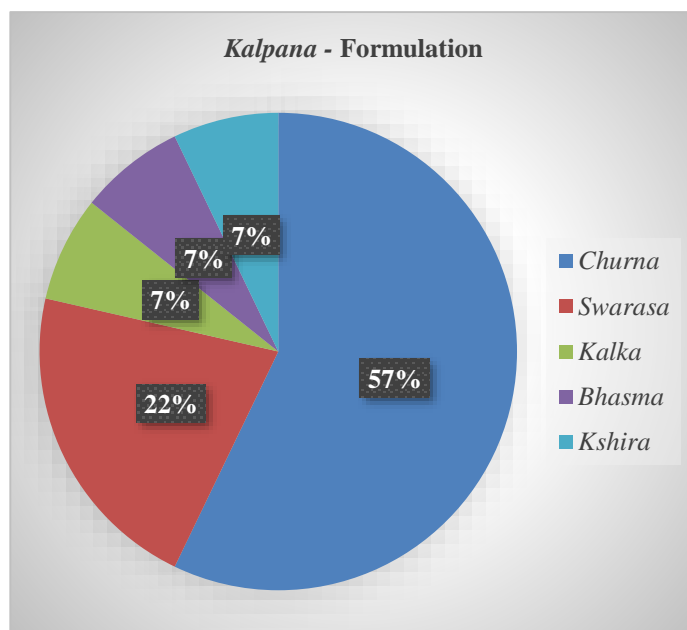


Fig.7

IV. CONCLUSION:

This survey in Bailhongal and Saundatti taluk has given 16 plants and 13 formulations that are used in treating haemorrhoids. *Markandika* (*Cassia angustifolia*) has the highest use value of 0.58 and it is very useful in-case *vibandha* (constipation), one of the symptoms of haemorrhoids. The only drawback is that on a prolong usage it leads to drug dependency.

Arshas (Haemorrhoids) in *Ayurveda* has a 4-fold classification of treatment i) *Bheshaja chikitsa* (treatment with medicinal plants) ii) *Kshara chikitsa* (treatment with *Ayurvedic* medicated thread) iii) *Agni chikitsa* (*Agni karma* – treatment done with the help of fire) iv) *Shashtra chikitsa* (surgical intervention). Here, these practitioners follow the *bheshaja chikitsa* in case of 1st and 2nd grade haemorrhoids. *Arshas* (haemorrhoids) is a disease which is connected with *grahani* (IBS), *vibandha* (constipation) and *udara* (ascites) so *bheshaja chikitsa* is indicated for minimal *dosha* involvement and the initial stage of the disease.

The treatment protocol for this contains *dravyas* having *agnivridhhi* (promotes digestion), *vatanulomana* (downward movement of *Vata dosha*) properties and should contain *Rakta stambhana* (haemostatic agents) property, the former two properties for *Sushka arshas* (dry) and the later one is needed in case of *rakta arshas* (bleeding piles) ^[11]. The formulations and the plants fulfil the criteria of the *bheshaja chikitsa* of *arshas* (haemorrhoids). Further In-vitro, in-vivo followed by that clinical studies on these formulations will help us in adding few of the folklore practices into ASU pharmacopeia for ensuring easier treatment of the disease.

Acknowledgement:

I thank the traditional practitioners of Bailhongal and Saundatti for their support in helping me in completion of this survey and helping in identifying the plants.

Conflict of interest:

There is no conflict of interest.

Table.1. Plants identified during the survey

Sl.no	Vernacular name (Kannada)	Botanical name	Family name	Mode	Habitat	Citation	UV	FL In %	Used part	Internal/ External
1.	Nagasampige	<i>Mesua ferrea</i>	Guttiferae	<i>Churna</i>	Small tree	1	0.08	6%	Flower	Internal
2.	Dikkemalli	<i>Gardenia gummifera</i>	Rubiaceae	<i>Churna</i>	Small tree	1	0.08	6%	Resin	Internal
3.	Elakki	<i>Elattaria cardomum</i>	Zingiberaceae	<i>Churna</i>	Herb	2	0.16	12%	Seeds	Internal
4.	Nelavarike	<i>Cassia angustifolia</i>	Leguminose	<i>Churna</i>	Herb	7	0.58	43.7%	Leaves	Internal
5.	Gasagase	<i>Papaver somniferum</i>	Papaveraceae	<i>Churna</i>	Herb	1	0.08	6%	Seeds	Internal
6.	Hing	<i>Ferula asafetida</i>	Umbelliferae	<i>Churna</i>	Herb	1	0.08	6%	Resin	Internal
7.	Balehannu	<i>Musa paradisiaca</i>	Musaceae	<i>Churna</i>	Herb	2	0.16	12%	Fruit	Internal
8.	Chitraka	<i>Plumbago zeylanica</i>	Plumbaginaceae	<i>Churna</i>	Shrub	4	0.34	25%	Root	Internal
9.	Gajjuga kayi	<i>Ceasalpinia bonduc</i>	Ceasalpinaceae	<i>Churna, Bhasma</i>	Herb	2	0.16	12%	Fruit	Internal
10.	Utharani	<i>Achyranthes aspera</i>	Amaranthaceae	<i>Kalka</i>	Herb	1	0.08	6%	Seeds	Both
11.	Tenginkaai	<i>Cocous nucifera</i>	Arecaceae	<i>Swarasa, Bhasma</i>	Tree	2	0.16	12%	Fruit, fibre	Internal
12.	Halsina hannu	<i>Ananas cosmosus</i>	Bromeliaceae	<i>Swarasa</i>	Tree	1	0.08	6%	Fruit	Internal
13.	Parangigida	<i>Carica papaya</i>	Caricaceae	<i>Kshira</i>	Shrub	1	0.08	6%	Latex	External
14.	Kari mensu	<i>Piper nigrum</i>	Piperaceae	<i>Swarasa</i>	Climber	1	0.08	6%	Fruit	Internal
15.	Irulli	<i>Allium cepa</i>	Liliaceae	<i>Swarasa</i>	Rhizome	1	0.08	6%	Bulb	External
16.	Karpura	<i>Cinnamomum camphora</i>	Lauraceae	<i>Bhasma</i>	Resin	1	0.08	6%	Gum	Internal

Table.2. Formulation used in Hemorrhoids by Folklore practitioners of Bailhongal & Saundatti

Sl.No	Churna (Powder) – 8	Sl.No	Kalka (Paste) – 1
1.	<i>Nagakesara (Mussaenda fraxinea)</i> fry it in a pan about 20 gms + <i>Nadihingu (Gardenia gummifera)</i> – 5gms + <i>Ela (Elattaria cardomum)</i> – 10gms, these all are mixed together and made into <i>churna</i> . Later this <i>churna</i> is taken with Banana and this is kept in steel box approx. 4 pieces in a steel box and taken continuously for 4 days.	1.	<i>Apamarga (Achyranthes aspera)</i> seeds should be fried and dried, later it is pounded and made powder out of it around 10 grams, ghee should be added to it around 50ml and it should be made in a consistency of a paste. This should be applied on Hemorrhoids and taken internally.
2.	<i>Markandika (Cassia angustifolia)</i> – 1 gm + <i>Kalsakkre (Sugar candy)</i> – 1 gms mix it together and consume this powder for 14 days	Kshira (Latex) – 1	
3.	<i>Kaskas churna</i> (powder of <i>Papaver somniferum</i> seed) – 1 teaspoon + 2 cup water – drink it in empty stomach.	1.	Papaya (<i>Carica papaya</i>) fruit latex should be applied in the Hemorrhoids.
4.	<i>Hingu (Ferula asafetida)</i> powder 5 gms + <i>Kadali (Musa paradisiaca)</i> cut into round pieces and given internally. Note: Strength and Condition of the patient to be kept in mind.	Swarasa (Extract juice) – 3	
5.	<i>Ela churna</i> (powder of <i>Elattaria cardomum</i>) – 5gms + <i>Kadali (Musa paradisiaca)</i> – ½ pieces + <i>Sakre</i> (sugar candy) – ½ tsp mixed together and consumed internally after food.	1.	Extract juice of <i>Palandu (Allium cepa)</i> bulb is applied in the hemorrhoids.
6.	<i>Chitraka moola churna</i> (Powder of <i>Plumbago zeylanica</i>) – 6gms + <i>Madhu</i> (Honey) or <i>Takra</i> (Buttermilk) taken internally after food for 15 days.	2.	<i>Bahunetra phala swarasa</i> (fruit extract juice of <i>Ananas cosmosus</i>) – 50ml + Fruit powder of <i>Maricha (Piper nigrum)</i> – 3 grams both are mixed and taken internally for 15 days.
7.	<i>Latakaranja (Ceasalpinia bonduc)</i> – 1 fruit should be rubbed and mixed with <i>guda</i> (jaggery) and taken internally for 14 days before food.	3.	<i>Narikela jala (Cocos nucifera)</i> – 100ml to this <i>Madhu</i> (Honey) – 20 ml for 15 days before food.
8.	<i>Markandika (Cassia angustifolia)</i> – 1 gm is mixed with 100ml of hot water and taken for 7 or 14 days		
Bhasma (Ash) – 1			
1.	<i>Narikela pushpa</i> (Flower of <i>Cocous nucifera</i>) → burn it with <i>Karpura (Cinnamomum camphora)</i> → make into ash → 2gms of this ash + <i>takra</i> – 100ml along with this <i>latakarnaja beeja churna</i> (powder of <i>Ceasalpinia bonduc</i> seeds) – 2gms this is taken internally for 7 days after food in morning and night.		

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