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Research Article

PHYSICOCHEMICAL ANALYSIS AND DRUG STANDARDIZATION OF TRIPHALADI YONI VARTI

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ABSTRACT

Triphaladi varti is an Anubhuta Yoga of herbo- mineral ayurvedic formulation used as Yoni varti (vaginal suppository) in the case of Slaishmiki Yonivyapath (vulvo vagina candidiasis) and other vaginal infections. The present work was carried out to standardize the finished product of Triphaladi Yonivarti. The ingredients of Triphaladi Yonivarti are Haritaki, Vibhitaki, Amalaki, Haridra, Nimba and Tankana. There has been an increase in demand for the Phyto-pharmaceutical products of Ayurveda so a new pharmaceutical preparation in the form of Triphaladi Yonivarti was tried to be established in the management of Shailshmiki Yonivyapath. Drug was analyzed for the following parameters like physic-chemical (loss on drying, total ash, acid insoluble ash, pH, disintegration) and High performance thin layer chromatography (HPTLC). On the basis of observations and experimental results, the study may be used as standard protocol in the further quality control researches on Triphaladi Yonivarti.

INTRODUCTION

Triphaladi Yonivarti is an Anubhuta Yoga with Harithaki, Vibithaki, Amalaki, Haridra, Nimba and Tankana as ingredients. Triphala[1] possess Kaphaghna, Tridoshaghna property, Haridra[2] is Kandughna, Nimba[3] is Krimighna, Tankana[4] is Sraavahara and Lekhana in nature. Thus the formulation is therapeutically effective in Kapha vriddhi and vaginal infection conditions especially of bacterial, viral and fungal origin. Varti is a pharmaceutical process dealt under modification of the Vati Kalpana which is considered as one of the secondary derivative of Kalka[5]. For globalization of Ayurvedic drug, standardization is very necessary. Hence analytical parameters are essential as a measure of quality control and standardization of the finished product. Analytical study improves the therapeutic applicability of the drug based on its composition. In addition analytical parameters provide a proof of drug identity, purity and substantiate the strength of finished product.

Aim And Objective

The objective of the study was to prepare the Triphaladi Yoni Varti and to standardize it basing on its organoleptic and physico-chemical parameters.

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MATERIALS AND METHODS

Collection, Identification And Authentication Of Raw Drugs

The raw drugs for the study were procured from the Sri Dharmasthala Manjunatheshwara Pharmacy, Udupi. The ingredients were identified and authenticated in the department of Dravya Guna, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan. The ingredients and part used and proportion are listed in (Table 1) below.

Preparation of medicine[6]

The ingredients of Triphaladi Yonivarti- Amalaki, Haritaki, Vibhitaki, Haridra and Suddha Tankana were separately pounded and sieved through a mesh of 16 microns to obtain the fine powder of all the ingredients. They are mixed together uniformly. The mixed fine powder was triturated with sufficient quantity of Nimba Swarasa (Bhavana Drug-Nimba). Fresh leaves of Nimba was fomented using a cloth tied to the lid portion of a stainless steel vessel and later squeezed to obtain the leaf juice. When the mixture attained appropriate consistency, then desired sized-(Index finger thickness) varti were rolled out manually to a dimension of 1.5 inch long, 0.5 inch thickness. Then it is dried in shade and stored in air tight containers at room temperature. Though the *Tarjani Pramana* was standardized, it was tough to maintain equality of size as they were manually prepared**.**

Table 1 Ingredients and its Part used in Triphaladi Yonivarti

Drug	Botanical / Scientific name	Part used
Amalaki	Emblica officinalis	Fruit Pulp/Fruit Rind
Vibhitaki	Terminalia bellerica	Fruit Rind
Haritaki	Terminalia chebula	Fruit Rind
Haridra	Curcuma longalin	Rhizome
Nimba	Azadirachta indica	Leaves,Flowers,Root, Bark,Stem Bark,Seeds,Seed Oil.
Tankana	Borax	

Table 2 Results of organoleptic and physico-chemical parameters of Triphaladi Yonivarti

Parameters	Results	Parameters	Results n=3 %w/w
Color	Dark brown	Loss on drying	8.04
Odour	Characteristic	Total ash	10.87
Taste	Bland	Acid insoluble ash	8.87
Consistency	Hard	pH	6.0
		Disintegration time (min)	More than 45min.

High performance thin layer chromatography (HPTLC)

(Table-3 & Figure 1)

One gram of powdered sample of Varti was dissolved in 10 ml ethanol and was warmed, filtered. 4, 8 and 12µl of the above filtrate were applied on a pre-coated silica gel F254 on aluminum plates to a band width of 7 mm using Linomat 5 TLC applicator. The plate was developed in Toluene: Ethyl acetate (7.0:1.0). The developed plates were visualized in UV 254, 366 nm and then derivatised with vanillin sulphuric acid reagent and scanned under UV 254,366 nm and 620nm. Rf, color of the spots and densitometry scan were recorded.

DISCUSSION

Aim of the analysis was to check the quality of Triphaladi Yonivarti and to standardize the formulation. The Varti proved to be safe and its pH was 6, so it helped in the restoring the normal vaginal flora and fights against the candidiasis where its pH is < 4.5[7]. The vaginal suppositories may be conical, rod shaped or wedge shaped. They are exclusively used for their local action on the vagina. Vaginal suppositories are indicated in case of itching and help to

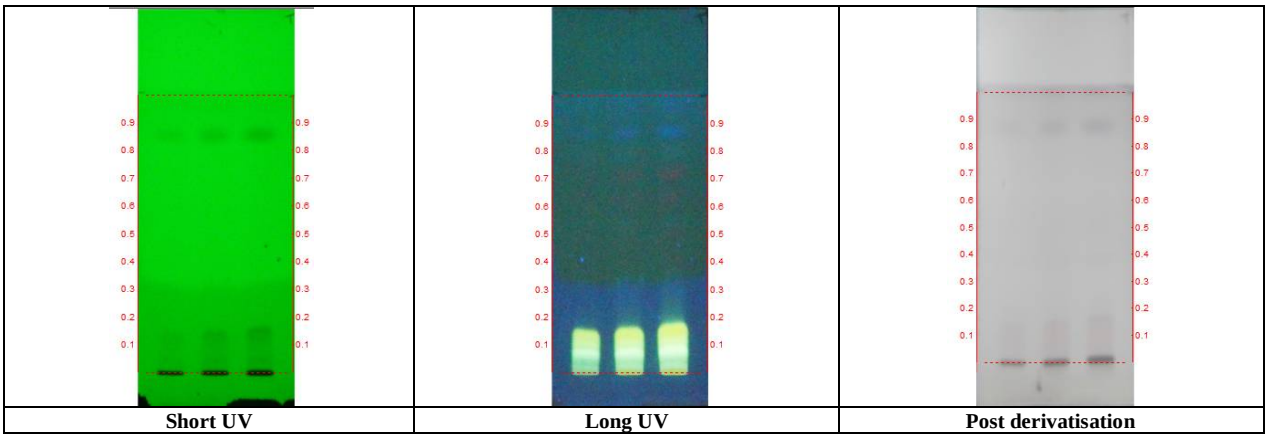

Figure 1 HPTLC photo documentation of ethanol extract of Triphaladi Yonivarti

Table 3 R_f values of samples

Short UV	Long UV	Post derivatisation
0.05 (L. green)	-	-
-	0.07 (F. white)	-
0.11 (L. green)	0.11 (F lemon. Yellow)	-
0.14 (D. green)	0.14 (F lemon. Yellow)	0.14 (L. purple)
-	0.52 (F. red)	-
-	0.65 (F. red)	-
-	0.72 (F. red)	-
-	0.78 (F. green)	-
0.87 (D. green)	0.87 (F. blue)	0.87 (D. purple)

*F – Fluorescent; L –Light; D – Dark

Analytical study

The analytical study, was carried out at S.D.M. centre for Research in Ayurveda and Allied Sciences, Udupi to determine the following physico-chemical parameters like Loss Of Drying, Total Ash, Acid Insoluble Ash, pH, Disintegration time(Table2). Organoleptic characteristics were also evaluated and are as tabulated below (Table.2). HPTLC analysis was carried out using – Toluene: Ethyl Acetate (7:1) as solvent system.

A suppository is prepared by any one of the following three methods: Rolling, Moulding and Cold compression. Moulding method is more common in practice. In this method initially the base is melted and to this a fine powder of the ingredients is added, mixed thoroughly and immediately the mixture in a semisolid form is poured into the lubricated moulds placed on ice cubes. After 5-10 minutes when the suppositories become dry, they are taken out from the moulds. Excess base is removed and they were wrapped in tin- foils and packed. The advantages of the suppositories are self administration, avoidance of oral and parenteral routes (avoids 1st pass metabolism),can be targeted delivery system, concentrate drug at site of action, reduces systemic distribution, reduce side effects, get to site of action with lower dose and reduces systemic toxicity.

CONCLUSION

Organoleptic, physico-chemical evaluation of Triphaladi Yonivarti illustrated the specific characters of all ingredients which were used in the preparation. On the basis of observations and experimental results, this study may be used as reference standard in the further quality control researches. Further studies may be carried out on Triphaladi Yonivarti

based on identification and separation of active ingredients with the help of various biomarkers.

Track 1- Triphaladi varti – 4µl Track 2- Triphaladi varti – 8µl Track 3- Triphaladi varti – 12µl

Solvent system – Toluene: Ethyl Acetate (7.0: 1.0)

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Refferences

1) Prakash L.Hegde, Harini.A, Dravyaguna Vijnana, chowkhamba Publications, New Delhi, Vol-1,1st Ed: 2011.P.No.429.
2) Sastry J.L.N, Dravya guna Vijnana, Chowkhamba Orientalia, Varanasi, Vol-2,2nd Ed: 2005.P.No514.
3) Sastry J.L.N, Dravya guna Vijnana, Chowkhamba Orientalia, Varanasi, Vol-2,2nd Ed: 2005.P.No724.
4) Ravindra angadi, A Text Book of Rasa Sastra, Chowkhamba Subharati prakshan, Varanasi, 1st Ed: 2014.P.No.531.
5) Angadi R. Bhaishajya kalpana Vijnana. 1st ed. Varanasi. Chaukambha Surbharati Prakashan; 2009. P217-9.
6) Sharangdhara, Sastri P. Sharangdhara Samhita. 4th ed. Varanasi. chaukambha Orientalia; 2000. P196-7.
7) Workowski KA, Berman SM. Sexually transmitted diseases treatment guidelines. Centers for Disease *Control and Prevention.*2006;55(4):54

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