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ANALYTICAL STUDY ON DRAKSHASAVA IN AYURVEDA

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ABSTRACT

Drakshasava is a traditional medicine used in various digestion problems. Asava and Arishta are Ayurvedic preparations that contain self-generated alcohol content and herbal extracts soluble in both water as well as alcohol. Under Ayurveda drakshasava used as traditional tonic. Because of drakshasava obtained from grape juice, which may be fermented and leads to act as weak wine. End conclusion of the research is Brand I is good and most effective on the different parameters of standardization.

KEYWORDS: *Asava; Drakshasava; Ayurvedic, Traditional Medicine.*

INTRODUCTION

Herbal preparations become more significant due to their low toxicity, compatibility with the body, and safety margin.[1] As a result, the extensive utilization of conventional herbal remedies has led to the examination of these bioactive substances using established standard techniques.[2] Some reports suggest that the herbal formulations are being mixed with lower quality drugs or other substances that are not drugs. Drakshasava, a traditional Ayurvedic tonic, is made from grapes and functions as a mild form of wine due to the inclusion of partially fermented grape juice and possibly resins.[4] It is believed to be advantageous for conditions like fatigue, feebleness and

depletion. It is thought to help with Vata-Vayu-Dosha and is recommended for treating heart problems and bleeding in Ayurvedic medicine. The meaning of the Sanskrit term "Draksha" is grape and "Asava" signifies distillate or extract. Drakshasava is a remedy mentioned in Sushruta Samhita, an Ayurvedic book of treatments from the 3rd to 4th century CE.[5] Although the formulations mentioned have been utilized in India for a long time, they have not been officially recognized, possibly due to a lack of proper research data and standardization of methodology related to their development. Nevertheless, certain scientists aimed to conduct a physico-chemical analysis of the commercial formulation and home-made Asava and Arista formulations.

In Ayurvedic formulation, herbal materials play a very important role in the management of healthcare systems and these herbal materials are gaining popularity day by day in many developed countries to be used as an alternative to healthcare. WHO has recommended various standardization processes establishing various test parameters to improve its acceptability and control its quality to ensure the safe use of the drug and its formulations. There was no evidence of such a comparative study in the literature. Therefore, the authors decided to evaluate two well-known brands of drakshasava from the Indian market for a comparative study on selected quality parameters.[7] Materials and Methods The study was conducted in the Department of Pharmacognosy, TMU Moradabad. The study was started after the approval of the respective institutions and the research committee of the institution.[8-10] Collection of Drakshasava Formulations Drakshasava formulations were purchased from two famous pharmaceutical brands of Moradabad region with fresh manufacturing date. All evaluations were performed according to the procedure below. Experimental organoleptic characterization Both samples were evaluated sensory such as color, smell, taste and appearance. Determination of Total Solids An accurately weighed amount of 5.5 ml of the sample is placed in a flat-bottomed, flanged vessel and placed in a water bath at 103°C for slow evaporation of the solvents. The remaining residues were measured after complete drying. Determination of alcohol content the sample preparation (20 ml) was accurately measured, transferred to a distillation flask and, diluted with 140 ml of distilled water. From this, more than 90 ml of distillate was taken into a 30 ml volumetric flask. The relative density was determined by maintaining the temperature at 23 - 25ºC. The percentage of ethanol contained in the preparation was determined. Determination of pH The acidity or alkalinity of Asava was studied by potentiometric method at room temperature following procedure of Indian pharmacopoeia-1996. Determination of refractive index The

refractive index was conveniently measured using the Abbe refractometer at 25ºC employing the wavelength of the D line of sodium (λ = 589.3 nm), after calibrating the apparatus against distilled water whose nD20 at 25ºC was 1.3225. Determination of viscosity The viscosity of Asava was carried out using capillary viscometer at room temperature. Determination of weight per ml The weight per ml of a liquid is the weight, in g, of 1 ml of the liquid when weighed in air at room temperature. The weight per ml of the liquid was determined using Pycnometer at room temperature. The value was determined as the average of three times. Determination of presence of Sugar Reducing sugar The 20 ml of Drakshasava was taken and neutralize with sodium hydroxide and evaporated the solution to half volume on water bath at 50°C to remove alcohol followed by cooling and addition of 10 ml of 21.9 gm of zinc acetate, 3 ml of glacial acetic acid, 10.6 gm of potassium ferro-cyanide and distilled water to make up to 100 ml. After that two ml of Methylene blue indicator was added. Resultant solution was titrated with Fehling solution from burette till end point brick red colour appeared. Non reducing sugar The 20 ml of Drakshasava sample was taken to which distilled water was added and boiled for 30 minutes in a water bath. After that it was cooled down and its pH was brought to 7. Then volume was made 100 ml by addition of distilled water. Then 10 ml of Fehling solution was added and solution was titrated till blue colour appeared. Afterword two drops of methylene blue were added followed by titration till brick red colour was obtained. Statistical analysis Experimental values were expressed as Mean ± SD. The data were subjected to one way analysis of variance (ANOVA) followed by Bonferroni's multiple comparison test.

DISCUSSION

Experiments were conducted to determine the physico-chemical parameters and compare the quality of two marketed Drakshasava preparations following the harmonized methods of Indian Ayurvedic Pharmacopeia. The evaluation studies were based on sensory evaluations such as color, taste, smell and appearance of both the marketed products ie. Brand I and Brand II drakshasava. We found that all samples of drakshasava of different brands conform to the standard values of official reference works. The pH values of the drakshasava samples from different suppliers showed that all the drakshasava samples were acidic in nature. Physicochemical parameters revealed that the results of the two formulations were pH (4.56, 4.46), refractive index (1.39, 1.38), specific gravity (1.09, 1.10), viscosity (2.04, 2.93), alcohol. Content (1.52). % v/v, 9.11 % v/v) and total solid content (23.96 % v/v, 25.37 % v/v). In comparison, the Brand II formula was found to have higher standard

parameter values than the Brand-I formula.[11-12]

CONCLUSION

A previous pharmacological study of Drakshasava in cyclophosphamide resulted in weight loss and reduced crown and rump length in developing mouse embryos, indicating that it is safe to use in pregnant mice and has no side effects even in non-pregnant mice. Therefore, we studied and evaluated two different brands of drakshasava viz. Brand I and Brand II drakshasava products and evaluated them with different physico-chemical parameters. Sample I found the brand to have an ordinary brand compared to the II. In the case of Brand II, this may be due to careless monitoring of the composition during manufacture, as some parameters are on the higher side of the limit. The final conclusion of the study is that Brand I is good and most effective with different normative parameters. Due to legal restrictions, we cannot disclose the names of the actual manufacturer.

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