

Body Talcum Powder Through the Lens of Ayurvedic Churna Kalpana

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Abstract- The word *Ayurveda* means "Science of Life." *Ayurvedic* information began in India 5,000 years ago and is often referred to as the prior "Mother of All Healing." The word cosmetic is derived from the Greek word "Kosmetikos" meaning having the power to arrange skilled in decorating. The term cosmetics article intended to be rubbed, poured sprinkled or sprayed or otherwise applied to the human body for beautifying, cleansing. The term *Churna* may be applied to the powder to a single drug or a mixture of two or more drugs, which are powdered separately prior to their being mixed to homogeneity.

Key Words: Churna kalpana, Talcum powder, Types of powder, Formulas of powder Safety & Efficacy

INTRODUCTION

Ayurveda is a science of life; it is one of the oldest medicinal pathy. *Bhaishajya kalpana*, which deals in detail about the preparation of different medicines. "*Bhaishajya kalpana*" derived from two words "*bhaishaja* and *kalpana*". *Bhaishaja* means "*Aushadha*" that which wins the fear of disease or restores the health of a person by stabilizing the *doshas*, and other word *Kalpana* means the process or the method employed for the preparation of pharmaceutical products. *Churna kalpana* is a prominent preparation in pharmaceutical world of *ayurveda* and macerated without any liquid, it is considered as an *upakalpana* of *kalka kalpana*.

¹The term *Churna* may be applied to the powder to mixture of two or more drugs or single drug, which might be powdered one after the other previous to their being blended to homogeneity. *Churna kalpana* is a prominent preparation in pharmaceutical world of *Ayurveda* and macerated without any liquid, its miles taken into consideration as an *Upakalpana* of *Kalka kalpana*. In classical books such as, *Brahattrayi*,

churnakalpana is not mentioned. But *Acharya Charaka*, *Sushruta* and *Vagbhata* defined divers sorts of *Churna* in their *samhita*. *Churna kalpana* is being mentioned for the first time by *Acharya Sharangdhara*.

Definition of Churna

It is the most pre dominantly used form of *Ayurvedic* preparation. Powder can be considered as a dry paste of herbs and so can be considered a part of *Kalka* preparation. Where ingredients are dried well and grinded without adding water or any other liquid, the fine form of medicine thus obtained considered as *Churna* (Powder).

According to *Acharya Sharangdhara* *Churna* means, finely powdered dry drugs which is filtered through a clean cloth. In other words, the fine powder obtained after thoroughly pounding and filtering the completely dry drugs is called *Churna*.

Equipment Required

- Ancient equipments-*Khalva yantra*, *Ulukhal yantra*, White cotton cloth
- Modern equipments- Mortar and pestle, Fine sieve, Shifter, Pulverize, Disintegrator, Mixer-grinder, Ball mills etc.

²General method of preparation:- *Churna* is considered as modified form of *kalka kalpana*. *Churna* is prepared from dry and clean herbs. Herbs are cleansed thoroughly to remove dust before being used in *churna*. Some ingredients are dried in the sun and some are dried in the shade depending on the aromatic and volatile content of herbs and they are powdered by pounding in with pestle & mortar and sieved through a thin layer of cotton cloth. If *churna* is polyherbal, then

weigh each ingredient through cloth and mix them together.

TALCUM POWDER

³Powder applications are extending in an assortment of profoundly created fields, like food sources, makeup, synthetics, and numerous other key fields, especially in drugs. The majority of active pharmaceutical ingredients (APIs) are administered as solid dosage forms, prepared by processing and formation of powders. A powder is a dry, solid substance made up of a large number of finely divided particles (ranging from 10 nanometers to 1000 micrometers) that is often made by crushing, grinding, or comminuting.

Powders have a large specific surface area and surface free energy, therefore, exhibiting some physical and chemical properties. Some of the properties identified with pharmaceuticals, for example, molecule size, shape, surface region, thickness, porosity, flow-ability, will impact the framing, pressing, and handling of an assortment of dose structures, for example granules, tablets, containers, suspensions, and so on. Moreover, the dissolvability and bioavailability of a medication definition can be influenced by some essential qualities of powders also.

⁴powder are one of the important categories of skin care preparations is powders. They are widely used for face and body care, not only by women but also by men. There are body powders, which are also known as dusting powders or talcum powders, face powders and compacts. There are also powders such as deodorant powders, foot powders used for specific purposes.

Fundamentally, powders differ from liquid skin care preparations in their physical characteristics and their most important cosmetic proper ties are determined exactly by these characteristics. Very fine particle size produces large surface area per unit weight which covers a large surface area of the body and results in strong light dispersion.

⁵The powders should have the following characteristics:

- The powder should have good covering power, thus conceal skin imperfections
- It should adhere perfectly to the skin and not pass over without any problem.

- It should not be completely dissipated in a few minutes to avoid re-powdering.
- The powder should be absorbent.
- There should be adequate slip to enable the powder to spread on the skin by the puff without producing a smudged impact.

⁶TYPES OF POWDER:-

1. Simple powder (*Ekaushadh churna*)-E.g. *Haritaki churna*, *Aamlak ichurna* etc.
2. Compound powder (*Mishra churna*)-E.g. *Sitopladi churna*, *Triphlanchurna*

Depending on particle size powder types:-

1. Coarse powder (*Sthool churna*)
2. Fine powder (*Sukshma churna*)
3. Very fine powder (*Atyantsukshma churna*)

⁷ Table no. 1 Sieves conform to the following specification

Approximate sieve number	Nominal mesh aperture size (mm)	Tolerance average aperture size (\pm mm)
4	4.0	0.13
6	2.8	0.09
8	2.0	0.07
10	1.7	0.06
12	1.4	0.05
16	1.0	0.03
--	Mm	$\pm \mu$ m
22	710	25
25	600	21
30	500	18
36	425	15
44	355	13
60	250	13(9.9)**
85	180	11(7.6)
100	150	9.4(6.6)
120	125	8.1(5.8)
150	106	7.4(5.2)
170	90	6.6(4.6)
200	75	6.1(4.1)
240	63	5.3(3.7)
300	53	4.8(3.4)
350	45	4.8(3.1)

OTHER CLASSIFICATION OF POWDERS:-

- Bulk powder for internal use e.g. Fine powders or granules
- Bulk powders for external use e.g. Snuffs, Dusting powders and tooth powders
- Simple and compound powders for internal use

- Powders in the form of compressed tablets and tablet triturates (compressed powders)
- Powders enclosed in cachets and capsules

⁸POWDERS MIXING METHODS:

1. Spatulation:

The powders are mixed in this way by moving a spatula through the powders on a sheet of paper or on a porcelain tile. The method is very useful in mixing:-

(a) Small amount of powder.

(b) Solid substances that liquefy or form eutectic mixtures, when in close and prolonged contact with one another since very little compression or compact results.

2. Trituration:

It can be used to reduce particle size as well as blend powders. A porcelain mortar with a rough inner surface is preferable to a glass mortar with a smooth working surface if particle size reduction and powder mixing are needed..

3. Geometric dilution:

The method is used when potent substances are too mixed with a large amount of diluents. In a mortar, the potent medicine is placed on top of an approximately equal volume of the dilute, and the substances are triturated to mix them slightly. Trituration is repeated

with a second amount of diluents equal in volume to the powder combination in the mortar. At each step, add diluents equal in volume to the mixture in the mortar until all of the diluents have been integrated.

4. Sifting:

Sifters are used to blend the particles together. This method produces a light, fluffy product that is unsuitable for incorporating strong medicines into a diluents basis.

5. Tumbling:

In this the process of mixing powders in a large container rotated by an electric motor. These blenders are widely employed in industry as large volume powder mixers.

⁹Size separation for powder:-The various methods used for separation:-

- Sieving
- Cyclone separator
- Air separator
- Elutriation

¹⁰Evaluation of Powder in modern:-

Evaluation and assessment of various powder products are essential to judge the quality of the products, must include tests for particle size, abrasiveness, apparent density, moisture content, limits for color etc.

¹¹ Table no. 2 Some Formulae of Body powder

Formulae 1	Formulae 2	Formulae 3	Formulae 4
Talc- 75 gm	Talc- 70gm	Zinc stearate- 5.0gm	Satinex- 6.0 gm
Colloidal kaolin- 10 gm	Calcium carbonate- 25.0 gm	Zinc oxide- 5.0 gm	Talc- 88.0 gm
Colloidal silica-5 gm	Zinc stearate- 4.0 gm	Magnesium carbonate (light)- 15.0 gm	Magnesium carbonate(light)- 5.0 gm
Magnesium carbonate- 5 gm	Boric acid- 0.3 gm	Talc- 74.5 gm	Boric acid-0.3 gm
Aluminium state- 4 gm	Perfume oil- 0.7 gm	Perfume- 0.5 gm	Perfume- 0.7 gm
Boric acid- 0.3 gm			
Perfume- 0.7 gm			

¹²Advantages of Powders:

- Powders are one of the oldest dosage forms and are used both internally and externally.
- Powders are more stable than, liquid dosage form.
- It is convenient for the physician to prescribe a specific amount of powdered-medicament depending upon the need of the patient.
- The chances of incompatibility are less as compared to liquid dosage form.
- The onset action of powdered drug is rapid as compared to other solid dosage forms, e.g. tablets, capsules, or pills. Powder dissolves easily in body fluids due to its smaller particle size.
- Large quantity of powdered drugs can be easily administered to the patient orally. The small

particles allow more rapid dissolution of drug in body fluids.

- Patients cannot swallow solid dosage forms, such as, tablets and capsules. They can easily take the powdered medication by itself or mixed with water or any other drink.
- Powders are more economical as compared to other solid dosage form, because these are prepared extemporaneously without involving any special machinery and techniques.

Disadvantages of Powders:-

- Drugs having bitter, nauseous and unpleasant taste cannot be dispensed in powdered form. They are usually difficult to ingest.
- Deliquescent and hygroscopic drugs cannot be dispensed in powder form.
- Drugs which get affected by atmospheric conditions are not suitable for dispensing in powder forms.
- Quantity less than 100mg or so, cannot be weighed conveniently on dispensing balance.
- Uniform, individually wrapped doses of powders (sachets) are required and this may increase the manufacturing expenses.
- Powder must be a homogeneous of all of the components and be of the most advantages also influence the biological activity of a drug.

¹³Powder containers

Powder containers are used for powder products such as fragrance powders, talc's and baby powders. They do not require portability but a usage requirement is a screw or flip top. The product is loaded straight into the container or into an inner drum which is usually paper or plastic. An interior net-like structure over the powder is used to apply the right amount of substance onto a powder puff. The powder puff is commonly made of cotton, acrylic, polyester, or nylon, and the puff base is usually foamed urethane, among other materials. The net is composed of nylon mesh and is framed in paper or plastic.

Packaging & Labeling of powder

- ✓ Hygroscopic, volatile powder & deliquescent powders packed in glass jars rather than pasteboard containers.
- ✓ Amber or green glass for light sensitive components.

- ✓ Should be stored in tightly closed containers.
- ✓ Product for external use must indicate "For external use only" on the label.

DISCUSSION

Churna kalpana is defined as, The drugs are cleaned and dried properly. They are finely powdered and sieved. If more than one medicine is present, each one is powdered individually, sieved, and carefully weighed before being put together. The reason of powdering the different ingredients separately is that, the different drugs have different consistency as soft, medium, or hard. So soft drug gets powdered easily and hard one takes more time, so at a time powder of different consistencies will be obtained. The finer powder has better therapeutic value due to its large specific area its absorb easily in the body. The Dose of powder is usually 1 *Karsha* (1 total 12gm for an adult). Shelf life of *Churna* and its potency for 2 months by *Acharya Sharangdhra* and according to DRUG and COSMETIC RULE 2009 shelf life of *churna* as 2 year.

According to modern view, Powders are intimate mixtures of dry, chemicals or finely divided drugs that may be intended for internal or external use. Powder has good chemical stability, rapid dissolution due to small particle size, flexibility of compounding-easy to prepare, fast action and better bio availability.³ Particle size is a basic property of a powder, which is essential to powder technology and dosage form design. Particle size, typically expressed as particle diameter, is essential to characterizing powders. For instance, smaller particles have greater specific surface area and their bulk density, porosity, flow ability, and solubility significantly differ from that of larger particles.

Talcum powder calms cools and softness the skin, and helps cut down on friction and prevents rashes, absorbs moisture and oil to keep skin dry, relieves itching on the affected area.

CONCLUSION

The comparative evaluation demonstrates that herbal talcum powder is a safer and effective alternative to modern talcum powder. With superior high moisture

absorption, Ph, and consumer acceptance, herbal formulations can replace synthetic talc-based powders.

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