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Review Article

Ayurveda: The Mystery of Life

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ABSTRACT

Ayurveda is a life science which explains about the different dosage forms, which is the physical form of a medication intended for administration. The different dosage forms can be prepared by the physician according to his yukti, considering *samyoga*, *vishesha*, *kala* and *samskara*[1]. Ayurveda is the system of medicine that evolved in India with a rational logical foundation and it has survived as a distinct entity from remote antiquity to the present day. The fundamental on which ayurvedic system is based are essentially true for all times and do not change from are to age^[2]. There are different dosage forms which have been explained in books. These have been classified into different types such as *aushadhakalpana*, *aaharakalpana*, *bahyaandabhyantarakalpana*, solid, liquid and semisolid forms, as well as of plant, animal and mineral origin. these dosage forms are mainly intended to increase shelf life, palatability and to alter potency. These can be used both internally and externally^[1]. Asava and Arishta are considered as unique dosage foam due to their indefinite shelf life^[3].

LIQUID DOSGAE FORMS

- Swarasa
- Sneha
- Hima
- Sandhana etc.

SEMISOLID DOSAGE FORMS

- Avaleha
- Lepa
- Malahara
- Kalka etc.

SOLID DOSAGE FORMS

- Churna
- Vati
- Guggule
- Khanda etc.

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INTRODUCTION:

Ayurveda is a science of life. It is mainly based on the *Trisutra, Hetu, Linga* and *Aushadhi*. Among these *aushadhi* plays a major role in the treatment. *Aushadhi* acts as an aid for the other branches in ayurveda. *Aushadhi* is used to maintain a good health as well as to cure diseases in humans. It is mainly administered according to the condition and convenience of the patient. In ayurveda there is a description of different dosage forms which have been explained nearly 5000 years ago. These are explained in classics for the purpose of making it compatible without losing the potency or efficiency of the drugs. It has been explained in a systematic manner considering all the aspects like *desa, kala, bala* etc. In classics it is mentioned that different dosage forms can be made by the *yukti* of the physician involving principle of *samyoga* or *vibhagato* convert into another dosage form. Also the potency of a drug can be increased or decreased by the same. *Kala* and *samskara* play a very important role in drug collection and augmenting the potency of the drugs. In classics they have also mentioned about the ideal qualities of a drug. It should be suitable for preparing many recipes, should possess the *gunas* and should be readily available. The total number of dosage forms told in ayurveda is not told by any other system of medicine^[1].

Shelf Life Of Ayurvedic Dosage Form:

There is no idea about shelf life of different ayurvedic formulations in the classical texts before of 11th century ad. After about 12th ad, the scholars have provided a specified shelf life/stability period of different dosage forms^[4,5,6]. The *kwatha, kalka* and *swarasa* are remain stable for up to one *prahara* (3 hrs) while *churna* (powder) formulation is having only 2-3 months of stability in its potency whereas nowadays, the airtight packed spices (turmeric, pepper, coriander, etc. Powder) are used comparatively for longer period. Also the stability period of the *vati* (pills) is mentioned to be up to one year which seems to be lesser in comparison to the tablets of allopathic system of medicine. Ayurvedic formulary of India (AFI) also has been specified some time period during which the formulation retains its efficacy. The longer stability in recent dosage forms is naturally the

gift of the present packaging technology which was not much more developed in the ancient time. Also, the modern science has made some advances to control and regulate various aspects of pharmaceutical processing so as to minimize or even eliminate the drawbacks of ancient packing^[7].

Packing Of Ayurvedic Formulations:

As per the reference in *charakasmahita*, a drug should be packed in such type of *bhajana* (vessel/packaging media) which has anurupagunathat is the packing material should not interfere with the physical, chemical or biological property of the drug being packed inside^[8]. Beside this, some of the indications are found for the airtight packaging of *churna, taila*, etc. Types of preparations, in a new *kalash* (earthen vessel with broader body & narrow mouth) and storage in airtight and dark place^[9]. So, it has a great role in obtaining a product of suitable purity and potency because unsatisfactory packaging permits or fasten the degradation in the product. Any package must possess sufficient quality so that it can conquer the mechanical hazards like shock, compression, vibration, etc. And environmental hazards like temperature, moisture, light, infestation, contamination and exposure to oxygen^[10]. Unlike to the ancient era, great advances in design and development of packaging technology has developed packaging materials, which have requisite barrier properties to build stability of the formulations. Various packaging media are available that can be selected according to nature of product being packed inside. These includes metal foils especially aluminum, plastics, glass bottle with closures, tin packs, collapsible tube, rubber, paper and board. Certain photosensitive drugs must be protected from light. There are numerous types of transparent, opaque and coloured containers, available for packaging. Amber glass will usually screen out ultra violet radiation very effectively and is usually the colour recommended for protection from light^[11].

Storage Conditions:

The most important point in the evaluation of the stability study of a product is its storage conditions. It should simulate the conditions under which the drug substance or drug product is

subjected from manufacturing up to its final application. Storage conditions are derived from real climatic situation^[7].

Savirytaavadhi of different ayurvedic dosage forms as per classics.

Dosage form	According to vāngasen	According to sharangdhar	According to yogarantnakar
<i>Kwatha</i>	-----	-----	3 hours
<i>Kalka</i>	-----	-----	3 hours
<i>Swarasa</i>	-----	-----	3 hours
<i>Vati</i>	-----	2 months	3 months
<i>Ghrita and taila</i>	6 months	16 months	12 months
<i>Asava</i>	-----	Long term stability	-----
<i>Rasa</i>	-----	Long term stability	-----

Pros And Cons Of Ayurvedic Dosage Form:

Pros:

- Safe and chemical free: since the medicines are made of natural ingredients and chemicals are not used, the harsh effects of chemicals do not affect the consumer.
- Complete cure: these medicines do not put a stop gap on the disease; they cure it in a way to prevent the reoccurrence of the disease. It aims in giving a long term cure for the disease.
- Improves health: consumption of these medicines not only cures the disease, but also improves overall health by improving metabolism, reducing stress and bringing tenacity.
- No operation: many people have the phobia of going under the knife. Ayurvedic medicines make sure that you do not have to get operated in situations like hemorrhoids, bone inflammation, gall bladder stones and removal of non-terminal tumor.
- Effective cure: there are several issues related to fields like gynecology, psychiatry, toxicology, nutrition, detoxification & rejuvenation, and fertility that have effective cures in this form of treatment and do not have any side effects.

Cons:

- There are several instances in today's world where a person might be given life support to be kept alive. Ayurvedic medicines can help in these situations and it has been seen that consumption of these medicines has worsened the condition of the patient.
- Ayurvedic medicines have a slow and gradual effect on the body generally.
- Since Ayurveda is highly focused on prevention, it doesn't focus on treating diseases caused by bacteria and viruses.^[12]

How Ayurvedic Formulations Work On Body:

Ayurvedic practitioners believe that the body and the world around it is composed of and governed by three basic elements called tridoshas i.e vata, pitta, and kapha. These three are present in each person in varying levels, the functions and qualities of which define one's unique abilities and characteristics, as well as determine how one should eat and live in order to maintain a proper balance.

Classical Ayurvedic Formulations:

- Ark (distillation of herbs):

They are distillates of herb, they are extremely light in nature and very assimilate in the system. Eg. *Gulab Ark, Ajwain Ark*.

▪ *Asava And Arishta (natural Fermented Liquid):*

These are prepared in the form of herbal juices or their decoction to undergo fermentation with the addition of sugar. There is a big difference between *Asavas And Arishta*. The *Arishtas* are prepared by boiling of drug in water while, *asavas* are prepared by using herbal juices. Eg. Arjunarishta, Ashokaarishta, Kumaryasava.

▪ *Avaleh (Jams / Paste Like Products):*

It is semisolid preparation of herb prepared with addition of jaggery, juices or decoction. Eg. *Chavanpryash, Drakshvleh*.

▪ *Bhasma: (Purified Calcination)*

Bhasma are very fine ayurvedic medical powder prepared by the process of calcination. Calcination is the process in which heavy metals, minerals are heated

at high flame and convert them into their oxidize. Eg. *Abhrakabhasma, Godantibhasma, Pravalbhasma*.

▪ *Churna (Powders):*

These are generally raw herbs which are dried and finally powdered and then passed through different sieves to prepare fine powder and then mixed with other appropriate ingredients which are mentioned in ancient texts. Eg. *Lavanbhaskarchurna, Sitopladichurna*.

▪ *Ghrita (Medicated Clarified Butters):*

This process involved that cow's milk is churned to obtain butter, which is heated at a temperature to obtain *ghee*. This *ghee* is then processed to produce *ghrit*. E.g. *Amritghrit, Jatyadighrit*. etc.^[13]

Table No: 1 List Of Ayurvedic Industries In India:

Name of industry	Year	Founders	Product	Brand
Dabur	1884	S.k burman[14]	Health supplements, personal care, oral care, [14,15]	Dabur toothpaste, toothpowder etc.
Sandu pharmaceuticals ltd	1985	Bhaskarsandhu[16]	Granules, tablets, baby care etc.	Sandushatari, sandy corysan tablet, sandugulkand etc.
Organic india	1997	Bharat mitra, bhavani lev[17]	Organic tulsi teas, health supplements and commodities[18]	Tulsi green tea, tulsi masala chai etc.
Vicco	1952	Keshav vishnu pendharkar[19]	Body lotion, skin cream	Vicco turmeric skin cream, vicco body lotion.
Patanjali Ayurved	2006	Baba Ramdev, acharya balkrishna	Food, beverages, personal care etc.	Patanjali soap, patanjali face cream etc. [20,21]
Himalaya	1930[22]	M manal[22]	Baby care, personal care, nutrition etc.	Himalaya face wash, himalaya cream, himalaya soap etc. [23]
Baidyanath	1917	Ram dayal joshi	Beauty care products, foods, medicinal oils etc.	Mahabhringraj tel, kesarikalp, chyawanprash etc.
Shree dhootapapeshwar ltd	1872	Vd. Krunshnashastripuranik, vd. Vishnushastripuranik	Bhasma, rasa, vati etc.	Agnikumar rasa, akeekpishti etc.

Table No: 2 Different Ayurvedic Preparations Used For Some Diseases:

Name	Ayurvedic dose
Bone and joint health	Daburshilajit,shilajit gold capsule, vegorex-10cap etc.
Dibeties	Madhumehariyog 40tab,basant kusumakarras etc.
Eye health	Akikbhasma 5gm,badam pak 100gm etc.
Liver health	Giloyatva 40gm, hapasidsyurup etc.
Lung health	Drakshasav,kafkartariras 40tab etc.

Table No: 3 Machinery Involved In Ayurvedic Preparations:

Sr no.	Category of medicine	Machinery/equipment used
1.	Anjana/pisti	Karel/mechanized/motorized, karel. End runner/ball-mill sieves/shifter.
2.	Churna / nasya/ manjan/lepa/ kwath churn	Grinder/disintegrator/pulveriser/ powder mixer/sieves/shifter.
3.	Pills/vati /gutikamatirai and tablets	Ball mill, mass mixer/powder mixer, granulator, drier, tablet compressing machine, pill/vati cutting machine, stainless steel trays/container for storage and sugar coating, polishing pan in case of sugar-coated tablets,mechanisedchattoo (for mixing guggulu) where required
4.	Kupipakava/ksara/ parpati/lavanabhasmasatva/sindurakarp u/ uppu / param	Bhatti, karahi/stainless steel vessels/patila flask, multanimatti/plaster of paris, copper rod, earthen container, gaj put bhatti, mufflefurnace(electrically operated) end/edgerunner, exhaust fan, wooden/s.s.spatula.

5.	Kajal	Earthen lamps for collection of kajal, triple roller mill, end runner, sieves, s.s.patila, filling/packing and manufacturing room should be provided with exhaust fan and ultra violet lamps.
6.	Capsules	Air conditioner, dehumidifier, hygrometer, thermometer, capsule filling machine and chemical balance
7.	Ointment/marhampasai	Tube filling machine, crimping machine/ointment mixer, end runner/ mill (where required) s.s. Storage container s.s.patila.

Formulations Of Different Ayurvedic Preparations In Ayurvedic Formulary Of India:

- Asavas And Aristas:

Explanation: fermented self generated alcoholic formulation made by soaking the herb in sugar solution or jiggery with madhuka pushpa (madhuca longifolia (J.Konig) J.F.Macbr.) For a specified period of time.

Major constituent with application: draksharista - vitisvinifera linn. As major ingredient. Urakshata – useful in chest injury

- Arka

Explanation: A liquid preparation obtained by distillation of certain liquids or herbs soaked in water using the distillation apparatus.

Major Constituent With Application : Ajamodarka-Apiumgraveolens as the main ingredient, which is used as a digestive.

- Avaleha Or Leha And Paka

Explanation: These are semisolid preparations, prepared with the addition of jaggery, sugar, or sugar candy and boiled with prescribed juice of the herbs or its decoction.

Major Constituent With Application: Kutajavaleha-major ingredient is holarrhenaantidysenterica, used to treat hyperacidity, anemia, and diarrhea.

- Churna

Explanation: Powder Of Herb(s), where a single herb or combinations of herbs are made into a coarse powder

Major Constituent With Application: Narasimhachurna - contains tinosporacordifoliamiers and semecarpusanacardium linn. As the main ingredients, used in the treatment of cough, phthisis, and fever.

- Guggulu

Explanation: an exudate obtained from the plant commiphoraweightii. Preparation having the exudate as the main effective ingredient is known as ‘Guggulu’.

Major constituent with application: kaisoraguggulu (contains mainly t. Cordifoliamiers) and kancanaraguggulu (contains mainly Bauhinia Variegata Linn.).

- Ghritas (Snehakalpa):

Explanation: Preparation in which ghee (Butter Derived from Milk) is boiled with prescribed decoction of drugs according to the formula as prescribed in ayurvedic text. This process ensures absorption of the active therapeutic principles of the ingredients used.

Major Constituent With Application: Asokaghrita is used in the treatment of pelvic pain, lower backache, and anemia and contains *Saracaasoca De Wilde* as the major herb.

- Taila

Explanation: preparations in which oil is boiled with prescribed decoction of drugs according to the formula. This process ensures absorption of the active therapeutic principles of the ingredients of the plant.

Major Constituent With Application: *Prasarinitaila* (major ingredient, *Paederiafoetida Linn.*) And *bhringarajataila* (major ingredient, *Eclipta Alba Linn.*).

- Dravakas

Explanation: Liquid Preparations Obtained From Lavanas (Rock Salts) And Ksaras by Distillation Process With Or Without Any Addition Of fluids . Ksaras are alkaline substances obtained from the ash of drugs. The drugs are cut into small pieces, dried, kept in an earthen pot, and burnt to ash.

Major Constituent With Application: *Sankhadravaka* is used in treating diseases of the abdomen and spleen and contains *Calotropisprocera R.Br.* And *Euphorbia Nerrifolia Linn.* Along with other ingredients.

- Lepa

Explanation: Topical applications in the form of a paste. The drugs are made into a fine powder. Before use on the body, it is mixed with some liquid or other medium indicated in each preparation and made into a soft paste. Water, cow's urine, oil, and ghee are some of the media used for mixing.

Major Constituent With Application: *Avalgudilepa* (contains *Psoralea Corylifolia Linn.*) And *pathyadilepa* (contains *terminalia Chebula Retz.* Along with other ingredients) are some of the examples of this category.

- Vati And Gutika

Explanation: Medicinal preparations in the form of tablets or pills. They are made of one or more drugs of plant, animal, or mineral origin. *khadiradi gutika* is an example to mention.

Major Constituent With Application: It contains *Acacia Catechu.* And is used in the treatment of halitosis, diseases of the teeth, and dental cavities (caries).

- Vartti,Netrabindu, Andanjana

Explanation: preparations used externally for the eye.

Major constituent with application: *Nalikeranjana* (containing *Berberis Aristata Dc* and *Glycyrrhizaglabra Linn.*) And *Tamradi Gutika* (containing *Glycyrrhiza Glabralinn.* And *Saussurea Lappa C.B. Clarke* along with other ingredients) are examples of this category.

- Bhasma And Pishti

Explanation: *Bhasma* -residue after incineration–calcined preparation. *Pishti*-(powdered gem or metal) along with appropriate herbs is Recommended for treatment of critical ailments

Major Constituent With Application: *Louha Bhasma* (ash made from iron) is the main ingredient of preparations like ‘*lauha kalpas*’. *pishti*-(powdered gem or metal) along with appropriate herbs is recommended for treatment of critical ailments.

- Rasa Yoga:

Explanation: contains mineral drugs as main ingredients, and it may be in pillor powder form.

Major Constituent With Application: ‘*Amlapittantaka Rasa*’(contains *t. Chebula retz.*) And ‘*Anandahairava Rasa*’(contains *piper nigrum linn.* And *piper longum linn.*)^[26]

CONCLUSION AND DISCUSSION:

In ayurveda there is an explanation of different dosage forms or *kalpanas*.it is mainly classified into two types; *Aushadhakalpana* and *Aharakalpana*. *Anushadhakalpana* and *secondary kalpana*. It can be again classified according to the state in which they are present i.e liquid ,semi solid, and solid.

All the *kalpanas* which have been mentioned. In ayurveda are mainly aimed at isolation of suitable active principles through different media like water, oil and *ghee*. These different aspects have to be considered in the preparation of formulations like *samyoga*, *vishlesai* i.e., combination and separation of different drugs keeping into consideration factors like *kala*, *smaskara* etc. The various *kalpana* as explained is formulated to achieve increased shelf life, increased potency and greater palatability along with its application of modern technology. I would like to conclude that the selection of the various dosage forms is left to the *yukti* of the *bhishak* as per the need of the patient. Thus, in the present scenario, one may consider the *saviryata awadhi* as an indicative of 'best before use date'. This is the time limit after which one or more properties of the formulations would have shown considerable changes/degradation which can be seen or perceived by the consumer/patients and lead to doubts about the quality of the product and ultimately on its efficacy. In the ancient when there was no industrialization and *vaidyas* themselves used to prepare drug in small scale for the treatment and the main objective of formulations, of a drug, is to achieve the desired action rather than secondary means palatability or shelf life but in today in the era of globalization and large scale production, there is a need to re-determine the revised stability period of these kinds of ayurvedic formulations by following a suitable guidelines.

It is also required to conduct such type of study on each and every particular formulation separately as all the formulations are varying in their composition and each ingredient have some specific stability period which may ultimately affect the formulations^[1,3].

REFERENCE:

- 1) Arun.N, Kadibgilvinay R, Gantibasavaraj Y, Unique Journal Of Ayurvedic And Herbal Medicines, 02 (04), July-Aug 2014.
- 2) V. Narayanaswamy, Ancient Science Of Life, Vol. 1, No.1, Pages 1-7, JULY 1981.
- 3) Guptaankit, Jaiswalmundeeep And Prajapatipradeep K, Indian Journal Of Traditional Knowledge Vol.10 (4), October 2011, PP.627-677.
- 4) Sastri P, Sharangadharasamhita With Commentary,(Choukhambaorientalia Publication, Varansi),2002,13.
- 5) Vaishya S G, Vangasen, (Choukhambha Sanskrit Sansthan, Varanasi), 2005, 73.
- 6) Shastri Lp, Yogarantnakar, (Choukhamba Sanskrit Sansthan, Varanasi), 2005, 203.
- 7) Guptaankit, Jaiswalmundeeep And Prajapatipradeep K, Indian Journal Of Traditional Knowledge Vol.10 (4), October 2011, PP.627-677.
- 8) Acharya Jt, Charakasamhita With Commentary, (Choukhambha Sanskrit Sansthan, Varanasi), 2001, 653.
- 9) Acharya Jt, Charakasamhita With Commentary, (Choukhambha Sanskrit Sansthan, Varanasi), 2001, 260.
- 10) Carter Sj, Cooper & Gunn's Tutorial Pharmacy,(Cbs Publishers & Distributors, New Delhi), 2004, 135.
- 11) Anonymous, Inorganic Medicinal And Pharmaceutical Chemistry, (Varghese Publishing House, Mumbai), 1986, 169.
- 12) Quora: Complementary & Alternative Medicine.
- 13) Planet Ayurveda.
- 14) How Dabur's Burman Segregated Family And Business Forbes India Retrieved 27 July 2017.
- 15) Our Founders Dabur.Com Retrieved 23 December 2013.
- 16) Sandu Pharmaceuticals Ltd, Wikipedia"
- 17) Srinivas, Nidhinath(2008-12-14) "Azamgarh Gives A Radical Thumps-Up", Economic Times Bennett Coleman &Co.Ltd. Retrieved 2009-07-27.
- 18) Herbal Gulals's Passe, It's Now Time For Organic Colours The Hindu, 2009-03-06 Retrieved 2009-07-27.
- 19) The Trust – Kv Pendharkar Collage", "Vicco Laboratories Product".
- 20) Patanjali Ayurved faQ's ,Patanjali Ayurved Retrieved 22 January 2016.
- 21) Baba Ramdev Empire Soars “.
- 22) The Himalaya Drug Company”
- 23) Nabeelmanal, CEO Himalaya Herbal Healthcare”.
- 24) Cure Veda Wikipedia

- 25) Good Manufacturing Practices For Ayurvedic, Siddha And Unani Medicines Schedule.
- 26) Jitendra S. Sharma, Subhadip Banerjee, Rajarshi Biswas, Bhaskardas, Debayan goswami, Ranjit K.

Harwansh, c.k. Katiyar, Pulok K. Mukherjee ,Journal of Ethnopharmacology 197(2017) 25-31.

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