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Natural relief : Herbal Churn for Irregular Menstruation

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Abstract :

This abstract examines the potential of natural drugs in managing irregular menstruation, looking at herbal remedies and alternative therapies. . Irregular menstruation is defined as deviations from a typical menstrual cycle in terms of timing, duration, or flow. Understanding the role of herbal churna in addressing irregular menstruation is made possible by insights into the pharmacological actions of key ingredients and their impact on hormonal balance. However, more research is necessary to establish standardized protocols and ensure evidence-based recommendations for optimal effectiveness and patient safety. This churna has 6 different drug which are helpful to treat hormal balance , menstruation cramps , and Irregular menstruation . Each drug has its specific role and they help to improve health . It is evaluated and Standardised by parameters Organoleptic characters , Physicochemical properties , etc . which used to improve quality of product .

Keywords : Menstruation, Unpredictable, Remedies, Recommendation

Introduction :

Irregular Menstruation :

Menstruation, also referred to as a period, is a normal physiological process that involves vaginal bleeding and the shedding of the endometrium, the lining of the uterus. While individual variances are common, it is a regular aspect of the menstrual cycle for females, usually occurring around every 28 days. Ovulation, the release of an egg from the ovaries, is linked to menstruation. If fertilization is unsuccessful, the uterine lining is discharged, signaling the start of a new menstrual cycle. An essential component of the reproductive system, this process typically begins during puberty and lasts until menopause. Some natural remedies for irregular menstruation include beetroot, fennel, ginger, cinnamon, ashwagandha, and shatavari. These a few chosen natural medications exhibit a variety of actions. Warming medications that are beneficial for menstruation include ginger and cinnamon. Period cramps were lessened by fennel.

Basic information and Properties of selected drugs :

	Ginger	Cinnamon	Ashwagandha	Shatavari	Fennel	Beetroot
Synonym	Adrak	Ceyon cinnamon	Indian Ginseng	Bahusuta, indivari	Bari sauf	Sugar beet
Biological name	Zingiber officinale	Cinnamomum zaylanicum	Withania somnifera	Asparagus racemosus	Foeniculum vulgare	Beta vulgaris
Family	Zingiberaceae	Lauraceae	Solanaceae	Asparagus	Apiaceae	Amaranthace
Category	Antioxident Antiinflammatory	Anti-inflammatory Antioxident	Breastfeeding	Antioxidant, Carminative.	Antioxidant, antiinflammatory,	Antioxidant
Colour	Creamy Yellow	Brownish orange	Light brown	Yellowish red	Light Green	Red
Odour	Citurs spicy	Sweet, warm, spicy	strong horse-like odor	sweet almond	Fragrant	Slightly sweet
Taste	Spicy	Spicy	bitter	sweet, slightly bitter	Licorice flavour	Sweet
Appearance	Homogeneous	Hard and woody	Leaves are dull green, elliptic, (bell-Shaped).	striated leaves, slender stems,white, fragrant flowers.	Feathery	Round and hard
Solubility	Insoluble in water	Slightly soluble in water	Water Soluble.	soluble in water	Insoluble in water	Soluble in water
Uses	Relieve Nausea and vomiting Aid digestion Prevent arthritis Treat various types of infection	Infertility treatment Remedy for toothache Reduce risk of cancer Cure for neurodegenerative	Lowers Blood Sugar, Increases Muscle and Strength, Improves Sexual Function in Women.	polycystic ovarian syndrome (PCOS) and infertility. Reduce symptoms of menopause.	Reduce Menstrual cramps Boost metabolism Improve eyesight Helps purify blood	Helps to lower blood pressure Supports weight loss Promotes healthy inflammation

[Table 1]

Some people think that women who experience irregular menstruation may benefit from ginger. It is believed to possess anti-inflammatory qualities that could alleviate menstruation pain and possibly control menstrual cycles.

There are instances when using cinnamon as a natural menstrual treatment is recommended. It is thought to have antispasmodic and anti-inflammatory qualities that could help control menstrual periods and lessen cramping.

Some believe that the adaptogenic herb ashwagandha may help regulate hormones and reduce stress, which may have an indirect effect on irregular menstruation. According to certain research, ashwagandha may promote general wellbeing and assist control cortisol levels.

Some people think that shatavari, a herb that is frequently used in ancient Ayurvedic medicine, has qualities that could help with hormonal balance, including treating irregular menstruation.

It is occasionally thought that fennel may help with menstruation problems. It is said to possess qualities that could lessen symptoms like cramping and bloating while also regulating menstrual cycles. Fennel seeds are used by some as a spice in cooking or as a tea.

Beetroot is a preservative and sweetener that is also used to treat irregular menstruation.

Formulation Table : [for 50 gm churn]

Sr. no.	Ingredient	Quantity	Role
1.	Zingiber officinale	10gm	stimulant
2.	Cinnamomum zaylanicum	10gm	stimulant
3.	Withania somnifera	7.5gm	Hormonal balance
4.	Asparagus racemosus	7.5gm	Hormonal balance
5.	Foeniculum vulgare	10gm	Anti inflammatory
6.	Beta vulgaris	05gm	preservative

[Table 2]

Material and Method :

The raw material such as powders of Zingiber officinale , Cinnamomum zaylanicum , Withania somnifera , Asparagus racemosus , Foeniculum vulgare , Beta vulgaris were used for the formulation . The raw material used for this formulation were purchased from market and authenticated in laboratory . The authentification carried out based on the microscopic characteristics of powdered drug .

Preparation Of Churn :

The drugs have been thoroughly cleansed and dried. To make each medicine finely powdered. Weigh out the following powders: 10 grams of ginger, 10 grams of cinnamon, 7.5 grams of ashwagandha, 7.5 grams of shatavari, 05 grams of beetroot, and 10 grams of fennel. Using a seive shaker, mix each powder individually, then fully blend the mixture using a mixer grinder.

Fig 1

Evaluation test for churn :

Organoleptic Evaluation :

The color , odour and taste of the formulation were evaluated manually .

Sr. No.	Parametrs	Observation
1	Odour	Characteristic
2	Taste	Little Spicy
3	Colour	Brown
4	Texture	Fine

[Table 3]

Physical Parameters :

1] Angle of repose:

Weighing the reasonable angle at which the minute particles in the air surface detracted toward the level surface was a prerequisite for estimating the angle of repose. Initially, the 100.00 g granules were loaded and fled somewhat into a channel that was created to go along with a lower tier closure. The lid was previously removed, allowing the granules to fall onto the lowermost portion of the pictorial paper surface. Weighing the altitude (h) and distance (d) of the formed granules allowed us to determine the repose angle (α), and the wealth of liquid balancing was used to carefully consider adding the principles into the final seed's equating ontent.

$$\theta = \tan\text{-}1(h/r)$$

2] Bulk density:

1. Take the 5gm sample powder of known volume (cm^3).

2. Add into 25 ml Measuring cylinder.

3. Measure the volume of sample in measuring cylinder.

4. Notify the both mass and volume of the powder.

5. Calculate the bulk density.

Bulk density = Mass / Bulk volume × 100

3] Tapped density:

The granules were judged by equating the most and pumped capacities of the fleed granules as well as the rates when they were full below. The principle got was delimited as the portion of uninterrupted book, as premeditated in this manner:

Tapped Density = Weight taken / Tapped volume

4] Compressibility / Carrs index :

Carrs index = Tapped density – Bulk density / Tapped density ×100

5] Hausners ratio :

Hausners Ratio = Tapped density / Bulk density

Observation table of physical parameters :

Sr. No.	Parameters	Observations
1	Angle of Repose (θ)	33 degree
2	Bulk Density (g/ml)	1.42
3	Tapped Density (g/ml)	2.22
4	Carrs index (%)	36.03
5	Hausners ratio	1.05

[Table 4]

Physio chemical Parameters :

1] Loss on Drying :

2gm powder is heated until no more weight is lost, that is, it is completely dry. At the beginning and after dryness is achieved, the weight of the substance is measured. The final weight loss is calculated, and represents the moisture content of the sample.

LOD (%) = Initial – Final / Initial × 100

2] Total ash value :

By placing 2 grams of churna into a crucible that had been preweighed, covered with tar, and burned at a temperature of no more than 450°C before being cooled, the entire ash content was ascertained. and measured. The total ash value is obtained by subtracting the final value from the initial value.

3] Acid insoluble ash value :

After adding 25 ml of diluted HCl to the remaining ash from the entire ash, it was allowed to boil for five minutes.To find the acid insoluble ash, this was filtered through ashless filter paper and then burned once more.

4] Water soluble ash value :

In place of the dil.HCl, the residue of the total ash was added, and the same method was performed with 25 milliliters of water.

5] Alcohol solution extractive value :

Weigh a 5 gm of churna Extract the material with a 100ml of alcohol solvent . Filter the extract to remove any insoluble material. Evaporate the alcohol solvent from the filtered extract to obtain a residue. Weigh the residue to determine its weight. Calculate the alcohol-soluble extractive value using the formula:

Alcohol-soluble extractive value = (Weight of residue / Weight of material) × 100

6] Water soluble extractive value :

Weigh5gm of churna .Boil the material in water for a specified period. Filter the extract to remove any insoluble material. Evaporate the water from the filtered extract to obtain a residue. Weigh the residue to determine its weight. Calculate the water-soluble extractive value using the formula: Water-soluble extractive value = (Weight of residue / Weight of herbal material) × 100

Observation table of physiochemical parameters :

Sr No.	Parameters	Observation
1	LOD (%)	2.4
2	Total ash value (%W/W)	14.6
3	Acid insoluble ash value (%W/W)	6.8
4	Water soluble ash value (%W/W)	11
5	Alcohol solution extractive value (%W/W)	1.92
6	Water soluble extractive value (%W/W)	0.82

[Table 5]

Results and Discussion :

The Churna was Procured and was evaluated for its Organoleptic , Physical , Physiochemical Parameters. All the results Obtained have been tabulated . Churn also shows a good patient compliance .

Conclusion :

In conclusion, the herbal churna for irregular menstruation offers promising potential in regulating menstrual cycles naturally. Its blend of herbs aims to address hormonal imbalances and support overall reproductive health. However, it's essential to consult with a healthcare provider before use, especially for individuals with underlying health conditions or those taking medications. Further research is also needed to validate its efficacy and safety for long-term use.

References :

1) Jain Sanjay, Koka Sweta, Gupta Asim, Barik Rakesh, Malavia Neelesh, Standardization of Chopchiniyadi Churna: An Ayurvedic Formulation, Journal of Pharmacognosy, 2(5), 2010, 61.

2) Pattnayak P, Hardel D.K, Mahapatra P, Standardization of Vaisvanara Churna: A Polyherbal Formulation, Journal of Pharmacognosy, 2(5), 2010, 52.

3) Indian pharmacopoeia, Controller of Publications, 1966, 1, 514- 517.

4) A Martin, Physical Pharmacy, Lippincott Williams and Wilkin, Maryland, 2001, 442-448.

5) Samantha MK, Pulok.K.Mukhergee. Development of natural products. The Eastern Pharmacist 2000, 43:23-24

6) Indian Herbal Pharmacoepia. Indian drug manufacturers association 1998, 1:a 13-20.

7) Mimica Dukin N, Kujundzic S, Sokovic M, Couladis M. Essential oil composition and antifungal activity of F.vulgarae obtained by distillation conditions. Phytotherapy Research. 2003, 17:368-71.

8) Kokate.C.K, Purohit.A.P, Gokhale.S.B, Textbook of Pharmacognosy 2002, 13:550-559.

9) Shan B, Cai YZ & Suu M. Antioxidant capacity of 26 spice extracts & characterization of phenolic constituents. Agriculture and food chem. 2005, 53: 7749-50.

10) Natkami AK. Indian materia medica. Popular prakasan 1976, 1:800-806

11) Peter Benfield. Method of enzymology, Academic Press 1955, 2:149

12) Lowry OH, Rosebrough NJ, Farr AL, Randall RJ. Protien estimation. Biochem 1951, 8: 193265.

13) Alfred Martin: Physical Pharmacy. London. 4 edition, pp.444 (2005).

14) Anonymous: The Ayurvedic Formulary of India. Part-1. Ministry of Health and Family Welfare, Govt. of India, New Delhi, pp.118-120 (2003).

15) Bassett, J., Denney, R.C., Jeffery, G.H. and Mendham, J: Vogel's Text Book of Quantitative Analyxis. FIBS, London, 4th edition. pp.342 (1978).

16) Wagner, H. and Bladt S: Plant drug analysis A Thin Layer Chromatography Atlas. Springer Verlage, Berlin, pp.3-4, 364 (1996).

17) World Health Organization (WHO): Quality Control Methods of Medicinal Plant Materials. Geneva. pp.28-34, 45-46 (1998).

18) Anonymous. A Hand Book of Common Siddha Kaya Kalpa (Rasayana) Herbs for Healthy life, Editor-In-Chief Lavekar GS Editor- Padhi MM Contributors- Ganapathiraman K, Rao MM, Mangal AK, Selvarajan S & Senthilvel G Puh. CCRAS, Department of AYUSH. Ministry of Health and Family Welfare. Govt. of India, New Delhi, 2008.

19) Ansari SH. Standardization of crude drugs- essentials of Pharmacognosy. Ist edition; 2005;14, 581.

20) Billore KV. Yelna MB, Denis TI, and Chaudhari BG. Database on Medicinal Plants used in Ayurveda & Siddha, Vol, 6. Central Council of Research in

Ayurveda & Siddha, New Delhi, 2004,374-400.

21) Gupta AK, Tandon N. Indian Medicinal Plants, Vol. 1", Indian Council of Medical Research, New Delhi, 2003:57-64, 205-211.

22) Sivarajan VV, Balachandran I. Ayurvedic drugs and their plant sources, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi, 1994; 50, 172-173.

23) Aswatha RHN, Kaushik U, Lachake P, Shreedhara CS. Standardization of Ayurvedic churna Apolyherbal formulation, Pharmacognosy Research, 1(4), 2009, 224-227

24) Dey D. Das, MN, Sharma AK., Pharmacognosy of Indigenous Drugs, Vol. 1". (2 reprinted), Central Council of Research in Ayurveda & Siddha, New Delhi 2005:52-76.

25) Iyengar MA. Anatomy of crude Drugs, sixth ed... Manipal power press, Manipal. 1994;26, 50, 62. 25. Iyengar MA. Pharmacognosy of powdered crude Drugs, 1st Edn. Manipal power press, Manipal. 1980,11, 27, 42