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STUDY OF DIFFERENT NEW DOSAGE FORMULATIONS BY USING *YASHTIMADHU* GEL BASE

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ABSTRACT

As *Ayurveda* is increasing in demand there are few challenges we have to face. Specially in case of external application patients prefer medicine which are easy to apply, less time consuming and ready to use. Considering all factors, new dosage formulation plays an important role and makes it more acceptable by society. Gel[1] is one of the new dosage formulation with less chemicals and can be used as a base to prepare different formulations. In this paper, using base of *Yashtimadhu* gel, face wash/cleanser[2], body scrub, pack are prepared. These formulations have medicinal property and can be used differently by using *yukti praman*[3] eg. Scrub for *udvartan*[4], pack as *lepa*[5-6] etc. After preparation analytical study is conducted. Advantages and disadvantages are studied and conclusion and result are obtained.

KEYWORDS: Gel, new dosage, *lepa*.

INTRODUCTION

New dosage formulation is a concept which makes *ayurveda* more acceptable by people. Due to its convenient nature more people are incline towards *ayurveda*. Topical application and cosmetics are one of the most demanded form of *ayurvedic* medicine. Topical gel drug administration is a localized drug delivery system anywhere in the body through ophthalmic, rectal, vaginal and skin as topical routes. Skin is the largest organ of body and can be healed by topical applications. Topical application of drugs offers potential advantages of delivering the drug directly to the site of action and acting for an extended period of time. Topical gels are intended for skin application or to certain mucosal surfaces for local action. Gel formulation provides better application property and stability in comparison to cream and

ointment. By converting *ayurvedic* medications into gel form we can treat our skin with ease and without much efforts. We can also make different formulations from gel according to condition of patients skin. Here preparation of *yashtimadhu*[6] gel is done and by taking same gel as a base different formulations are prepared i.e gel scrub, gel pack and face wash gel. All these are prepared by using decoction of *yashtimadhu*, because *yashtimadhu* is *varnya* also antimicrobial activity *of yashti* is proven. All its gel formulations will enhance skin complexion, pH of all formulations are noted and advantages and disadvantages of all were studied.

AIM

To study preparation and advantages of gel base formulations with their analysis.

OBJECTIVE

1. To study preparation of gel base.
2. To study preparation of other formulations from gel base.
3. To study analytical parameters for gel base formulations.
4. To study advantages and disadvantages of formulations.

PROCEDURE

Table no 1: Material used in preparation of Gel, Scrub, Pack, Face wash.

Gel	Quantity	Scrub	Quantity	Pack	Quantity	Face wash	Quantity
Yashtimadhu decoction	2-3%	Yashtimadhu decoction	2-3%	Yashtimadhu decoction	2-3%	Yashtimadhu kadha	60%
Carbapol 940	1%	Carbapol 940	1%	Carbapol 940	1%	Carbapol 940	1%
TEA	q.s	TEA	q.s	TEA	q.s	TEA	q.s
Water	Qs	Water	Qs	Water	Qs	Water	Qs
Methyl paraben Propyle paraben	1%	Methyl paraben Propyle paraben	1%	Methyl paraben Propyle paraben	1%	Methyl paraben Propyle paraben	1%
		Walnut shell	as much as scrub effect needed			SLS	2%
						Propylene glycol	2%

METHODOLOGY

1) Gel: In 250 ml of water 2gm carbapol is added when it dissolves completely, TEA is added till we achieve proper gel like consistency. Preservatives are added in last.

2**) Scrub**: In this preparation of gel ¼ tsf walnut shells are added.

3) Pack: In gel base glycerin is added and 2-3 drops of TEA are added to get thickness and

4) Face wash: In decoction of *Yashtimadhu* Carbapol is added and on the other hand preservatives and SLS is dissolved in water. Further propylene glycol is added to the *Yashti kadha* followed by SLS. TEA is added drop by drop till expected consistency is achieved.

Fig 1.

OBSERVATION

Evaluation of all formulation was evaluated for various parameters as follows.[8]

Physical evaluation: Physical parameters such as color, odor & consistency were checked visually.

Washability: Formulations were applied on the skin then easily remove by washing with water were checked manually.[9]

Color: The color of the formulations were checked visually.

pH: pH of 1% aqueous solution of the formulation was measured by using a calibrated digital pH meter at constant temperature. To see gel formulations are ready to use, pH of all the formulations were tested. Skin has slight acidic nature the topical must match the pH range i.e 4.5 to 5.5.

Irritancy test: All formulations were applied on left hand dorsal surface of 1 sq. cm and observed in time interval 1 to 2 hrs.[10]

RESULT

Table no 2: Evaluation of formulations.

Formulation Parameters	Gel	Gel scrub	Gel pack	Face wash gel
pH	5	5	5.5	5.5
Color	Yellow	Yellow	Yellow	Yellow
Consistency	Semisolid	Semisolid	Semisolid	Semisolid
Odor	Sweet	Sweet	Sweet	Sweet
Washability	-	-	-	Good
Irritancy	Non irritant	Non irritantv	Non irritant	Non irritant

These gel formulations are more convenient and can be used daily. Though the effect may vary as less amount of *aushadhi* are involved. There is need to find out new dosage formulation with less chemicals and more Ayurveda *aushadhi.* There are more advantages of gel conversion and is easily acceptable by patients. Gel gets easily absorbed in skin and can last longer. We should convert irritable formulation to gel which makes there use easy and enhance effect. From single drug *yashtimadhu* we can prepare many formulations taking gel as a base and these formulation can do multitask i.e nourishment of skin, skin lightning, moisturizing, *lekhan*, enhance complexion, cooling, tightening, cleansing and most important healing. There are some disadvantages but along with that all formulations are effective, convenient and attracting more people to Ayurveda.

DISCUSSION

Topical formulations include creams, ointments, pastes, gels etc. Out of which gels are getting more popular now a days because they are more stable and also can provide controlled release than other semisolid preparations, also better shelf life. The gel formulations can provide better absorption characteristics and hence the bioavailability of drug. It also provide the better therapeutic effects to patient compliance. We can convert gel formulation in various forms easily and can apply it in daily routine of patients.

Gel is one the formulation with less chemical involved, every prepared formulation can be used for different purpose or altogether for extra benefits. Gel for skin protection, on discoloration of skin, burns, wounds etc.

Scrubs for dead skins, for *udhvartan*, mild *lekhan.*

Face wash as cleanser on skin diseases and pack as a lepa for any skin condition or tightening effect.

These formulations provide better absorption. They can last for longer time on skin also easy to use without any mess. They are more effective than marketed topical because of *ayurvedic* medicinal involvement. Oil, *lepa*, powder, *kadha* can be converted into gel form to avoid greasiness and mess which also saves time and efforts and can be easily involved in daily routine of patient.

CONCLUSION

All these formulations can be used topically as they maintain pH range of skin.

Advantages

- Easy to apply.
- No time consumption.
- Non messy, non greasy.
- Can be kept for longer time.
- Absorbs easily.
- In demand and acceptable by patients.
- Convenient and effective.
- Regular use is easy.

Disadvantages

- Contains chemical.
- Less amount of medicines are added.

Along with many advantages few disadvantages are observed but keeping convenience and consistent use in mind we can recommend using different new dosage formulation and also we can do further analytical as well as pre-clinical study to check the activity of formulations on different diseased conditions and their shelf life. Natural remedies are more acceptable as they are safer with fewer side effects than the synthetic ones. Herbal formulations have growing demand in the world market. It is a very good attempt to establish the herbal skin care products.

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