

**PRINCIPLES OF RAW DRUGS IN BHAISHAJYA KALPANA****Dr. Lata D. Kide\*<sup>1</sup>, Dr. Rajendra Rohidasrao Lokhande<sup>2</sup> and Dr Umesh Bajirao Kale<sup>3</sup>**

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**ABSTRACT**

An endeavour has been made to review and reflect the fundamental principles of Bhaishajya Kalpana in systematic manner with their significance. Hence, the entire principles of Bhaishajya Kalpana are categorized into Principle of Formulation and Principle of Therapeutic Application. Complete understanding of these fundamentals is the prime key for successful research and development in Ayurvedic pharmaceuticals. Principles of using raw drugs in Bhaishajya Kalpana, are important in identification, collection, preservation point of view. In this present article detailing of all these principles.

**KEYWORDS:** Raw drug, preservation Collection, identification, selection.

**INTRODUCTION**

Bhaishajya Kalpana Adharbhuta Siddhanta can be called as fundamental principle of Aushadha Nirmana<sup>[1]</sup> and Aushada Prayoga or

Art of Aushadha Nirmana and Aushadha Prayoga. Main aim of Bhaishajya Kalpana is to develop the quality dosage forms of Ayurveda formulation in order to achieve utmost therapeutical benefits but without the knowledge of proper application of this formulation, desired therapeutic effects cannot be achieved. Hence principles of Bhaishajya Kalpana must include the principle for formulation and for application as well. Pharmaceutical study does not only include the drug manufacturing but also includes its dispensing to the patient in most

suitable form and its application by the patients. Thus, the comprehensive fundamental principles of Bhaishajya Kalpana are-

- Principles of formulations
- Principles for therapeutic application (Aushadha prayoga siddhanta)
- Principles of therapeutic uses

### Review of Literature

Principles of taking raw drug Identification - Collection - Selection - Storage cation.

**Parichaya (Identification):** Proper identification of raw materials is the first process of preparation of medicines. In Samhita and Nighantus several synonyms are mentioned for drugs. Synonyms give an idea for the identification. For instance, Pippali (Piper longum Linn) has so many synonyms. Magadhi indicates place of abundant growth i.e. Magadha, Krishna describe external color i.e. black, Kana tell the external texture i.e. beaded appearances, Usana ascribe its pungent taste, Upkuliya is used for ecological description, Koala for its fruit weigh about 1 Koal (6gm).<sup>[2]</sup>

**Samgrahan (Collection):** Action of Ayurvedic drugs depend on their intrinsic properties which in turn depends on how the drug is collected and processed. Factors such as soil type, agro-climatic conditions and nakshtras, influence the intrinsic properties of drugs.

**Time of collection:** In ancient time, it is advised to collect drugs facing towards East (east indicates vitalizing the plant energy through the sun) or North direction<sup>[3]</sup> (the symbol of moon), it transfers its properties in plants and in pushya, mrigshira, hastha and ashwini nakshatra<sup>[4]</sup> (these nakshatras are considered to be superior) mentioned in classical texts. The general opinion for time consideration is that the time of collection should coincide when the active ingredients are at their optimum level and free from decomposition, example as latex of plants should be collected before sunrise or when they ooze out.<sup>[5]</sup> Milky juice of snuhi (milk hedge) is collected after two or three years old.<sup>[6]</sup> Bilva fruits are collected just before their dehiscence<sup>[7]</sup> and tamarind after their full maturity.<sup>[8]</sup>

**Collection of drugs:** Characteristic of drug growing land: Ideal drug should be collected from perfect land. The characteristic feature of the land and region from where herbs are collected are mentioned in classical texts.<sup>[9,10]</sup> Characteristic features of the herbs: The characteristic feature of the herbs to be collected are also mentioned in Sushruta Samhita.<sup>[11]</sup>

Collection of drugs as per karma (action): According to Acharya Susruta, virechan dravya (purgatives) should be collected from prithvi and jala guna bhuyishta bhumi, for vaman dravya (emetics)- agni, akash, vayu guna bhuyishta bhumi and for samshaman dravya (palliatives)- akash guna bhuyishta bhumi<sup>[12]</sup> whereas Acharya Sharangdhara mentioned Collection based on karma w.s.r season that for vaman and virechan action, drug should be collected at the end of the vasant ritu and for the rest of the action in the sharad ritu.<sup>[13]</sup> Collection of drugs as per virya (potency): Usna virya dravya (agneyaoushadha) should be collected from agneya bhumi and grishma ritu and Shita virya dravya (soumyaoushadha) from soumya bhumi and shita ritu.<sup>[14]</sup> Drug collection based on potency w.s.r Vishesh sthan.- usna and tikshna dravya should be collected from vindhyanchal region and shita prabhav dravya should be collected from Himalayan region.<sup>[15]</sup>

**Selection of dravya (Dravya chayan siddhanta):** Selection of different part of drugs and selection of these parts as per season: The active ingredients of particular part of the plants are at their optimum at particular season. Hence part should be selected accordingly. For Dhataki plant, flowers are to be selected, for Snuhi plant, kshir (latex) is to be used, likewise for Bijak and Khadir plant, the sara (steam core) is to be selected.<sup>[16]</sup> Different Acharyas given their different view regarding parts and season. For instance, According to Acharya Charaka<sup>[17]</sup> in sarad ritu twak (Bark), kanda (Core wood), kshir (Latex) is selected whereas Acharya Sushruta mentioned only collection of bark in this season<sup>[18]</sup> and in Rajnighantu, Panchang (whole part of plant) is to be selected.<sup>[19]</sup>

**Navin and prachin dravya grahan:** In general, selected drugs should be fresh except Vidanga (embelia ribes Krishna (piper longum), Guda (jaggery), Dhanya (cereals and pulses), Ajya (ghee) and Makshika (honey)<sup>[20]</sup> as potency of these drugs increases with the time.

**Dry and wet dravya siddhanta:** However, the general rule is to use a dry drug, only when it is freshly collected and dried whereas the wet drugs are to be used in double the prescribed quantity in all formulation<sup>[21]</sup> barring the exceptions described below. Ardra dravya prayoga (exception) General rule is to use all the wet drugs in double quantity except guduchi, kutaj, vasa, kushmanda, shatavari, aswagandha, sahchari, shatpushpa<sup>[22]</sup> as given.

**Abhava Pratinidhi dravya (drug substitution):** It is the substitute drug in absence of original drug. The concept of pratinidhi dravya overcomes the problem of unavailability of the some drugs which are used in medicinal formulation. Substitutes are intentionally

selected and utilize rationally to achieve the desired effect. The substitution is based on Ayurvedic principles that both the drugs should possess similar guna (properties) and actions means on the basis of pharmaco-therapeutically activity. For astavarga dravya can be substituted by vidarikanda, shatavari, ashwagandha and varahi kanda. Some instances shows similar morphological and chemical constitution of both dravya example kushta (saussurea lappa) as substitute for pushkarmool<sup>[23]</sup> However, there are also instances where substitutes shows no similarities either in morphology or chemical constituents with the original drug example wood of raktachandan and root of ushir. In current period, the drug should be assessed on the basis of their gunakarma and further their analytical and clinical study to test its therapeutically efficacy, should be evaluated.<sup>[24]</sup>

**Storage of raw materials:** To promote safety, efficacy and quality of raw material is the most important aspect in ayurvedic pharmaceutics. This can be achieved by regulating the storage and handling of raw herbs for various Ayurvedic formulation. In ancient times, Acharyas were also concerned for proper storage of raw materials in order to protect from contaminants and to get ideal raw materials for the formulation. Storage house (bheshajgraha) should be free from dust and moisture and should be kept in proper container as mentioned in Sushruta Samhita 38/82.<sup>[25]</sup> Nowadays strict rules and regulation are there in GMP for ASU drugs in T schedule of drugs and cosmetics act 1940 and rule 1945<sup>[26]</sup> for storing the raw materials and finished products. Storage for raw materials should be free from cow webs, insects and rodents and should be under hygienic condition. Adequate provision of light and ventilation should be there, should be free from dampness and provide independent adequate space for raw material, packaging materials and finished products. Raw materials should be used in appropriate container to protect the quality of raw materials and to prevent from damage, dampness, contamination. Proper enclosures of raw materials by suitable cabinations. Cabinations refers to pots, jars, cartons etc. Raw materials of metallic origins, minerals, animal source, fresh herbs, dry herbs, volatile oil, perfume, flavors and plants extract or resin are separately stored in suitable containers under hygienic condition.

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