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HERBAL POWDER FOR DECOCTION USED IN TREATMENT OF PILES

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Abstract

From the ancient time we are using various plants or plant products as medicine to treat various disease and disorders. Using plant and plant products is the the most superior whey from the many decades. Now here we discussed about the treatment of piles with the use of herbal powder. Plant drugs like latana camara leaves, ajwain seeds, cumin , black , lemon juice,etc. are used for the preparation of powder which shows there therapeutic action on piles. Piles is one of the common disease from which many peoples are suffered. There is lot of increment in in the number of patients suffered from piles in day to day life. This disease is exploring due to change in and eating habits of human being. Here the latana leaves have antiinflammatory, analgesic action. The ajwain reduces the inflammation of blood vessels and heals the the ulcers formed due to rupture of skin by hardened stools or itching and also reduce the flatulence. The jeera cumin seeds work as natural laxatives. The black salt eliminates the gases from small intestine and lemon juice with black salt shrinks the lumps of piles.

Key words : Latana Camara, piles, herbal powder, superior

Introduction

There are four dosage forms available for the consumption of medications or medicaments.

- 1) Solid
- 2) Semi-solid
- 3) Liquid
- 4) Gases

Here solid dosage form is used for formulation. In solid dosage form Powder for oral administration is prepared.

Oral powders:

Oral powders are preparations consisting of solid, loose, dry particles of varying degrees of fineness. They contain one or more active ingredients, with or without excipients and, if necessary, authorized colouring matter and flavouring substances.

Advantages

- More stable than liquid
- More convenient to swallow than tablet or capsules
- Can be prepared into granules for use in preparing tablets and or reconstituted to liquid form
- Rapid therapeutic effect due to large surface area
- Useful for bulky drugs with large dose

Nowadays, there is increase in number of patients suffered from piles day by day. This is due to changing and lazy lifestyle of human being. Specially in urban areas the peoples doesn't want to take any efforts for any work, they becomes very lazy and dependent. Due to such lifestyle peoples may face lots of health problems.

There are many formulations available for treatment of piles in in various dosage form such as tablets, capsules, gels. They might be an ayurvedic or herbal or allopathic. But the allopathic drugs have sometimes side effects. If you take pain killers that might help you to ease any pain from piles, but sometimes these could make you constipated and add to your problems. There are lots of different products available over the counter such as soothing creams, ointments and suppositories that might ease any pain and itching from files. Some products main contains a local anaesthetic such as lidocaine lignocaine that may affect the sensitivity of your skin.

That's why here we are formulating formulation of of herbal powder as herbal products prepared from medicinal plants and they might have lace aur negligible side effects.

Here we are using the leaves of of Latana Camera, Ajwain Seeds, Jeera , Lime Juice, Black Salt for the preparation of of herbal powder which used in treatment of of piles.

Piles

Piles is one of the the common disease from which many peoples are suffered. Piles are enlarged blood vessels that you can get inside for around your anus. It is completely normal to have blood vessels in our anus as they play an important role in continence. But piles can develop if this blood vessels become enlarged which can cause symptoms are difficulty in defecation.

The anus is is lined with spongy tissues supplied with blood vessels – the anal cushion – and they help your anus too close. These are perfectly normal but sometimes they can developed into piles.

Types of piles

Internal piles start inside your anal canal, but they might hang down and come out your anus. They're Graded according to whether they come out, and if so, how far they come out.

First degree piles may bleed but don't come out of your anus.

Second degree piles come out of your anus when you have a poo, but go back inside on their own afterwards.

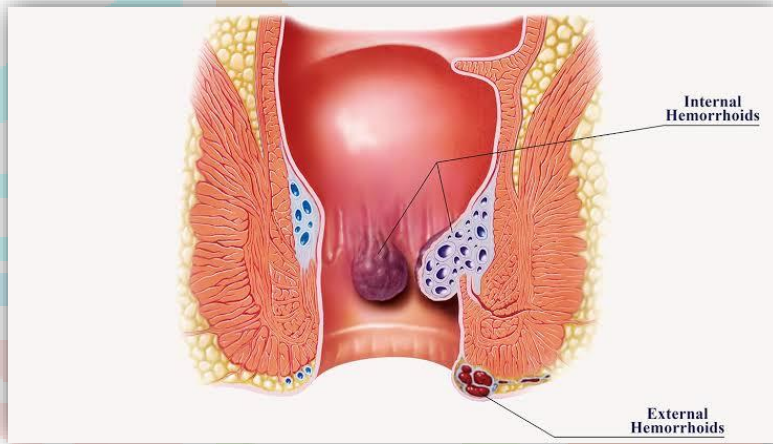
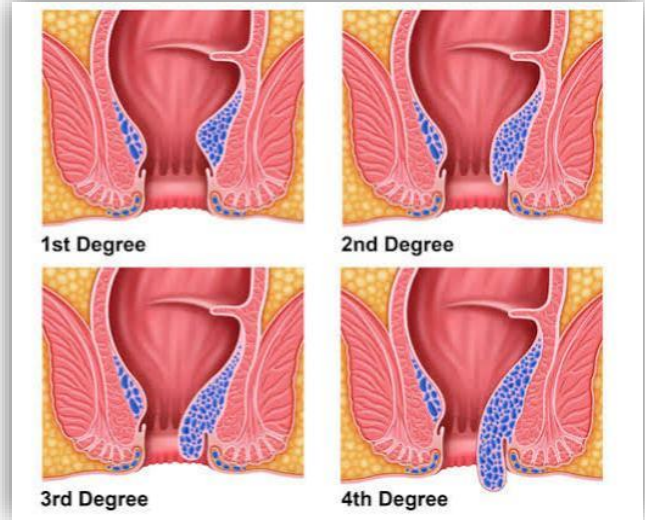
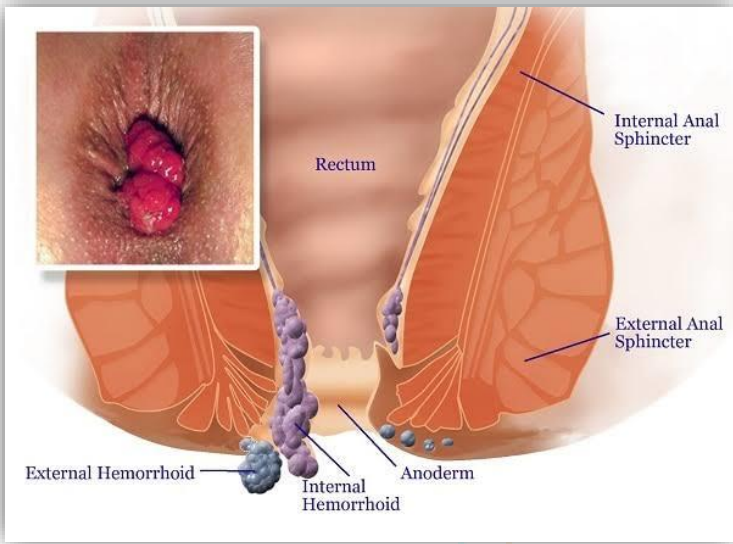
Third degree piles come out of your anus and only go back inside if you physically push them back in.

Fourth degree piles always hang down from your anus and you can't push them back in. They can become very swollen and painful if the blood inside them clots.

External piles are swellings that develop further down your anal canal, closer to your anus. They can be really painful, especially if they have a blood clot in them.

It's possible to have both internal and external piles at the same time.

Piles look like small all round discolored lumps. You might be able to feel them on your anus or hanging down from your anal canal.your anal canal is is too short muscular tube with blood vessels net connect your rectum (back passage) with your anus.



Materials and Methods

Materials

❖ Latana Camara:-



Synonyms :- Raimuniya, Ghaneri, Latana

Taxonomical classification :-

Kingdom: Plantae

Clade: Tracheophytes

Clade: Angiosperm

Clade: Eudicots

Clade: Asterids

Order: Lamiales

Family: Verbenaceae

Genus: Lantana

Species: L. camara

Uses:-

- It is used as an antiinflammatory.
- It shows an antibacterial activity.
- It shows an analgesic activity.
- It also shows the antimicrobial, antifungal, insecticidal activity.
- It has also been used in traditional herbal medicines for treating a variety of ailments, including cancer, skin itches, leprosy, chicken pox, measles, asthma and ulcers.



❖ Ajwain :



Synonyms :- Ajowan caraway, Thymol seeds, Bishop's weed, or CCaro

Taxonomical classification:-

Kingdom: Plantae

Clade: Tracheophytes

Clade: Angiosperms

Clade: Eudicots

Clade: Asterid

Order: Apiales

Family: Apiaceae

Genus: Trachyspermum

Species: T. ammi

Uses:-

- Ajwain is sold as a dietary supplement in capsules, liquids, or powders.
- Carom seeds help in maintaining your digestive health.
- They treat any kind of abdominal discomfort due to indigestion like stomach pain or burning sensation.
- It increases the appetite for those suffering from loss of appetite.
- It also has antifungal and antibacterial properties.
- The plant can also help to treat peptic ulcers as well as sores in the esophagus, stomach, and intestines.
- They may also help to fight bacteria like salmonella and E. coli, which can lead to food poisoning and other stomach issues.
- It has antiinflammatory property.



❖ Jeera :



Synonyms:- cumin, cumin seeed

Taxonomical classification:-

Kingdom: Plantae

Clade: Tracheophytes

Clade: Angiosperms

Clade: Eudicots

Clade: Asterids

Order: Apiales

Family: Apiaceae

Genus: Cuminum

Species: *C. cyminum*

Uses:-

- Contains antioxidants. Cumin seeds contain naturally occurring substances that work as antioxidants.
- Has anticancer properties.
- May help treat diarrhea.
- Helps control blood sugar.
- Fights bacteria and parasites.
- Has an anti-inflammatory effect.
- May help lower cholesterol.
- Aids in weight loss.
- It acts as natural laxatives.



❖ Lemon juice :



Synonyms:-

Taxonomical classification:-

Kingdom: Plantae

Clade: Tracheophytes

Clade: Angiosperms

Clade: Eudicots

Clade: Rosids

Order: Sapindales

Family: Rutaceae

Genus: Citrus

Species: C. limon

Uses:-

- Eating lemons may lower your risk of heart disease, cancer, and kidney stones.
- Help Control Weight
- Prevent Kidney Stones
- Protect Against Anemia
- Reduce Cancer Risk
- Improve Digestive Health
- It promotes hydration
- It's a good source of vitamin C
- It improves your skin quality
- It freshens breath



❖ Black Salt :-



Synonyms:- Kala Namak

Uses:

- **Indigestion**
Black salt is used to correct indigestion by stimulating bile production in the liver. It also helps control bloating by improving the digestive fire due to its Laghu and Ushna (hot) properties.
- **Constipation**
Black salt is good for constipation due to its Rechana (laxative) nature. It softens hard stool and helps in easy excretion.
- **Obesity**
Black salt might help manage weight by digesting Ama (toxic remains in the body due to improper digestion) and removing extra fluid from the body due to its Ushna (hot) potency.
- **Muscles spasm**
Black salt helps to control muscle spam because of its Vata balancing property. It also has a small amount of potassium which is an essential component for the muscles to work properly.
- **High cholesterol**

Black salt helps in controlling high cholesterol level due to its Ama (toxic remains in the body due to improper digestion) reducing property. This is because according to Ayurveda, Ama is the main reason for high cholesterol as it blocks the channel of the circulatory system.



Methods:-

1) Selection and collection of herbs or raw materials :

The levels of Latana and lemon fruit collected from botanical garden of campus of Aditya pharmacy College Beed. Another thing includes ajwain, black salt, jeera procured from local market at Beed but the care should be taken that the material should be fresh and hygiene.

2) Methods of preparation of powder formulation:

- i. The Latana Camara leaves was dried in in shade for minimum 24 hours and the leaves where reduced in small size by triturating inmortar and pestle and pass through thesieve number 40.
- ii. Peeled lemon fruit and collect the required amount of lemon juice in a container.
- iii. Seeds of ajwain and jeera are well dried in daylight and then powdered separately in grinder and passes through sieve number 40.
- iv. All the powders aremixed together according to formula then add required amount of lemon juice and mix together in mortar and pestle.
- v. After mixing powder dried inhot air oven at 40⁰C for 1 hour.
- vi. After that the Powder is forwarded for further evaluations.

Evaluation parameters:-

1. Determination of Moisture content: The moisture content was measured described by AACC method. Two gram sample was placed in a preheated and weighed glass petriplate and then dried in a hot air oven at 130 °C for 2 hrs. or till constt. Weight after drying glass petriplate was transferred to the dessicator to cool and then petriplate was reweighed. The loss in weight was calculated as percentage of moisture content.

$$\text{Moisture content (\%)} = \frac{W_2 - W_1}{\text{Weight of Sample}} \times 100$$

W1 = Weight (g) of Sample before drying.

W2 = Weight (g) of Sample after drying.

2. Determination of Ash content: The ash content was Measured, described by AACC [19] method. Two gram sample Was placed in a Prewighed crucible and then uncovered Crucible was allowed to incinerate in a muffle furnace at 820 °C for 4 hours and then crucible was cooled in a desiccator And then weighed.

$$\text{Ash (\%)} = \frac{\text{Weight of ash}}{\text{Weight of sample}} \times 100$$

3. Phytochemical analysis:

i. Determination of Total Phenolics:

Total phenolics were Determined using the Folin–Ciocalteu assay [20]. The Absorbance was measured at 765 nm and the results were Expressed in gallic acid equivalents.

ii. Determination of Total Flavonoids:

Total flavonoids Were estimated using Aluminium Chloride colorimetric Method [21]. The Absorbance was measured at 510 nm. Results Were expressed in Catechin equivalents.

$$\% \text{ of Flavonoid} = \frac{\text{Final Weight} - \text{Initial weight}}{\text{Weight of sample}} \times 100$$

iii. Determination of Tannins :

Tannins were estimated according to the method described by Van- Buren and Robinson Absorbance was measured at 605nm and the result were stated in Tannic Acid equivalents.

4. Evaluation of Formulated Herbal Powder :

In development of new dosage form preformulation study is The prior step in the possible drug development. It is the Principal investigation in the drug development to obtain Information on the known properties of compound and the Proposed development schedule. So, this preformulation study May merely confirm that there are no significant barriers to Compound development. Following pre-compressional Parameters were studied like angle of repose, bulk density, Tapped density, etc.

Angle of Repose

The fixed funnel method was employed to measure the angle Of repose. A funnel was secured with its tip at a given height (h), above a graph paper that is placed on a flat horizontal Surface. The blend was carefully pored through the funnel Until the apex of the conical pile just touches the tip of the Funnel. The radius of the base of the conical pile was measured. The angle of repose (θ) was calculated using the following formula:

$$\tan \theta = h/r$$

Where, θ = Angle of repose, h = Height of the cone, r = Radius of the cone base. Values for angle of repose $\leq 30^\circ$ usually indicate a free flowing material and angles $\geq 40^\circ$ suggest a poorly flowing material, 25- 30 show excellent flow properties, 31-35 show good flow properties, 36-40 show fair flow properties and 41-45 showing passable flow properties.

Bulk Density

15 g powder blend introduced into a dry 100 ml cylinder, without compacting. The powder was carefully leveled without compacting and the unsettled apparent volume, V_o , was read. The bulk density was calculated using the following formula.

$$\rho_b = M / V_o$$

Where, ρ_b = Apparent bulk density, M = Weight of sample,

V_o = Apparent volume of powder.

Tapped Density

After carrying out the procedure as given in the measurement of bulk density the cylinder containing the sample was tapped 500 times initially followed by an additional taps of 750 times until difference between succeeding measurement is less than 2% and then tapped volume, V_f was measured, to the nearest graduated unit. The tapped density was calculated, in gm per ml, using the following formula.

$$P_{tap} = M / V_f$$

Where, P_{tap} = Tapped density, M = Weight of sample, Vf = Tapped volume of powder.

Result and Discussion

1. Preparation of powder formulation:

Preparation of powder dried mixed. The Herbal Powder as mentioned resulted in varying yields as Detailed in Table

Table 1 :- Preparation of powder formulation

Sr.No	Content	Quantity
1	Latana Camara	60%
2	Ajwain	15%
3	Jeera	10%
4	Black salt	10%
5	Lemon Juice	5%

2. Sensory evaluation

Sensory evaluation parameters observed in Herbal powder . The observed parameters like color, taste, flavor, texture, overall acceptability at room temperature of the formulation is presented in Table2. On the basis of paired comparison evaluation the drink has very good taste, flavor and overall acceptability. Change in sensory characters during storage was also analysed

Table 2. Sensory evaluation of Herbal powder

Parameters	Formulation
Color	Greenish
Taste	Salty or Characteristic
Flavor	7
Texture	6
Overall acceptability	7

1= extremely dislike, 2= strongly dislike, 3= moderate dislike, 4= slight dislike,

5= neutral, 6= slight like, 7= moderate like, 8= strongly like, 9= extremely like



3. Phyto pharmaceutical test

Moisture content and ash analysis during nutritional analysis are very important because it directly affects the nutritional content of the food, its stability and storage, etc. The moisture and ash contents were calculated for Herbal powder. The pH of freshly prepared Herbal powder was 5.5.

Table 4. Phyto pharmaceutical test

S.No.	Ash Content	Moisture Content	pH
HP1	4.7%	3.5%	4.5
HP2	4.5%	4.7%	5.2
HP3	5.1%	4.5%	5.4
HP4	5.1%	5.6%	5.5

Table 5 : Physical Evaluation of Herbal powder

S.No.	Parameters	Results
1	Angle of repose	31.6
2	Bulk density	0.56
3	Tap density	0.65

Angle of repose was 31.6, here bulk density 0.56, tap density 0.65, which shows its moderate flow property. All results are showed in table.

Conclusion

The formulation beneficial for the patients suffered from Piles. The formulation is prepared from the plants source so the chances of side effects are lower than the allopathic formulation. This is good supplement for recovery from the illness and pain of piles and give the relief to the person. This herbal powder is a natural option to the allopathic drugs along with several health benefits. All the herbs used in this preparation are easily available during any season and are not costly thus the product is economically feasible.

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