IMPORTANCE OF BHAVANA IN AYURVEDIC FORMULATION

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ABSTRACT
Bhawana is important Samskara mentioned in classics by which even small dose of a drug may be made to produce a very high result i.e. to increase its potency. Bhawana is a process of wet trituration. physiochemical changes helping organic properties to inorganic substances. It is a systematic procedure of enhancing therapeutic qualities in individual drug as well as formulations. Bhawana exert constant pressure and frictional force. The toxic effects and unwanted properties may be neutralized because of influence of Bhawana dravya. Therefore, knowing of Bhawana Dravya mentioned during various Bhasma and formulation preparation has an important role. Bhavana is a wet trituration process and also a size reduction technology, frequently used in Ayurvedic pharmaceutics.

KEYWORDS: Bhawana, Samskara, Pharmaceutics.

Definition
It is the process in which the material is completely submerged in prescribed liquid and triturated till its dryness. Bhawana is a process of wet grinding in which materials are ground with particular liquid media for a specific period facilitates in easy absorption or further processing. Bhawana is also explained as a procedure of soaking the Churna (powders) with liquid overnight and triturate in day time in the presence of sunlight. The Bhavana of a substance with its Swarasa or Kashaya helps in potentiating the substance which shows desired result in reduced dosage. The ideal quantity of Bhavana dravya is mentioned as that which is sufficient to make the powder drug moist homogenous submerged with bhavana dravya.

Objectives
1 To bring minute particles of the material in contact with the liquid media.
2 Transformation of the coarse powder to finer state.
3 To facilitate the material for further processing.
4 Leads to unique and suitable physico-chemical changes.
5 The efficacy of the material.

Amount of liquid media
1 The amount of material to be levigated.
2 The material can be immersed completely.
3 Amount of liquid media should be taken so much, that it can make the material wet through out the specific period of grinding.

Procedures
1 In case where the media is taken as decoction form, the amount of dry herb should be taken equal to the amount of material, eight times water should be added to it and should be reduced to one eighth by boiling. Then the decoction is added to the material, as much that the material remains wet for whole day. This process is continued for seven days.
2 The material is mixed with liquid material and ground till the whole material becomes like dough.
3 The material is mixed with particular liquid media and ground continuously for the specific period.

Significance of Bhavana
The toxic effects if any, Bhavana dravya will be neutralized because of influence of Bhavana dravya. Therefore, selection of Bhavana dravya has an important role, in reducing the impurities/ toxic effects of the substance Bhavana makes the drug easily digestible and assimilable. Completion of Bhavana results in smoothness of the drug leading to non irritability. Usually metals and minerals are processed with help of Bhavana. The addition of Swarasa, Kashaya or water helps in easy grinding of hard drug materials specially metals and minerals. The vegetabledrugs in the form of decoction or juice impart their own therapeutic effects to these metals during processing.

Role of media
Liquid media facilitates in easy and smooth grinding, it eliminates the problem of dust. In this process during
grinding the minute particles of the material come in contact to the liquid media. Pellets can be prepared after proper levigation, so it helps in further processing. Media impregnate its active principles to the material and make the material organic. Liquid media acts as a binding agent also. In case of Kharaliya Rasayana liquid media helps in preparation of pills. Every liquid media possesses some inorganic material. In Bhasma preparation, these inorganic contents are transferred to Bhasma and acts as trace elements, useful for our body. Particular media is mentioned for levigation of specific material indicates some basic relation between the particular media and specific material.

Changes during Bhavana process
(1) Physical changes
(a) Reduction in hardness: By continuous grinding the hard material become soft in consistency.  
(b) Increase in weight: The organic and inorganic contents of the media are impregnated in the material causing gain in weight.  
(c) Particle size reduction: By continuous and repeated rubbing action between two surfaces helps in reduction in particle size.  
(d) Binding agent: In Kharaliya Rasayana during Bhavana liquid media acts as a binding agent.

(2) Chemical changes
Chemical reaction: During levigation minute particles of the material come in contact with the liquid media and during grinding heat is produced. So there may be every possibility of occurrence of chemical reaction between the material and media.

(3) Biological changes
Reduction in the particle size helps in absorption of the materials and increase bioavailability. Induction of trace elements helps in fulfilling the body requirement of trace elements and also acts in many physiological processes. Formation of desired compound during Bhavana process increases the therapeutic efficacy of the material. Organic components of the liquid media are transferred to the material to make it organo-metallic or organo-mineral compounds, which are favourable to the body.

CONCLUSION
It is a Bhavana Samskara which alters the original properties of raw material and induces the new properties into the main drugs through the various liquids (extracts and juices) which act as catalysts to direct the alchemic transformation of original ingredients. This process of impregnation helps in reducing the particle size of the drugs thus increasing their capacity for absorption into the system.

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