IAMJ

Review Article International Ayurvedic Medical Journal ISSN:2320 5091

TABLET & TABLETING IN AYURVEDA (VATI KALPANA)-A REVIEW

Purnendu Panda[1], S.K.Meher[2], Banamali Das[3], G.C.Bhuina[4]

Central Ayurveda Research Institute for Hepatobilliary Disorders, Bhubaneswar, Odisha

ABSTRACT

Vati Kalpana is the outcome of kalka kalpana among the five fundamental preparation of Ayurveda Pharmaceutical science. Sharangadhara has mentioned a specific chapter for preparing Vati (Tablet) by specific techniques in his text. According to the Acharya Sharangadhara, synonyms of Vati (tablets) are Gutika (pills) and Modaka (Large size pills) and Varti (draggees). Vati kalpana plays an important role in pharmaceutics of Ayurveda, owing to many advantages like easy administration, palatability, convenient form for dispensing and transportation. Vatikalpana is a pharmaceutical procedure in which the powder of raw drugs (Herbal or Herbominerals) triturated together with certain Kasayam or Juice or even honey and the medicines are prepared in the form of pills or tablets.In Brhatrayi different Vati formulations are mentioned in different context. But Acarya Sarngadhara was the first person who mentioned the detailed description regarding Vati kalpana in a separate chapter.

Keywords: Vati, Tablets ,Ayurveda

INTRODUCTION

It is fact that the success of treatment depends mostly upon the quality of drugs, for that medical research work gives emphasis to drug research. Similarly in Ayurveda Pharmacy also several Acaryas has been added or modified the different formulations or preparations according to their own experiences from time to time without violating the basic principles, to find out the most potent drug to prepared different formulations of herbal, herbo-mineral compounds in various form. To keep the medicine potent for long time, to prepared the medicine for easy administration and also quick action is taken into consideration. In the Ayurvedic field of practice through several types of kalpanas are being used presently, Vati kalpana plays an important role in pharmaceutics of Ayurveda, owing to many advantages like easy administration, palatability, convenient form for dispensing and transportation. Vati kalpana is a pharmaceutical procedure in which the powder of raw drugs (Herbal or Herbo-minerals) triturated together with certain Kasayam or Juice or even honey and the medicines are prepared in the form of pills or tablets.In Brhatrayi different Vati formulations are mentioned in different context. But Acarya Sarngadhara was the first person who mentioned the detailed description regarding Vati kalpana in a separate chapter.

Synonym:

The synonyms of Vati described by Sarngadhara are Gutika, Vati, Modaka, Vatika, Pindi, Guda, Varti etc.

Gutika: Madicine made into circular shape mass dosage form, is called as Gutika. This can be compared with pills in modern pharmaceutics. Vati is made in the shape of

How to cite this URL: Purnendu Panda Et Al: Tablet & Tableting In Ayurveda (Vati Kalpana)-A Review. International Ayurvedic medical Journal {online} 2016 {cited 2016 July} Available from: http://www.iamj.in/posts/images/upload/1218_1221.pdf

flat circular mass and it is similar to tablet. Varti: If the Gutika or Vati medicine is modified into long oval solid shape form, then it is called as Varti. This is commonly used for local administration in anal canal, vaginal canal, penis, eye for different diseases. Vataka: Medicine moulded into big circular mass form is known as Vataka. Pinda or Pindi: Aushadhi churna is mixed with Sarkara and moulded like Pinda(circular mass) then it is called as Pinda or Pindi. Modaka will be having circular shape and having big size, possessing weight around 20 g, 50 g.

Type of Vati : In the Ayurvedic Pharmaceutical text two types of Vati preparation methods are mentioned , these are,like (i) Agnisadhya Vati and (ii) Anagnisadhya Vati.

Agnisadhya Vati: In case of Agni Sadhya vati preparation, the sugar or Jaggery (guda) or Guggulu is made like lehya on mild fire then the powders of the ingredients are added to the Paka (lehya) which become soft mass paste like then vati is to be made by rolled into circular in shape.

Anagnisadhya Vati: By this process Vati is prepared without heat. The powders of ingredients are either pounded with Guggulu and guda, adding with any suggested liquid or honey to prepared the vati or triturated with any suggested liquid or honey to made into vati

General method of preparation:

The drugs of plant origin are dried and made into fine powders separately. The minerals are made into Bhasma or Sindura, unless otherwise mentioned.In case where Parada and Gandhaka are mentioned, Kajjali is made first and other drugs are added with it one by one according to the formula. These are put into a Khalva and ground to a soft paste with the prescribed fluids. When more than one liquid is mentioned for grinding they are used in succession. When the mass is properly ground and is in a condition to be made into Pills, Sugandha dravyas are added and ground again.

The criteria to determine the final stage of the formulation before making pills is that, it should not stick to the fingers when rolled in between two fingers. Pills may be dried in the shade.

In case where sugar or Jaggery is mentioned, paka of these should be made on mild fire and removed from the oven. The powders at these ingredients are added to that Paka and briskly mixed. When still warm, Vatakas should be rolled and dried in Shade.

For the preparation of Vati Sarngadhara has mentioned the ratio of ingredients that Sita should be taken 4 times, Guda should be taken 2 times, Guggulu and Madhu should taken equal quantity and other liquids taken 2 times more than that of Curna used for Vati.

Preservation: Pills made of plant drugs when kept in air tight containers can be used for two years. Pills containing minerals can be used for an indefinite period. (The Ayurvedic Formulary of India)

Matra: Generally the dose of Vati is mentioned as one Karsa but according to the bala it can be assessed and advised. The above mentioned dose of Vati is for herbal medicine.

Purpose of Vatikalpana: Due to the following reasons, pills are an ideal form of medication such as:

1) Accuracy of dosage: The drugs and excipients are uniformly mixed in the trituration process show active ingredient content within the permitted limits. The patient thus receives the intended dose, an intention not always realised when liquid medicines are measured in domestic spoons of varying capacities.
2) Stability: Drugs in the solid form are usually more chemically stable and having potency for long time. Where there is the possibility of a gradual loss of potency, the date of manufacture should be mentioned on the container. It helps retaining the volatile principles of drugs like Kasturi, Amber, Campor and many herbal aromatic plants.
3) Patient acceptance: Pills containing nausea drugs can be covered with a protective coating to mask the taste. Owing to their

comparatively small bulk pills can be carried by the user without inconvenience, thereby permitting regular dosage, a condition not always easy to achieve with liquid medicines.

4) Economy: Pills are made by mass production method on machines of high efficiency and output. They also represent a rapid and economical means of dispensing.

Characteristics of Good quality of pills/Tablets:

1. It should contain the stated dose within permitted limits.
2. It should be sufficiently hard to withstand reasonable handling from the time of manufacture until they reach the consumer.
3. It should be a suitable size for easy administration and be free from physical imperfections and foreign matter, which would detract from their appearance.
4. It should be disintegrate readily.
5. It is preferable to use micro fine powder for the preparation of Vati.

Analytical Study: To evaluate the quality of finished product obtained after detailed pharmacy method, certain standard criteria are define by many pharmacopeias to which tab/pill should confirm for, factors such as: Uniformity of weight, Hardness of pill/tab, Disintegration time,Water soluble extract,Alcohol soluble extract,Ash value and Loss on drying etc.

Determination of uniformity weight of pills/Tablets: To determine the uniformity of weight of the tablet/pills, twenty pills are selected randomly and weigh individually in a precision weighing balance. Then average weight of each pill is determine with divided the total weight of 20 pills by 20 in each group. The highest weight, lowest weight and average weight of each group of pills are recorded.

Determination of pills hardness: Hardness of pill is tested by placing a pill in a tab/pill hardness tester and rotate the knob to fix the pill in it. Then adjusted the scale to zero, after the setting, pressure is increased by further rotating the knob. When pill broke down the hardness is recorded as indicated in scale. In this process, ten pills of each group are tested and calculated the average hardness of each pill.

Determination of disintegration time: Disintegration time of pill is tested by taking three pills in a tube of the disintegrator apparatus, then adjust the apparatus in such a manner that, the complete up and down movement of both the tube in the beaker containing distilled water was repeated for 30 time per minute when the particles remained above the screen which was readily passed through it was recorded as the disintegration time of the samples.

Determination of water soluble extract: water soluble extract of pill is tested by taking about 5 gms of accurately weighed of the air dried pills sample is taken with 100 ml. of water, in a conical flask, then allow it to stand for 18 hours, with occasionally shaking. After 18 hours this mixture is filtered with taking precaution against loss of water. Then 20ml. of sample filtered is taken in previously weighed porcelain evaporating dish, and this is placed on a hot water bath dried constantly in oven. Then again that porcelain evaporating dish having extract is weighed and obtained quantity of water soluble extract calculated in percentage.

Determination of the ash value: To calculated ash value, at first a porcelain crucible is weighed. Two grams of sample is taken in that weighed porcelain crucible. This porcelain crucible containing samples is placed in an electric furnace by gradually increasing the heat (550-700^{0}C) up to the sample is free from carbon. After that it is cooled and weighed and calculation of the Ash value in percentage of both the trial drugs is recorded.

Determination of loss on drying: To Determination of loss on drying ,a watch glass is weighed accurately, then 1 gm of sample is taken in weighed watch glass and dried in an electric hot air oven at 110^{0}C for 6 hours.,

After that it is cooled and again weighed and calculate. The difference in the two weights which gives the loss on drying of the sample in percentage.

Equipments for Tablets/Pills Manufacturing: In earlier days Ayurvedic practitioners were prepared medicine in their own house and provided their patients but now so many sophisticated equipments are invented to develop pharmaceutical sector and to fulfil the demand of public by preparing bulk quantity of medicines at a time. So the Equipments required for Tablets/Pills Manufacturing are Rapid Mixer Granulator, Double Cone Blender / Mechanical Shifter Spray Coating Machine, Rotary Tablet Press, Tablet Counting Machine, Tablet Polishing Machine, Automatic Tablet Printing Machine, Strip Packing Machine

Some Important Ayurvedic Tablets /Pills: *Abhayadi guggulu, Amrta guggulu, Abha guggulu, Ekavimsatiko guggulu, Kancanara guggulu, Kaisora guggulu, Goksyradi guggulu, Trayodasanga guggulu, Navaka guggulu, Navakarsika guggulu, Triphala guggulu, Pancatiktaghrta guggulu, Punarnavadi guggulu, Yogaraja guggulu, Mahayogaraja guggulu, Rasabhra guggulu, Rasna guggulu, Laksa guggulu, Varadi guggulu, Vyosadi guggulu, Siba guggulu, Saptanga guggulu, Swayambhuva guggulu, Saptavimsatika guggulu, Simhanada guggulu, Vatari guggulu, Agnitundi Vati, Astaksari Gutika, Eladi Gutika, Kasturyadi Gutika (Vayu Gutika), Kankayana Gutika, Khadiradi Gutika (Mukharoga), Khadiradi Gutika (Kasa), Gandhaka Vati, Gorocanadi Vati, Candraprabha Vati, Citrakadi Gutika, Cukkumtippalyadi Gutika, Dugdha Vati, Dhanvantara Gutika, Prabhakara Vati, Pranada Gutika, Plihari Vatika, Bilvadi Gutika, Marma Gutika, Maricadi Vati, Manasamitra Vataka, Mukkamukkatuvadi Gutika, Mrtasanjivani Gutika, Yakrtsulavinasini Vatika, Rajahpravartini Vati, Lavangadi Vati, Lasunadi Vati, Siva Gutika (Laghu), Sukramatrka Vati, Sulaharana Yoga, Sulavajrini Vatika, Sankha Vati, Saubhagya Vati, Surana Vataka, Sanjivani Vati.*

CONCLUSION:

In the Ayurvedic field of practice through several types of kalpanas(formulations) are being used presently, *Vati kalpana* (Tablet/Pills) plays an important role in pharmaceutics of Ayurveda, owing to many advantages like easy administration, palatability, convenient form for dispensing & transporting, to keep the medicine potent for long time and also its quick action. Tablet can be prepared in several ways and product performance can be depend on suitable composition of the formulation, Due to availability of various formulation techniques, good patients compliance and huge potential, several tablet/pill products popularised in the pharmaceutical market. It is also emphasised that newer scientific and technological innovations should be undertaken for the emergence of promising and versatile dosage form with novel performance and characteristics.

Acknowledgement: The authors are very grateful to the Director General and Deputy Director (Tech) CCRAS, New Delhi, for their encouragement and support.

REFERENCES

1. Bhaisajya Ratnabali, Sri Gobind Dash edited with Vidyotini hinditika by Ambikadatta shastri , Chaukhamba sans sansthana ,8th Edi,1987.
2. Charaka Samhita,Vidyotini hindi comm.16th Edi 1989
3. Sarangadhara Samhita,Acharya Sarangadhara, Translated by K.R.Srikantamurty, Published by Chaukhamba Orientalia,Varanasi,4th Edi-2001
4. The Ayurvedic Formulary Of India,Part-I,1st Edi 1978 ,Govt of India,Ministry Of AYUSH.
5. P.Panda,A comparative pharmaco-clinical study of Singhanada Guggulu And Vatari Guggulu on Amavata,M.D(Ay) thesis

,Gujarat Ayurveda University Jamnagar,1998.

CORRESPONDING AUTHOR
Dr. Purnendu Panda
Email: pandaurnendu02@yahoo.com

Source of Support: Nil
Conflict of Interest: None Declared