AYURVEDIC PERSPECTIVE OF DRUG STANDARDIZATION

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ABSTRACT

Standardization is the process of developing and implementing technical standards. The literary review of the Ayurvedic texts reveals that our Acharyas of Samhita period were using mainly freshly prepared medicines of which Panchavidhakashaya kalpanas are the basic pharmaceutical preparation from which all other preparations were developed. A specific method for each and every preparation and some basic standards of finished products are mentioned in Ayurvedic texts to maintain their quality. Acharya Sharangadhara has mentioned detail information about various formulations with respect to their methods of preparation as well as basic standards. Ayurvedic drug standardization requires rational approach and in this regard the fundamental aspect of drug standardization should be preserved. Main obstacle in Ayurvedic drug standardization is different biological source of the drug as the active constituent may vary according to the climatic conditions and geographical source of the drug.

Keywords: Panchavidhakashaya kalpanas, Standardization, Desha.

INTRODUCTION:

It is a well known fact that the great scholars of Ayurveda were very much concerned about the standardization of drugs in a way that an Ayurvedic practitiner is able to prepare, store and prescribe the same drug to his patient. Before screening a drug following parameters are followed i.e. 1. Dravya (Substance) 2. Rasa (Taste) 3. Guna (Property) 4. Veerya (Potency) 5. Vipaka (Post digestion effect) 6. Prabhav (Specific property of substance) 7. Karma (Pharmacological action). Acharya Charak, the Father of Indian medicine says that by proper processing even a poisonous or tikshna dravya can be converted into an excellent medicine. In Ayurveda a great emphasis is given to the complete knowledge of drugs including identification, procurement, processing, preparation and application under a separate branch of learning called Bhaishajya Kalpana (Ayurvedic Pharmaceutics).

The Acharyas had developed and considered the following factors for manufacturing the drug such as –
- Desha (Place of origin and time of collection of raw material)
- Specific part and quality of raw material
- Size and shape of furnaces
- Type and quantity of fuel used in the preparation
- Specification about the place of manufacturing
- Kaal (Time and duration of process)
- Characteristic of finished material
- Saviryata avadhi (Self life)

The astrological aspects were given due to considerations regarding the drug standardization. To collect the herbs Pushya, Hastha, Mrigshira or Ashwin nakshatras are preferred. During these periods plants are found to contain the highest percentage of active principles. Each part of the plant should be collected after its complete maturation. Based on this idea Acharya Charaka, Sushruta, Sharangadhara and Raj nighantu had given a list of seasons corresponding to each part of a plant to be collected. In Charaka Samhita the Gunantaradhana (change in property) is elaborately elucidated with an account of following techniques –
- Toyasannikarsha (Treatment with water)
- Agnisannikarsha (Treatment with heat)
- Shaucha (purification)
- Manthan (churning or grinding)
- Kala (season or duration)
- Vasana (flavouring)
- Bhavana (trituration with plant extract)
The Shishyas (disciples) under the guidance of their Guru strictly followed the above factors. The medicines so manufactured were mainly available to the patients and there was no organized market structure for the sale of these formulations like today. In the present scenario it is not possible for any manufacturing unit to adhere to these instructions due to commercial compulsions. The traditional texts are very clear about the self life of Ayurvedic medicines. It has been mentioned as follows –

<table>
<thead>
<tr>
<th>Products</th>
<th>Saviryataavadhi (Self life)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Raw herbs</td>
<td>One year</td>
</tr>
<tr>
<td>2. Churna</td>
<td>Two months</td>
</tr>
<tr>
<td>3. Avaleha (Chyawanprasha, etc), vati</td>
<td>One year</td>
</tr>
<tr>
<td>4. Medicinal Ghrita and taila</td>
<td>One year</td>
</tr>
<tr>
<td>5. Asava, Arista and Dhatubhasma</td>
<td>Potency increases with time</td>
</tr>
</tbody>
</table>

Even in the present scenario of modern world, most of the Ayurvedic formulations available in the market are not labeled as of manufacturing and expiry date, the toxicity and indications and contraindications. If some of the formulations carry this label, it is not in accordance with the above guidelines of Ayurveda. Industry is also opposed to follow the classical text on this issue. Similarly, other instructions, which have been described in Ayurvedic texts, are also difficult to be followed by the manufacturer. This situation results into the production of sub-standard Ayurvedic medicines. Absence of statutory standards and controls of the authorities made it easier to produce licence for manufacturing and sale of Ayurvedic medicines. On one hand, one could see an increase in the turnover of Ayurvedic industries, the other side, number of generic ayurvedic medicines disappeared from the market or came in short supply.

WHO guidelines for standardization and quality herbal formulations:
- Quality control of crude drugs material, plant preparations and finished products.
- Stability assessment and self life.
- Safety assessment, documentation of safety based on experience or toxicological studies.
- Assessment of efficacy by ethno medical informations and biological activity evaluations.

NEEDS FOR STANDARDIZATION:
- Presence of microorganisms, toxins, pesticides, fumigation agents, radioactivity and the presence of toxic compounds of toxic metals.
- Substitution and misidentification of Ayurvedic drug.

Standardization of Ayurvedic drugs is necessary for the increasing popularity of Ayurvedic medicine in Western world.

CONCLUSION:
The Ayurvedic classics have given the concept of drug standardization and its techniques which were prevalent at that time. If one strictly follows the guidelines given, it will be a great success for Ayurvedic researches and practitioners both. But the increasing commercialisation and need for the society, it has become mandatory for the incorporation of modern methods in stream lining the standardization techniques; along with the existing ones. Thus, the aim of standardization is to combat adulteration and provide reliable, effective and properly processed Ayurvedic drugs to the society.

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