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A COMPARATIVE ANALYTICAL STUDY OF DIFFERENT SAMPLES OF PANCHTIKTA GRHITA

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ABSTRACT

In view of the present trend of commercialization in the preparation and marketing of Ayurvedic medicine and to ensure the interests of the profession and public, it has become our prime duty to establish the standard pharmaceutical parameter of Sneha Kalpana including manufacturing. Process as well as to find out the physicochemical changes occurring during the process. A standard is a numerical value, which quantity the parameters and thus denotes quality and purity of material.

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INTRODUCTION

Sneha Kalpana was one such evolution from the basic Kalpanas viz. Swarasa, Kalka, Kwatha, Hima and Phanta carving a niche for itself. It is the only Kalpana which can be administered by all the administerable routes of the body, quite efficacious and having a wide acceptability. Shamana, Shodhana, Brimhana, Rasayana are some amongst the multiple effects exerted by Sneha Kalpana with a small variation in the dose or route of administration. Hence, understanding the wide potential of the Sneha Kalpana, this is selected for the current study. Ghrita as the Sneha and the penta-bitters that is Panchatikta processed to formulate Panchatikta Ghrita (Sa. Sam. M. Kh. 9/92) in Different methods to evaluate and potential its therapeutic effect in the disease Eka Kustha (psoriasis) is attempted in this study.

Aims and Objectives

To Explore the Analytical Parameters of

- (a) Amurchhita and Anavartita, (b) Murchhita and Anavartita
(c) Murchhita and Avartita (10 times) sample of the drug.

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MATERIALS AND METHODS

Analytical Study

- Specific Gravity,
- Acid value,
- Refractive index,
- Saponification value,
- Ester value,
- TLC, HPTLC

OBSERVATION AND RESULTS

Analytical study: Organoleptic Characters of Panchatikta Ghrita Samples

Perusal of the data reveals that the Goghrita which is whitish yellow in color, becomes yellowish after Murchhana and it's smell also changes. It also reveals that with the increase in the number of Avartana. The organoleptic characters also changes. It turns from yellowish green (Amurchhita Panchatikta Ghrita) to green. The thickness and bitterness also increases with the increase of the number of Avartana. It is found that, the specific gravity of Ghrita increases after Murchhana and it also increases steadily with the increase in the number of Avartana.

Sample	Color	Consistency	Taste	Smell
A. Goghrita	Whitish yellow	Semi-solid	Kashaya	Characteristic
B. Murchhita Ghrita	Yellowish	Semi-liquid	Kashaya	Character smell of Triphala
C. A. Panchatikta Ghrita	Yellowish green	Semi-solid	Bitter	Characteristic
D. M. Panchatikta Ghrita	Greenish	Semi-solid	Bitter (Compare to C)	Characteristic
E. Panchatikta Ghrita (5 th Avartana)	Greenish	Semi-solid	Bitter(Compare to D)	Characteristic
F. Panchatikta Ghrita (10 th Avartana)	Greenish	Semi-solid	Bitter(Compare to E)	Characteristic

Comparative Analytical Values of different Panchatikta Ghrita Samples

Group	S.G.	L.O.D.	Refractive Index	Acid Value	Sap. Value	Un-sap. Value
Goghrita	0.9102	0.41	1.4620	0.85	229.27	-
M. Goghrita	0.9137	0.26	1.4600	0.21	267.19	-
A.P.T.G.	0.9128	0.09	1.4600	0.85	272.93	0.93
M.P.T.G.	0.9114	1.61	1.4615	0.72	291.26	0.84
P.T.G. (5 th)	0.9138	0.97	1.4620	5.25	221.62	1.63
P.T.G. (10 th)	0.9175	0.01	1.4620	6.81	273.55	1.67

The present data also shows that the loss on drying decreases steadily with the increase in the number of Avartana i.e. from 1.61 after 1st Avartana to 0.97 after 5th Avartana to 0.01 after 10th Avartana. This indicate that Ghrita samples should contain minimum moisture. There is not much variation in the refractive index. So, it may not contribute much to differentiate the samples. The data of acid value reveals that the acid value of Panchatikta Ghrita increases steadily with the increases in the number of Avartana, which was 0.72 after 1st Avartana, increased to 5.25 after 5th Avartana and reached to 6.81 after 10th Avartana during the process of Avartana herbal materials were used which may be contributing for the increase of acid value with the increase of Avartana.

The saponification value of Goghrita increases from 229.27 to 267.19 after Murchhana, while that of Panchatikta Ghrita prepared by using Goghrita as such was 272.93 very near to that of Murchhita Ghrita. Though, the value was high (291.26) in the Panchatikta Ghrita after 1st Avartana prepared by using Murchhita Ghrita as compared to that of Panchatikta Ghrita prepared by using Ghrita as such (without Murchhana) but after 10th Avartana the value was again reduced to 273.55 i.e. almost same to it. The unsaponifiable matter content increases steadily with the increase in the number of Avartana. After first Avartana it was 0.84, which was increased to 1.63 after fifth Avartana and the value reached to 1.67 after tenth Avartana.

Conclusion

- Panchatikta Ghrita was first time used by Chakradatta in Kustha Roga in later part of 11th century A.D.
- Though, Avartana like process are found, mentioned in Charaka Samhita but, Avartana term is given by Sahastra Yoga.
- Sneha Murchhana process is described by Govindadassen in his classic i.e. Bhaishajya Ratnavli (18th Century A.D.) to find better color, odor and smell/remove the Ama Dosh.

- Analytical study reveals that there are differences in values of various parameters among all different Panchatikta Ghrita Samples.
- The acid value of Panchatikta Ghrita increases steadily with the increasing the number of Avartana, (0.21 to 6.81) through a reduction was observed after Murchhana (0.85 to 0.21).
- The saponification value of Go-ghrita (229.27) increases after Murchhana (267.19) but drug Avartana it was decreased (291 – 273).
- Murchhita Panchatikta Ghrita possess significant antibody suppression activity but has no anti-inflammatory and anti-stress activities.
- Dashavarti Panchatikta Ghrita produces significant anti-inflammatory, moderate anti-body suppression and moderate anti-stress activities. Besides it also produces moderate biphasic effect on CMI- initial suppression followed by stimulation.

REFERENCES

- Bhaishajya Ratnavali Jwara Chikitsa.
Chakrapanidutta, chakradutta with vaidyaprabha hindi commentary by dr indradev tripathi, edited by pro. ramanath dwivedi 1997. chaukhamba samskrit sansthan, 3rd edi.
- Charaka Samhita of agnivesha, revised by charaka and drdhabala, vidyotini hindi com. By pandit kashinath shastri and Dr.Gorakha nath chaturvedi (1982), 10th edi., chaukhamba bharati academy, Varanasi.
- Effect of test drugs on formaldehyde paw licking was studied as described by *Bitter et al* (2000).
- Sharangdhar Samhita, Dipika by adhamalla and gudarth dipika by kasiram, chaukhamba orientalia, Varanasi 5th edi. (Madhyam Khand 9/92).
- Sushruta Samhita, edited with Ayurveda Tattva sandipika, hindi commentary by kaviraj Ambikadutta Shastri 2001. chaukhamba samskrit sansthana, Varanasi, 12th edi.
- Vagbhata; s astanga samgraha, hindi commentary by kaviraj atrideva gupta 1993, krishnada academy, Varanasi,
