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A Critical Analysis on pharmaceutical study of *Chyawanprasha Rasayana*

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ABSTRACT

Chyawanprasha is a widely consumed dietary supplement, which is very much popular for its nutritional value. In Ayurveda, *Chyawanprasha Avaleha* is classified under the category of *Rasayana*, which aims at maintaining vigour, vitality and physique, while delaying the ageing process. It is believed that *Chyawanprasha* helps not only in maintaining homeostasis but also increases immunity of the body. There are various references for *Chyawanprasha Avaleha* in Ayurvedic texts. Among them, references in *Charaka Samhita* and *Sharngadhara Samhita* are significant. Here, in this article an attempt has been made to analyze the preparation of *Chyawanprasha* according to *Charaka Samhita*. *Chyawanprasha* deserves a scientific exploration so as to document its therapeutic utility.

Key words: *Chyawanprasha*, *Charaka Samhita*, *Sharangadhara Samhita*, *Immunity*, *Rasayana*.

INTRODUCTION

Human *Chyawanprasha* is one of the most popular Ayurvedic preparations placed under 'Rasayana' group of drugs which aims at maintaining physique, vigour, and vitality, while delaying the aging process.^[1] *Chyawanprasha* is named after sage *Chyawana*, who first consumed the formulation to impart youth, charm, vigour and longevity.^[2] It is a comprehensive herbal tonic, which serves as a nutrient for healthy individuals includes around fifty herbs including *Amlakias* major ingredient. Being the major ingredient and richest source of vitamin C (not deteriorated on heat exposure during preparation),^[3] it plays a major

role in pharmacology of *Chyawanprasha*.^[4] *Amalaki* also furnishes *Chyawanprasha* at least with five tastes such as sweet, sour, bitter, pungent and astringent.^[5] Sugar and honey also provide sweet taste, which is *Sarvadhaturvivardhanah* (responsible for the proper development of body tissues).^[6] Above all it can be consumed in all seasons, as it contains ingredients, which are weather friendly nullifying the unpleasant effects due to extreme environmental and climatic conditions.^[7,8]

Along the time, as new Ayurvedic texts were written, variations started in the way of preparation of *Chyawanprasha*. In today's era, number of Ayurvedic medicines including *Chyawanprasha* is being manufactured by the herbal companies in their own way. The *Charaka Samhita*, which is the oldest Ayurvedic text, method that has been described is the best way to prepare *Chyawanprasha*. Present article is a humble attempt to analyze the pharmaceutical properties of *Chyawanprasha* prepared with all the possible scriptural directions as in *Charaka*, so that the people get same health benefits by consuming *Chyawanprasha* as ancient. People around the world now use *Chyawanprasha*, as anti-stress, anti-ageing, immunity booster, vitalize and a comprehensive general tonic. *Chyawanprasha* improves all aspects of health when taken regularly. (Table 1)

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MATERIAL AND METHODS

Collection of the drug

Ingredients of *Chyawanprasha* were procured from local area of Hisar, Haryana, India. Each of the plant ingredient of this formulation were taken in the quantity of one *Pala* (48 gm) as per given in *Charaka Samhita*, viz. *Bilva*, *Agnimantha*, *Shyonaka*, *Patala*, *Kashmarya/Gambhari*, *Bala*, *Prishniparni*, *Shalaparni*, *Mudgaparni*, *Mashaparni*, *Pippali*, *Gokshura*, *Bruhati*, *Kantakari*, *Shrungi*, *Tamalaki*, *Draksha*, *Jivanti*, *Pushkaramoola*, *Agaru*, *Abhaya*, *Guduchi*, *Varahikanda*, *Vidarikanda*, *Vidarikanda*, *Shati*, *Musta*, *Punarnava*, *Shatavari*, *Ela*, *Chandana*, *Utpala*, *Vidarikanda*, *Vasa Moola*, *Ashvagandha*, *Kaknas* along with five hundred (500) *Amalaki* fruits.^[9] Above all *Vanshalochana* (192g / 4 pala), *Pippali* (96g/2pala), *Twaka* (48g / 1 pala), *Ela* (48g / 1 pala), *Patra* / *Tamalapatra* (48g /1 pala), *Nagkeshara* (48g /1 pala) were taken as *Prakshepa Dravya*. Their characteristics were authenticated by the Department of *Dravyaguna*, National College of Ayurveda, by correlating their morphological and microscopic features with relevant literature. (Table 1)

Table 1: Ingredients of *Chyawanprasha* according to *Charaka Samhita*^[10] and their properties.^[11]

SN	Plant name	Botanical names	Part used	Properties
1	<i>Bilva</i>	<i>Aegle marmelos</i> Correa.	Rt./St. Bk.	Useful in chronic dysentery, diarrhoea and dyspepsia.
2	<i>Agnimantha</i>	<i>Premna integrifolia</i>	Rt./St. Bk.	Laxative helps in indigestion and Cough.
3	<i>Shyonaka</i>	<i>Oroxylum indicum</i>	Rt./St. Bk.	General debility, diarrhea and dysentery.
4	<i>Patala</i>	<i>Stereospermum suaveolens</i>	Rt./St. Bk.	General debility, dyspepsia, blood disorders, cough and acidity.
5	<i>Kashmarya/Gambhari</i>	<i>Gmelina arborea</i>	Rt./St. Bk.	Promotes lactation and helps in

				indigestion
6	<i>Bala</i>	<i>Sida cordifolia</i>	Pl.	Cardiotonic, stomachic, aphrodisiac and general tonic.
7	<i>Prishniparni</i>	<i>Uraria picta</i>	Pl.	General debility, nervine tonic, cardiac and blood disorders, antidote for snake venom
8	<i>Shalaparni</i>	<i>Desmodium bulbifera</i>	Pl.	General debility, nervine tonic, cardiac, blood and respiratory disorders.
9	<i>Mudgaparni</i>	<i>Phaseolus trilobus</i> <i>nsu</i>	Pl.	Aphrodisiac, mild sedative, general debility, malnutrition and fatigue
10	<i>Mashaparni</i>	<i>Teramnus labialis</i>	Pl.	Aphrodisiac, mild sedative, general debility, malnutrition and fatigue
11	<i>Pippali</i>	<i>Piper longum</i>	Fr.	General debility, dyspepsia, flatulence, respiratory tract infection.
12	<i>Gokshura</i>	<i>Tribulus terrestris</i>	Pl.	Aphrodisiac, diuretic and cardiotonic
13	<i>Bruhati</i>	<i>Solanum indicum</i>	Pl.	Cardiotonic, astringent, carminative and helps in flatulence
14	<i>Kantakari</i>	<i>Solanum xanthocarpum</i>	Pl.	Mucolytic, expectorant, allergic bronchitis, bronchial asthma and common cold
15	<i>Shrungi</i>	<i>Pistacia integerrima</i>	Gl.	Expectorant, carminative, anorexia, cholagogue, cough and asthma.

16	<i>Tamalaki</i>	<i>Phyllanthus niruri</i>	Pl.	Appetizer, cholagogue, laxative, hepatoprotective and antiviral.
17	<i>Draksha</i>	<i>Vitis vinifera</i>	Dr.Fr.	Nutrient, stomachic, demulcent, laxative, anorexia, hepatoprotective, dyspepsia and constipation
18	<i>Jivanti</i>	<i>Leptadenia reticulata</i>	Rt.	Cooling eye tonic, nutrient and aphrodisiac.
19	<i>Pushkaramoola</i>	<i>Inula racemosa</i>	Rt.	Cardiotonic, carminative, antiseptic, diuretic, dyspepsia, indigestion, chronic cough and general debility.
20	<i>Agaru</i>	<i>Aquilaria agallocha</i>	Ht.Wd.	Aromatic, neurotrophic, carminative and aphrodisiac
21	<i>Abhaya</i>	<i>Terminalia chebula</i>	P.	Neurotrophic, carminative, infertility, cardiac and liver disorders
22	<i>Guduchi</i>	<i>Tinospora cordifolia</i>	St.	General tonic, immunomodulator, helps in degenerative disorders.
23	<i>Varahikanda</i>	<i>Dioscorea bulbifera</i> (Substitution for <i>Riddhi</i>)	Sub.Rt. .Tr.	Aphrodisiac, useful in acidity and ulcers.
24	<i>Vidarikanda</i>	(Substitution for <i>Jivaka</i>)	Rt.Tr.	Aphrodisiac, tonic helps in nervous debility, skin problems, hepatic disorders and constipation.
25	<i>Vidarikanda</i>	(Substitution for <i>Rishabhak</i>)	Rt.Tr.	Aphrodisiac, tonic helps in nervous debility, skin

		a)		problems, hepatic disorders and constipation.
26	<i>Shati</i>	<i>Curcuma zedoaria</i>	Rz.	Stimulant, tonic, depurative, vertigo and during pregnancy
27	<i>Musta</i>	<i>Cyperus rotundus</i>	Rz.	Neurotrophic, carminative, helps in constipation, hepatoprotective.
28	<i>Punarnava</i>	<i>Boerhaavia diffusa</i>	Pl.	Cardiotonic, hematinic, diuretic and helps in anemia
29	<i>Shatavari</i>	<i>Asparagus racemosus</i> (Substitution for <i>Meda</i>)	Rt.Tr.	Aphrodisiac, nutrient, potent galactagogue, good tonic for lactating mothers
30	<i>Ela</i>	<i>Elettaria cardamomum</i>	Sd.	General tonic, useful in anorexia and flatulence.
31	<i>Chandana</i>	<i>Santalum album</i>	Ht.Wd.	Aphrodisiac, tonic helps in nervous debility, skin problems
32	<i>Utpala</i>	<i>Nelumbium speciosum</i>	Fl.	Neurotropic, cardiotonic and helps in general debility.
33	<i>Vidarikanda</i>	<i>Pueraria tuberosa</i>	Rt.Tr.	Aphrodisiac, tonic helps in nervous debility, skin problems, hepatic disorders and constipation.
34	<i>Vasa Moola</i>	<i>Adhatoda vasica</i>	Rt.	Cardiotonic, expectorant, diuretic, cardiac and respiratory disorders.
35	<i>Ashvagandha</i>	<i>Withania somnifera</i> (Substitution for <i>Kakoli</i>)	Rt.	Aphrodisiac, antioxidant, loss of memory, loss of muscular energy

36	<i>Kaknasa</i>	<i>Martynia diandra</i>	Fr.	Hepatotonic, cholagogue, laxative, anorexia, indigestion and constipation
37	<i>Aamlaki</i>	<i>Emblica officinalis</i>	Fr.	Rejuvenative, Neurotropic, Hepatoprotective, antioxidant, cardiogenic, rich source of vitamin C
38	<i>Ghrita</i>	Cow's ghee	-	Nutrient
39	<i>Tila Taila</i>	Sesame oil	-	Nutrient
40	<i>Khanda Sharkara</i>	Sugar candy	-	Sweetening agent.
Rt./St.Bk. - Root/ Stem Bark, Pl. - Plant (Whole), Fr. - Fruit, Gl. - Gall, Dr. Fr.- Dry Fruit, Rt.- Root, Ht.Wd. - Heart wood, P. - Pericarp, St. - Stem, Sub.Rt.Tr.- Substitute Root Tuber, Rt.Tr.- Root Tuber.				

Table 2: *Prakshepaka Dravya*.

S N	Plant name	Botanical names	Part used	Properties
1	<i>Vamshalochana</i>	<i>Bambusa arundinacea</i>	S.C	Stimulant, astringent and aphrodisiac.
2	<i>Pippali</i>	<i>Piper longum</i>	Fr.	General debility, dyspepsia, flatulence, respiratory tract infection.
3	<i>Twak</i>	<i>Cinnamomum zeylanicum</i>	St.Bk.	Anemia, general debility, abdominal distension and anorexia.
4	<i>Ela</i>	<i>Elettaria cardamomum</i>	Sd.	General tonic, useful in anorexia and flatulence.

5	<i>Patra/Tamalpatra</i>	<i>Cinnamomum tamala</i>	Lf.	Helps in general debility, anorexia and indigestion, uterine stimulant.
6	<i>Nagakeshara</i>	<i>Mesua ferrea</i>	Stmn	Nutrient, cardio tonic, brain tonic, carminative and appetizer.
7	<i>Madhu</i>	Honey	-	Mild laxative, bactericidal, sedative, antiseptic, useful for cold, cough, fever, sore eyes, throat, tongue, duodenal ulcers and liver diseases.
S.C - Silicacious Concretion, Fr. - Fruit, St. Bk.- Stem Bark, Sd.- Seed, Lf. - Leaf, Stmn. - Stamens.				

Preparation of the formulation

All the herbs of the decoction (from 1 to 36 in table 1) were coarsely powdered and suspended in around 12.3 liters of water. 500 Ripe fresh *Aamlaki* (each weighing around 15-20 gm, total weight approximately 9 kg) bundled in a clean white cotton cloth and are immersed into the above suspension of herbs and water. Mixture was boiled till the volume was reduced to one quarter (around 3 liters) i.e. decoction was prepared. After removing the cloth, seeds were discarded from *Aamlaki*; rubbed the peels of *Aamlaki* on a mesh, fibers were discarded and finally, *Aamlaki Pisthi* (paste of the Indian gooseberries) was prepared. Decoction was filtered and marc was discarded. *Amalaki Pisthi* was fried with 288gm *Go-ghruta* and 288gm *Tila Taila* (Sesame oil) in an iron pan and heated until turned to reddish brown. Sugar syrup was prepared by dissolving 2.4 kg of *Khandasharkara* (Sugar candy) in the prepared

decoction. In the sugar syrup *Aamalaki pisthi* was added and the iron pan containing *Pisthi* was heated until ghee starts separating. After removing the pan from fire, *Go-ghrita* and powder of *Prakshepadravaya* (condiments) was mixed. After cooling, 288g (6 pala) old honey was added and finally the finished product, which was dark shining brown in colour semisolid in consistency, was prepared.

OBSERVATIONS

Being an *Avlehakalpana*, *Chyawanaprasha* was observed and studied with the standard "*Avaleha Siddhi Lakshana*" mentioned in the Ayurvedic classical texts^[12] i.e. *Asannapaka Lakshna* like *Darvi Pralepatvam* (sticks to the stirrer), *Tantunatvam* (come up as thread like if taken out in a rod), *Apsumajjanam* (should settle down when dropped in water), *Sthiratvam* (stable on shaking) *Patite Na Shiryatvam* (not scatter after falling on the floor) and *Paka Siddha Lakshana* includes *Pidite Mudra* (gives finger prints, when pressed between fingers), *Sukhamarda* (soft and pills should be formed when taken between fingers and rubbed), *Sukhasparsha* (soft to touch), *Gandha Varna Rasodabhava* (good odour, colour and taste). *Paka Siddha Lakshana* indicates the completion of *Paka* and then heat must be stopped. The final product had organoleptic character such as *Amla*, *Madhura*, *Kashya Rasa*, blackish brown colour, *Ghrutagandhi* (typical sweet smell like *Ghruta*) appeared during *Paka* and in final product, all the *Siddhi Lakshana* for *Paka* appeared as mentioned above. *Chyawanprasha* (12-28 gm = 1 *Karsha*)^[13] is taken with 100-250ml milk as *Anupaana*.^[14] It is advised to avoid milk and curd intake for individuals suffering from asthma/respiratory disorders.^[15]

DISCUSSION

Avaleha Kalpana is a dosage form known for its palatability and shelf life. *Khanda Sharkara* (crystalline sugar) and *Aamlaki* are used in maximum quantity. *Khanda Sharkara*, which is a sucrose is used to form the strong solution i.e. syrup. Strong solutions of sucrose prevent the decomposition to which the matter extracted from vegetable to the great osmotic

pressure excreted by the sucrose solution, which is inhibitory to the development of the bacteria, fungi and moulds which are the chief causes of such decomposition,^[16] secondly it provides sweetness to the formulation. So we can say it increase the self-life and also palatability of the product.

Aamlaki fruits are rich in ascorbic acid and researchers showing that ascorbic acid in *Amla* is more stable than in any other sources during heating. Several authors^[17-20] have reported that the chemical constituents of *Amla* (e.g. polyphenols, tannins, leucoanthocyanins and other antioxidants) protect ascorbic acid of *Amla* from destruction.^[20] *Aamlaki* also having a wide range of medicinal value such as Skin anti-aging,^[19,20] Immuno-modulatory,^[23-28] Antioxidant^[29-32] which directly refer its *Rasayana* property.

Honey^[33] and *Ghrita*^[34] which works as 'a carrier of herbs', called as *Yogavahi*, helps in absorption of various herbs deep into the tissues.^[35]

The ingredients of *Chyawanprasha* such as *Nagkesara*, *Tamalapatra*, *Elaichi*, *Dalchini*, *Patla*, *Arni*, *Gambhari*, *Bel*, *Arlu*, *Shalparni*, *Draksha*, *Harde*, *Honey*, *Bhumyaamalaki*, *Kachur*, *Pushkarmool*, *Nagarmotha*, *Kaknasa*, *Vidari Kanda* and *Agar* help in correcting digestive system related complaints.^[36,37] *Pippali*, *Kantakari*, *Kakdashingi*, *Bhumyaamalaki*, *Vasaka*, *Pushkarmoola*, *Prishniparni*, *Arni*, *Shalparni*, *Til* oil and *Amalaki* help in nourishing the respiratory system.^[38]

Nagkesar, *Guduchi*, *Nagarmotha*, *Vidari Kanda*, *Kanwal*, *Agar*, *Ashwagandha*, *Shalparni*, *Prishnaparni* and *Amalaki* help to sharpen the CNS. It also lowers cholesterol levels by improving blood lipid profile.^[39,40] It is effective and enhances libido and fertility in both the sexes. It thickens semen in males and streamlines menstrual cycle in females.^[41,42]

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