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PHARMACEUTICO ANALYTICAL STUDY OF AMALAKYAVLEHA

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ABSTRACT

Panduroga has been well known to Indian people the since Vedic eras. It is explained in complete detail by the *Acharyas* of *Ayurveda* as a specific disease with its pathogenesis and treatment. In *panduroga*, the colour of the body gets changed to pale, sclera, nail, tongue, etc. Due to *Rakta-Alpata*, haemoglobin level decreases from the normal level. It is linked with both important *Dhatus*, i.e., *Rasa* and *Rakta*. It is represented as anaemia, recognised as the world's second important cause of disability and responsible for about one million deaths a year. Recently, physicians preferring *ayurvedic* medicines to manage *panduroga* as these formulations are considered safe compared to modern treatment. Hence, the present study was undertaken to standardize the compound *Ayurvedic* formulation through Pharmaceutical and analytical evaluation. The sample was subjected for various analytical parameters like water soluble extractive, alcohol soluble extractive, ash value, loss on drying, pH, Total sugar and Reducing sugar. Thus, the pharmaceutical characters achieved may provide guidelines for standardization of *Amalakyavaleha* formulation.

Keywords: *Panduroga, Avaleha*, Phamaceutical, Analytical parameters

INTRODUCTION

Avalehas (Semisolid preparations) are semisolid dosage form basically used for internally. *Avaleha* is considered as an *upakalpana* of *kwatha* since *Acharya Sharangadhara* has given almost importance to *kwatha* in the definition[1]. *Avaleha*, is synonymous with dosage forms like *Rasakriya, Phanita, Avaleha, Khanda, Ghana*[2], it can be consumed along with specified *anupana*. *Avaleha* is widely used as rejuvenator (*Rasayana*) in *Samhitas* but it is most frequently quoted in diseases like *Kasa*, *Shwasa*, *Shotha and pandu roga*[3]. *Amalakyavaleha* is a poly herbal formulation used for the management of various diseases like *Pandu roga*, *kamala, halimaka* etc. It is described by *Acharya yogaratnaka* in *pandu Rogadhikara* and it is also explained at *Bhaishajya ratnawali* in *pandu*. Present study is focus on first attempt to develop quality parameters of *Amalakyavaleha* on the basis of Pharmaceutico analytical parameters evaluation[4]. Hence, there is need to scientific proof for standardization of quality parameters. The Pharmaceutico analytical parameters can be used for checking the adulteration and purity of drug. Therefore, the present study was designed to evaluate the Pharmaceutico analytical parameters of *Amalakyavaleha.*

OBJECTIVE OF STUDY

Present study, is aimed to look out on herbal drugs used in the preparation of *Amalakyavaleha* and Standardization of Pharmaceutico analytical parameters evaluation. The purpose of Standardization of final product is to ensure quality control paramenter with therapeutic efficacy. Therefore, maintaining the quality of this product is an important factor.

MATERIALS AND METHODS

Collection, identification of raw drugs

Collection of raw materials[5]

The raw drugs *Amalaki, Pippali, Madhu, Yasgtimadhu, Draksha, Shunthi, Vanshlochana, Sharkara,* of Indian brand were purchased from local market Bareilly. All the herbal drugs were authenticated in Pharmacognosy Laboratory of GAMC Bareilly.

Pharmaceutical study

The dosage from was prepared in the department of *Rasashastra* and *Bhaishajya Kalpana*, GAMC Bareilly. The pharmaceutical study was carried out as mentioned below-

Table No. 1: ingredients of *Amalakyavaleha*[6]

S.N.	Ingredients	Botonical name	Part used	Quantity
1	*Amalaki swarasa*	Phyllanthus emblica	Fruits	3.2 lit.
2	*Pippali*	Piper longam	Fruits	250 gm
3	*Yashtimadhu*	Glycyrrhiza glabra	Stem bark	50 gm
4	*Draksha*	Vitis vinifera	Fruits	250 gm
5	*Shunthi*	Zingiber officinale	Stem	50 gm
6	*Vamshalochana*	Bambusa arundinaceae	Secreted part	50 gm
7	*Madhu*	Honey	-	250 gm
8	*Sharkara*	Sugar	-	2.4 kg

Preparation of *Amalakyavaleha* in *Rasa shastra* & *Bhaishajya Kalpana* Pharmacy of GAMC Bareilly.

First of all, after pressing the *Amalaki* with the help of a machine, the juice *(Swarasa)* is extracted and filtered through a clean cloth. By putting the juice of *Amalaki* obtained in this way in a pan, sugar *Chasni* is prepared by mixing it. After the sugar *Chasni* of 2 strings (*taar*) is made, powder is made of all the other *Prakshepa dravya* (precipitating substances) and put in this sugar syrup to make *avaleha*. When the *avaleha* cools down, take it off the stove and add honey to it[7]. In the process of preparation of avaleha 6.15 kg avaleha was obtained and its sample was studied analytically through available parameters.

Figure no. 1 - *Amalakyavaleha* ingredients and prepared *avaleha*

SOP of preparation of avaleha[8]

Raw material (Part used – root, seeds, bark, leaves,)

⇩

Coarsely (*Yavakuta*) powdered level of grinding should pass through sieve no. 4

⇩

Decoction prepared , *Swarasa* prepared if raw material become fresh

⇩

Quantity of extract obtained in *kwatha* (reduced to one fourth)

⇩

Quantity of sugar, jaggery added moderate fire dissolved & filtered

⇩

Moderate fire boiling

⇩

Constantly check for the signs of completion of *avaleha* preocess

⇩

Prakshepa dravya added and homogenous semisolid mixture

⇩

Addition of honey and mix well

⇩

Packing in air tight containers

Pharmacognostical Study

Amalakyavaleha is herbal drugs used in Intermediate product sample was identified and authenticated by Pharmacognosy department, GAMC Bareilly. The identification was carried out on the basis of organoleptic features and morphological features as per standard references

Pharmaceutical Evaluation

Physicochemical Parameters: *Amalakyavaleha* was analyzed by using qualitative and quantitative parameters at Pharmaceutical Laboratory, GAMC Bareilly. The common parameters mentioned in *Ayurvedic* Pharmacopeia of India and CCRAS guidelines i.e. pH, Loss on drying, acid soluble extractive, water soluble extractive, total sugar, Redusing sugar were taken[9].

Table No. 2 : Organoleptic characters of raw herbal materials used in formulation

Parameters	***Amalakyavleha***
Appearance	Semisolid material
Colour	Chocolate Brown
Odour	Sweetish
Touch	Smooth
Taste	Sweet & Astringent

Table No. 3: Physiochemical parameters of *Amalakyavleha* formulation

No.	**Test**	***Amalakyavleha* sample**
1.	Loss on drying	32.17 %
2.	Water soluble extractive	65.4% w/w
3.	Methanol soluble extractive	8.32 % w/w
4.	Ash value	0.28%
5.	Total Sugar (%)	20.2%
6.	pH value (5% N)	6.1

OBSERVATIONS AND RESULTS

Pharmaceutical Analysis

Organoleptic characters: Organoleptic characters like Texture is semisolid, Taste Sweet and astringent, Colour is Chocolate brown and odour is sweetish. Organoleptic characters like Texture, Taste, Colour and odour Touch were scientifically studied are as per detailed in Table no. 2.

DISCUSSION

Amalakyavaleha is a well-known *Ayurvedic* poly herbal formulation used for the management of various diseases like *Pandu, kamala, Halimaka* etc. It is described by *Acharya Yogaratnakar* in *Pandu Rogadhikara* and also explained in *Bhaishajya Ratnawali* in *Pandu rogadhikara*[10]. The nomenclature of *Amalakyavaleha* is based on its one main ingredient is *Amalaki*. The organoleptic characters of *Amalakvaleha* like dark chocolate brownish colour was found almost similar. Touch and appearance of *Amalakvaleha* was sticky & semisolid. Taste was sweet and astringent, odor was sweetish characteristic. pH of samples *Amalakvaleha* is 6.1 due to acidic nature of swarasa of *Amalaki* which is quantity wise major ingredient. The reason may be semisolid consistency of *Avaleha* that contains considerable portion of moisture. Total ash values of *Amalakvaleha* is 0.28 %. Ash value depends upon the total inorganic substances present in the particular drug; more the inorganic substances present in drugs the ash value will be higher. Total sugar content value depends upon the heating process during preparation. Total sugar percentage of *Amalakyavaleha* is 20.2 %.

CONCLUSION

Present study reveals that quality of *Amalakvaleha as* per pharmaceutico analytical parameters, which helps in justifying the quality of formulation and meet the desired quality. In the present work, the obtained results were found within normal prescribed limits. For first time, this profile of *Amalakvaleha was* established. On the basis of observations and experimental result, the evaluation of research of *Amalakvaleha may* be used as standard reference for further quality control research works and clinical studies.

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