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# Importance Of Churna Kalpana In Rasa Shastra & Bhaisajyakalpana

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**Abstract-**

Ayurveda treats the mind, spirit, senses, and physical body. "A person whose body structure and functions in terms of doshas, dhatus, and malas are in a state of Samya or balance, as well as sensory, mental, and spiritual welfare," is the definition of a healthy person's overall health. This definition of health is better than the more recent one put forth by the World Health Organization a few decades ago; it was provided by Ayurveda at least a few thousand years ago. We learn more about who we are in connection to nature through Ayurveda. Ayurveda takes a holistic approach to treatment, looking at the full individual rather than just the area that is diseased. The goal of treatment is to restore the imbalanced body-mind matrix by controlling sexual pleasure, eating habits, sleep patterns, lifestyle routines, and behavior, as well as by administering medication. It was found that some upkalpanas, like Churna Kalpana, might satisfy the need for time as well as requirements like palatability, low dosage, rapid action, ease of handling, long self-life, and swift action. The purpose of this article is to provide readers with information about Churna Kalpana, including its benefits and drawbacks as well as its shelf life.

**Keywords- Ayurveda, Rasa Shastra,Churna Kalpana,Powder.**

**Introduction-**

An important and well-known subject of Ayurveda is Rasa shastra. The aim of this field is to eradicate poverty worldwide and enhance bodily strength while delaying the aging process. It encompasses alchemical knowledge (Lohavedh) and Ayurvedic pharmaceutics, particularly mineral-based treatments. During the pre-vedic era, metals were successfully employed to treat a wide range of illnesses, which is when Rasa Shastra first emerged. Once Lord Buddha arrived and the Ahimsa doctrine took hold, it expanded swiftly. Rasa Shastra reached its zenith at this particular time. In the fourteenth century, Madhavacharya announced in his work Sarva Darsana Samgraha that it was a medical field with independent philosophical foundations.[1] An attempt has been made in this review to present a succinct but comprehensive overview of many components associated to this discipline, given its importance in Ayurvedic medicine and the lack of comprehensive evaluations on the subject.
The medical field is always changing. Medicine and disease have existed for as long as life itself. Numerous elements, such as Agantuka (environmental), Swabhavika (natural), Karmadosha (past sins), Kayikantara (internal agents), and many more, can trigger the onset of an illness. All cultures have always looked to natural resources to ensure the continuance of a healthy state. Since the beginning of time, herbal remedies have been utilized to treat a wide range of illnesses. Because of this, careful observation and reflection are crucial to man's never-ending effort to improve his quality of life.[2] Mankind has been engaged in an endless search to unravel the ultimate mystery of nature. Over the course of civilization, he has made progress in piecing the puzzle together, yet perfection is still elusive.

**Bhaishajya Kalpana:**

Bhaishajya The words "Kalpana" and "Bhaishajya" are the roots of the word "Kalpana." Here, "Bhaishajya" refers to a medication that either cures the illness or manages it without causing any negative side effects. The reason medicine is termed bheshaja is that it dispels fear of illness. The word "bheshaja" generally refers to conquering illness. Actually, it encompasses two crucial and significant facets of medicine and therapeutics[3].

1. **Preventive-** the encouragement and maintenance of longevity, swastha, or good health, in the healthy individual.
2. **Curative-** the recovery of illness among those who are sick and suffering.

The term "Kalpana" refers to both the formulation and the process used to prepare different formulations. A good form for the body that improves bodily prosperity is kalpa. Kalpana and Bhaishajya combine to form the word "Bhaishajya Kalpana" according to the "Shashty Tatpurush Samas." "Aushadh Nirman" is a synonym of "Bhaishajya Kalpana". "Aushadhi" comes from the word "aushaha," which means "the ability to kill the disease," and "dhi," which means "dharayati," which means to maintain this quality. The herb with this kind of property is known as "aushadhi.""[4]

**CHURNAKALPANA:**

The word "churna" refers to the powdered form of one medicine or a combination of two or more pharmaceuticals that have been separated into powders before being thoroughly combined. Churna is defined as a finely ground powdered medicine or combination of drugs in the Indian Ayurvedic formulary. The meaning of the term "churna," according to Sabda Kalpa Drum, is Pesascurnikaranam.

**DEFINITION:**

1. Churna is the substance that is obtained by the Pesana process, which involves trituration or pounding.
2. Churna, as defined by the Indian Ayurvedic Formulary, is a finely ground powdered medication. [5].
3. Churna refers to a powder that is either a single medicine or a combination of two or more drugs that are powdered individually before being combined to a homogenous mixture.
4. Sharangadhara defines Churna as a finely ground, dry medicine that is filtered through a cloth. The synonyms for Churna that are explained include Rajaha or Ksoda. It should be taken in the equivalent of one Karsa Pramana.
5. As per Acharya Kashayapa, the substance that is ground into a fine powder is known as chruna. This churna is utilized for many purposes such as Anjana, Amavikara, Vrana, and Grahani roga.[6]
6. As per Acharya Kashayapa, the material that is ground into a fine powder is known as chruna. This churna is utilized for many purposes such as Anjana, Amavikara, Vrana, and Grahani roga.
7. A dry powder, filtered through a fine cloth is called as churna[7].

**SYNONYMS:**

Rajah, Kshoda, Shushka pista, Adrava kalk.

**Vernacular names:[8]**

English : Powder
Sanskrit : Suska Kalka, Suska Pista, Ksoda, Raja
Hindi : Churna
Kan. : Pudi, Hittu, Churna
Latin : Pulver, Pulverata
Unani : Safaf, Atus, Avadhilana

**CLASSIFICATION OF CHURNA:**

- According to components

1. Simple
2. Compound

- **According to size:**

(1)**Sthula -** Coarse powder - for Hima, Phanta, Kasaya, Sieved through no, 20 sieves.

(2) **Suksma -** Fine powder for Vati, Leha, Nasya, Sieved through No.60 sieve
(3) **Atyanta Suksma (Vastra Galita) -** Bhasmas, Anjannas, sieved through No.100 sieve (very fine powder).

- **According to structure:**

1. Crystalline
2. Amorphous

- **According to composition**

1. Herbal powder
2. Herbo- mineral
3. Mineralo- metallic powder

- **According to karma**

1. Deepana
2. Virechana etc.

**Praksepaka dravyas and their quality:**[9]
These are similar to that Kalka Kalpana.
(1) Guda - Equal to that of Churna
(2) Sarkara - Two times of that of Churna.
(3) Hingu - Quantity which does not cause any Utkleda (Nausea) and must be used after frying.
(4) Liquids - Ghee, oil, honey etc. 2 parts
(5) Milk, water - 4 parts.
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**Process of preparation:**[10]
The drugs that are discussed in Churna Yoga have been dried and purified. Using a mortar and pestle, they are pounded into a powder and then sieved through a thin layer of fabric. The best way to prepare a prescription with many substances is to powder each drug individually, weigh the necessary amounts, and then combine them together. The medications that will be employed in the formulation must come from recently harvested material. Drugs that have been stored for an extended period of time, have altered in color, taste, or smell, or have an insect infestation should be categorically refused.
The aromatic medications are cooked just enough to intensify or enhance their scent. The medications should have any unnecessary stuff eliminated from them. The medications listed in the churna yoga have been dried and cleaned. They are pounded into a powder using a mortar and pestle, then sieved through a very thin fabric layer (vastragalita). When creating a formulation with many substances, the most effective technique is to divide the medications into powder form, weigh the necessary amounts, and then combine them together. Since certain medications include more fibrous matter than others, it is advised to treat each one separately before combining it.

**PREPARATION OF CHURNA:** [11]
The general procedure of preparing Churna can be divided in to 3 parts: -
1) **Purva Karma:** The raw medications are dried in the sun before being ground into powder. Cleanliness and hygiene must always be upheld.
2) **Pradhana Karma:** The dry medications are ground into a powder using an iron mortar. The powdered materials are sieved using a clean, fine cloth. It is fastened to a vessel and covered in powder. The process of sifting involves softly shaking and spreading.
3) **Paschat Karma:** To prevent contamination and humidity from the air, the produced powder is stored in sterile, airtight containers.

**Preservation**:

- Churna should be packed in airtight container.
- Churna which are made with the combination of Kshara should not be preserved in Iron container.

**METHODS OF ADMINISTRATION:** [12]
It is impossible to consume churna without prakshepa, and the following classics mention the quantity of prakshepa:

- Jiggery is the same as Churna
- Double the sugar
- Hingu: Use the quantity after frying that does not result in utkleda (nausea).
- Ghrita: twofold
- Double Taila
- Double Honey
- Fluid – four instances

**Important uses of Churna:[13]**

**According to different Ayurvedic texts the Churna dosage forms have several uses, such as -**

(1) Churna are applied externally for lepana in wounds and skin conditions, Avadhulana (sprinkling), and pratisaran (rubbing with fingers on teeth and gums).

(2) Main medication for various disorders such Hingvastaka Churna, Talisadi Churna, Sankhapuspi, Kalka, etc.

(3) Churnas: Suvarna Bhasma with Trikatu Churna and Abhraka Bhasma with Talisadi Churna are two examples of adjuvants that can be employed.

(4) Vati, Avaleha, Arka, Kasaya, Hima, Phanta, Snehas, Ksirapaka, Asavarista preparations, etc. are made with churnas.

(5) External applications for powders include lepana for wounds and skin conditions, and avadhulana (sprinkling).

**Anupana (vehicle) for Churna[14]:**

Churna is administered with the vehicle called anupana, and old Ayurvedic writings also describe the amount of anupana taken. If jaggery is added to this powder, the amount should be double that of sugar and only enough fried hingu to prevent nausea. Traditionally, churnas are served with equal parts ghee, honey, or tailas. If they are to be taken with a decoction, four times that amount of churna should be added to water, milk, etc.

Churna should be consumed with the appropriate anupana; the amount of anupana is specified based on Dosha. It is characterized as:

1. In Vata Roga: 3 pala (appox. 150g)
2. In Pitta Roga: 2 pala (appox. 100g)
3. In Kapha Roga: 1 pala (approx. 50g)

**Preservation[15]:**

Pack the churna into airtight containers. Prepared churna is usually best kept in glass bottles with a tight stopper. Foil wrapping and polythene provide further damp-proof protection. Churna's self-life duration is stated to be two months, after which time its power progressively decreases. If not ruined by fungi or moisture, the Churna can continue to function for a full year. Ideally, churna should be consumed within two months and stored in airtight containers.

**Shelf life[16]:**

- Churna has a two-month shelf life, according to Sharangdhara.
- Sharangadhara Pu 1/51 - 2 Months
- Three Months of Ratnakara Jwara Yoga
- Gazette notification for two years under D & C Rule 161B by the Department of AYUSH

**Doses[17]:**

General dose of churna is 1 karsha (12g)

**Modern concept of churna (Powders) [18]:**

Although pharmaceuticals are made in a variety of physical forms and shapes, many of them involve the usage of powders in one way or another. Powders are the solid dosage form of medication intended for both internal and exterior use. They are available in crystalline or amorphous form.

**Classification of powders[19]:**

Basically, based on how they are administered, the powders are divided into the following groups.
1.Parenteral powders
2.Powders for external use, such as dental, insufflation, and dusting powders.
3. Powder is used for internal administration; it is further divided into two groups.

- **Simple powders:** These powders have a single component that can be crystalline or amorphous.
- **Compound powders:** These powders consist of two or more drugs that have been combined, separated into doses, and then mixed again.

The solid dose form of medication for both internal and exterior use is powder. They can be found as crystalline or amorphous. Even if the medications are made in a variety of ways and with various physical forms, powders are used in the preparation of many of them.

**Advantages of Powders[20] –**

Powders have a few special benefits.
(1) The amount of active medication in each dose can vary.
(2) Infants and small children who are unable to swallow tablets or capsules can be given it with ease.
(3) Since disintegration is not necessary, powders will work quickly.
(4) Generally speaking, powders are more stable than liquids.
(5) Powders and liquids are less incompatible than liquids.
(6) It can be produced in a wide range of dosage forms, such as tablets, capsules, dusting powders, bulk powders, inhalation powders, powders for reconstitution, etc.
(7) It is less expensive than other dosing forms.

**Disadvantages -**

(1) Preparing and packing them takes time.
(2) They are heavy to move around.
(3) When powders are opened, spills may occur.
(4) A well prepared suspension might be a good substitute in situations when a pill or capsule is inappropriate.
(5) It is not advisable to dissolve drugs in powder form if they degrade when exposed to air.
(6) Powdered medication cannot be dispensed since it is bitter, caustic, and unappealing.

**METHODS OF PREPARATION OF POWDERS:**

**1. Trituration:** Using a pestle and mortar, we can crush coarse granules into tiny particles using this technique.

2. **Pulverization by Intervention:**

When a substance's soft or sticky quality makes it difficult to powder in a mortar, another material is added, and after it has been properly powdered, it is removed. For instance, it's hard to powder camphor, so we add a little alcohol to it, powder it, then let the alcohol evaporate.

3. **Levitation:** By mixing the material with an appropriate non-solvent (levitations agent) to create a paste, the substance becomes powder. One levitation agent that is frequently employed is liquid paraffin.

**Size separation or sifting[21]:**

- Size separation, sometimes called sifting, is the process of separating particles based on their size.
- When comminuting a crude medicine derived from plants, sifting is required.
- Hard material takes longer to mill into fine particles than soft components of crude pharmaceuticals, which do so more quickly. In this scenario, the soft material's fine powder needslessly stays in the mill.

• Sieves are used for sifting, which eliminates the fine powder. The leftover coarse material is once more placed into the mill for grinding. We refer to this type of gritty powder as gruff or tailing. Until all of the material is reduced to the appropriate size, this process is repeated. In order to achieve a homogenous mixture, all of these fractions are finally properly blended.

**PARTICLE SIZE OF POWDER[22]:**

All the ingredients must be blended into a homogenous powder, and the particle size must be as small as possible. This will affect the powder's biological activity and therapeutic efficacy in addition to determining how quickly it dissolves in the stomach and intestine. The U.S. Pharmacopoeia uses descriptive terms like "very coarse," "the powder must be a homogenous blend of all the components," and "it must be of the most advantageous particle size," which not only affects the powder's rate of solubility in the stomach and intestine but may also have an impact on its biological activity or therapeutic performance," to standardize the particle size of powder. Descriptional adjectives like "very" have been used in the U.S. Pharmacopoeia to standardize the particle size of powder.

- **Coarse powder:** A powder that has all of its particles pass through a sieve with a 1.70 mm nominal mesh aperture and no more than 40% pass through a 355 µm nominal mesh aperture.
- **Moderately coarse powder:** A powder that has all of its particles pass through a sieve with a nominal mesh aperture of 710 µm and no more than 40% pass through a sieve with a nominal mesh aperture of 250 µm.
- **Moderately fine powder:** A powder with a nominal mesh aperture of 710 µm for all of its particles, and a nominal mesh aperture of 250 µm for no more than 40% of its particles.
- **Fine powder:** a powder that is entirely separated into particles by a 180 µm nominal mesh aperture screen.
- **Very fine powder:** a powder, all of which particles are filtered through a sieve with 125 µm nominal mesh aperture. When a powder's fineness is expressed as a number, all of the powder's particles are supposed to pass through a sieve whose nominal mesh aperture, expressed in µm, is equal to that number.

When the fineness of a powder is described by mean of a number, it is intended that the particles if powder cell pass through a sieve of which the nominal mesh aperture, in µm, is equal to that number.

**Discussion-**

A traditional Ayurvedic formulation technique called "Churna Kalpana" (Powder Formulation) entails grounding medicinal herbs and components into a fine powder. This age-old method has several benefits, including quick absorption and ease of administration, and is well-known for its medicinal uses. Churna Kalpana has attracted interest in contemporary research because of its potential for novel treatment techniques and drug delivery. The ancient Ayurvedic manuscripts Charaka Samhita and Sushruta Samhita are the source of Churna Kalpana. In the past, churnas, or powders, were widely utilized for both internal and external uses. They had the advantage of being easily dosed, having a fast onset of effect, and being able to be blended with other substances, such water, honey, or ghee.

Traditionally, the herbs are chosen with care, cleaned, dried, and then finely pulverized in mortars and pestles. The churnas' particle size is a major determinant of their therapeutic efficacy, impacting things like absorption and bioavailability. In order to guarantee uniform potency and efficacy among batches, current research focuses on standardizing these procedures. The pharmacological actions of Ayurvedic churnas, such as Triphala Churna, Hingwashtak Churna, and Trikatu Churna, which include anti-inflammatory, antioxidant, digestive, and antibacterial characteristics, have been well studied. Ensuring quality control and standardization is a significant obstacle in the modernization of Churna Kalpana. Due to variations in raw material sources, preparation techniques, and storage conditions, ayurvedic churna compositions frequently alter. Establishing strict quality control procedures, such as evaluating particle size, purity, and concentration of bioactive compounds, is the focus of current research. The effectiveness of different churnas in treating diseases like diabetes, arthritis, digestive issues, and respiratory problems has been assessed in a number of clinical investigations.

**Future Directions in Research:**

1. Integrating Ayurveda and contemporary science to validate traditional claims through thorough clinical trials is where Churna Kalpana research will go further.
2. To produce synergistic results, researchers are looking at the prospect of creating combination medicines that include both modern pharmaceuticals and Ayurvedic churnas.
3. The development of biopharmaceuticals and nanotechnology may make it possible to optimize churna formulations for specific drug delivery.

**Conclusion:**

Because of its many therapeutic effects, ease of preparation and administration, and long history of use, Churna Kalpana, an Ayurvedic formulation method, continues to play a crucial role in traditional healthcare. It is a commonly used preparation because of its simplicity and effectiveness, especially for respiratory, metabolic, and digestive diseases. Modern research has shown that, in order to guarantee its consistent performance and safety, standardization, quality control, and clinical validation are necessary-even though its historical significance and wide applicability are well-documented. Modernizing Churna Kalpana with cutting-edge methods in medication delivery, bioavailability research, and particle size analysis creates new opportunities for fusing traditional medicine with modern medical procedures. In order to close the gap between conventional wisdom and contemporary scientific confirmation, Churna Kalpana must embrace rigorous research procedures, even in the face of obstacles like raw material unpredictability and contamination risk. In the end, Churna Kalpana may prove to be a useful adjunctive treatment in contemporary medicine, especially if further research concentrates on streamlining manufacturing procedures, guaranteeing security, and carrying out extensive clinical trials to bolster its traditional claims.

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