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PHARMACEUTICO-ANALYTICAL STUDY OF MUKHASAUNDARYAKAR YAVADI LEPA AND DEVELOPMENT OF ITS NEW DOSAGE FORM INTO CREAM

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ABSTRACT

Mukhadushika (Acne vulgaris) is a common dermatological disorder predominantly affecting adolescents and young adults, leading to cosmetic disfigurement and psychological distress. Ayurveda describes Mukhadushika under *Kshudra Roga*, with various external formulations (*Lepa Kalpana*) recommended for its management. *Mukhasaundaryakar Yavadi Lepa*, mentioned in classical texts, is indicated for enhancing facial complexion and treating acne-related lesions and discoloration. However, conventional lepa formulations pose challenges such as limited shelf life, difficulty in preparation, and reduced patient compliance. The present study aimed to carry out a pharmaceutico-analytical evaluation of *Mukhasaundaryakar Yavadi Lepa* and to develop a novel, patient-friendly dosage form by converting it into a cream, while preserving classical Ayurvedic principles. Pharmaceutical preparation, physicochemical analysis, and standardization of both lepa and cream were performed. The developed cream exhibited acceptable organoleptic properties, physicochemical parameters, and stability, indicating its suitability as an alternative topical formulation. The study concludes that modification of *Mukhasaundaryakar Yavadi Lepa* into cream improves convenience and acceptability without compromising therapeutic potential.

KEYWORDS: Mukhadushika, Acne vulgaris, Mukhasaundaryakar Yavadi Lepa, Ayurvedic cream, Pharmaceutico-analytical study.

INTRODUCTION

Skin is the largest organ of the body and plays a vital role in physical appearance and self-esteem. In the present era, increasing stress, environmental pollution, dietary irregularities, hormonal imbalance, and altered lifestyle patterns have resulted in a higher prevalence of dermatological disorders, particularly acne vulgaris. In Ayurveda, acne vulgaris is correlated with *Mukhadushika* or *Yauvan Pidika*, characterized by thorn-like eruptions on the face due to vitiation of *Kapha*, *Vata*, and *Rakta*.[1]

Mukhadushika is described under *Kshudra Roga* in Ayurvedic classics.[2] Although considered a minor disease, its impact on facial aesthetics and mental well-being makes it clinically significant. Ayurveda emphasizes both *Shodhana* and *Shamana Chikitsa* for its management.[3] Among *Shamana Chikitsa*, *Bahirparimarjana Chikitsa* in the form of *Lepa Kalpana* is widely advocated.

Mukhasaundaryakar Yavadi Lepa, described in *Chakradatta*, is traditionally used for facial beauty (*Mukha Saundarya*) and management of *Mukhadushika*.[4] Despite its efficacy, *lepa* application requires fresh preparation, has limited shelf life, and is inconvenient for daily use. To overcome these limitations and enhance patient compliance, Ayurveda permits modification of dosage forms without altering fundamental principles. Therefore, the present study was undertaken to convert *Mukhasaundaryakar Yavadi Lepa* into a cream and to evaluate both formulations through pharmaceutico-analytical parameters.

MATERIALS AND METHODS

Selection and authentication of raw materials

The raw drugs used in *Mukhasaundaryakar Yavadi Lepa*, namely *Yava* (*Hordeum vulgare*), *Yashtimadhu* (*Glycyrrhiza glabra*), *Lodhra* (*Symplocos racemosa*), were procured from authenticated sources. All ingredients were identified and authenticated based on organoleptic and pharmacognostical characters.

Pharmaceutical study

Preparation of *Mukhasaundaryakar Yavadi Lepa*

Table No. 1: Ingrediets of *Mukhasaundaryakar yavadi lepa.*

Churna Dravyas	**Ratio**	**Quantity**
Yava churna	1 Part	45 gm
Yashtimadhu	1 Part	45 gm
Lodhra	1 Part	45 gm

Procedure

- The raw drugs were cleaned, dried, powdered individually, and passed through a suitable sieve to obtain fine powders.
- The powders were mixed uniformly in prescribed proportions to obtain a homogenous lepa formulation.

Preparation *of Mukhasaundaryakar Yavadi Taila*

Mukhasaundaryakar Yavadi Taila was prepared using classical *Sneha Paka* method with kalka, sneha dravya, and drava dravya in appropriate ratios.[5] Sneha Siddhi Lakshanas were observed to confirm completion.

Table No 2: Ingredients for the preparation of *Mukhasaundaryakar yavadi taila.*

	Ratio	**Quantity**
Kalka	1 Part	75 gm
Sneha	4 Part	300 ml
Drava Dravya	16 Parts	1200 ml

Table No. 3: Ingredients of *kalka dravya* of *Mukhasaundaryakar yavadi taila.*

Sr.no	**Contents**	**Form**	**Quantity**
1.	*Yava* (Hordeum vulgare)	*Bharad churna* (thick dry powder)	25 gm
2.	*Yashtimadhu* (Glycyrrhiza glabra)	*Bharad Churna* (Thick dry powder)	25 gm
3.	*Lodhra* (Symplocos Racemosa)	*Bharad Churna* (Thick dry powder)	25 gm

Table No. 4: *Sneha Dravya of Mukhasaundaryakar yavadi taila.*

Sr.No.	**Name of Ingredients**	**Quantity**
1.	*Tila Taila* (Sesame oil)	300ml

Table No. 5: *Drava Dravya* of *Mukhasaundaryakar yavadi* taila.

Sr No.	**Name of Ingredients**	**Quantity**
1.	*Jala* (Water)	1200 ml

Table No. 6: Ingredients of *Mukhasaundaryakar yavadi* cream.

Ingredients	Quantity	
A)Water Phase 1) Dimineralized Water	60 -70%	585 ml
B) Oil Phase		
1) Emulsifying Wax	4-5 %	45 gms
2) Stearic Acid	4-5%	45 gms
3) *Mukhasaundaryakar yavadi* oil	25%	225 ml
4) Glycerin	1 %	10 ml
5) Di sodium EDTA	0.5 %	4.5 gm
C) Preservative(Phenonip)	0.1 %	4 to 5 drops

Preparation of *Mukhasaundaryakar yavadi* cream

Mukhasaundaryakar Yavadi Taila was prepared by classical *Sneha Paka* method. The cream was formulated using a standard oil-in-water emulsion technique.[6] The oil phase containing medicated oil and the aqueous phase were heated separately and emulsified under controlled temperature with continuous stirring.

Procedure

DM water was taken in a wide stainless-steel vessel and heated on an induction heater to a temperature of 80°C. *Mukhakasaundaryakar yavadi* oil was taken in another stainless-steel vessel and heated on induction to 80°C. Oil-soluble components—Emulsifying Wax, Stearic Acid, Glycerine, and EDTA —were added to the *Mukhakasaundaryakar yavadi* Oil (oil phase) and dissolved completely. Continuous stirring was carried out to ensure a homogeneous mixture of the oil phase. Once the oil phase was uniformly mixed, it was slowly added to the aqueous phase, maintaining the temperature at 80°C.Stirring was continued until the oil phase began to float over the aqueous phase, after which heating was stopped. Preservative and Fragrance were added to the mixture, followed by thorough stirring to achieve uniform distribution. Continuous stirring was performed until emulsification commenced. After cooling, the mixture was blended using an electric blender to enhance emulsification and to achieve a soft, uniform cream consistency. Prepared cream after measuring it was poured and stored in a clean labelled air- tight container.

OBSERVATIONS

- Initially, the oil phase was observed floating on the aqueous phase. With continued stirring, the mixture gradually thickened.
- As both phases were mixed and allowed to cool, emulsification began to occur.

- During the cooling process, continuous stirring led to further thickening of the mixture, indicating proper formation of the emulsion.
- After blending with an electric blender, the final cream obtained was soft, smooth, and homogeneously blended.

Precautions

- Continuous stirring was maintained while adding the oil phase to the aqueous phase to ensure proper emulsification.
- The temperature was carefully maintained throughout the process to facilitate uniform mixing of both phases.
- All procedures were carried out under hygienic conditions to prevent microbial or fungal growth in the prepared cream.

Analytical study

Physicochemical analysis

Mukhasaundaryakar yavadi lepa

pH, Loss on Drying @ 110◦ C, Total ash Content, Water Soluble Extract, Alcohol Soluble Extractive, Particle size, TLC were carried out at Ayurvedic Drug Testing And Standardization Laboratory, BSDT college, Wagholi, Pune.

Mukhasaundaryakar yavadi cream

Ph, Rancidity, Viscosity, Loss on drying at 105^0c, Spreadability Test, Total fatty matter, TLC were carried out at Ayurvedic Drug Testing And Standardization Laboratory, BSDT college, Wagholi, Pune.

RESULTS

Pharmaceutical results

Mukhasaundaryakar yavadi lepa

The total quantity of *Mukhasaundaryakar yavadi lepa* obtained was 128 gm out of 135 gm.

Loss of weight: 7gm.

Mukhasaundaryakar yavadi cream

Weight of cream: 900 gm

Total time taken for preparation of cream: 3 hrs

Table No. 7: Showing Organoleptic characters of *Mukhasaudaryakar yavadi Lepa.*

Organoleptic Test	Result
Rupa	Powder Form/Brick Red Colour
Sparsh	Soft
Rasa	*Kashaya*
Gandha	Characteristic

Table No. 8: showing values of Analytical Tests of *Mukhasaundaryakar yavadi Lepa.*

Sr.no.	***Parameters***	***Results***
1.	Loss on drying	3.054
2.	Total ash	6.66
3.	Alcohol soluble extractive	7.02
4.	Water soluble extractive	20.85
5.	Sieve no. B.S.S. 85	76.75
6.	Sieve no. B.S.S. 100	72.75
7.	Sieve no. B.S.S. 200	57.27

Table No. 9: Showing the observation of TLC of *Mukhasaundaryakar yavadi lepa.*

Eye observed		
Sr.No.	**Rf Value**	**Colour**
1	0.2625	Light blue
254 nm Observed		
1	0.075	Light blue
2	0.85	Light blue
3	0.09	Light blue
365 nm Observed		
1	0.6	Blue
2	0.69	Blue
3	0.75	Light orange
4	0.8	Dark blue
5	0.875	Dark blue
6	0.94	yellow

Table No. 10: Organoleptic Tests about *Mukhasaundaryakar yavadi* Cream.

Organoleptic Tests	Result
Sparsh	Semisolid, Soft
Roopa	Creamish White
Gandha	Fragrant

Table No. 11: Showing Values of Analytical Tests of *Mukhasaundaryakar yavadi* Cream.

Sr no.	***Parameters***	Results
1	pH	5.29
2	Loss on Drying	61.30
3	Spreadability	2289.06
4	Total fatty matter	22.41
5	Viscosity	26045cps

Table No. 12: Showing the observation of TLC of Mukhasaundaryakar yavadi cream.

254 nm Observed		
1	0.18	Blue
2	0.32	Blue
3	0.39	Blue
4	0.82	Blue
5	0.92	Blue
6	0.44	Greenish blue
7	0.53	Greenish blue
8	0.66	Greenish blue
9	0.74	Greenish blue
365 nm Observed		
1	0.18	Light grey
2	0.26	Light grey
3	0.32	Light grey
4	0.39	Blue
5	0.53	Blue
6	0.69	Blue
7	0.82	Blue
Iodine Chamber		
1	0.39	Brown
2	0.50	Brown
3	0.53	Brown

Fig. 1: Preparation of *Mukhasaundaryakar yavadi lepa.*

Fig. 2: Preparation of *Mukhasaundaryakar yavadi taila.*

Fig 3 : Preparation of *Mukhasaundaryakar yavadi* cream.

DISCUSSION

Mukhadushika (Acne vulgaris), described under *Kshudra Roga* in Ayurveda, significantly affects facial appearance and psychological well-being. *Bahirparimarjana Chikitsa*, especially *Lepa Kalpana*, is widely advocated for its management. *Mukhasaundaryakar Yavadi Lepa* is a classical formulation indicated for improving facial complexion and treating acne lesions; however, its conventional form has limitations such as poor shelf life, difficulty in fresh preparation, and reduced patient compliance. Hence, the present study aimed to

evaluate the formulation pharmaceutico-analytically and to develop a patient-friendly cream dosage form.

The pharmaceutical preparation of *Mukhasaundaryakar Yavadi Lepa* showed minimal processing loss, indicating appropriate handling and fine pulverization of raw materials. Organoleptic characteristics such as soft texture, characteristic odor, and *Kashaya rasa* were consistent with classical descriptions and the inherent properties of ingredients like *Lodhra* and *Yashtimadhu*. Fine particle size distribution facilitates better skin contact and uniform application.

Loss on drying of the *lepa* was low (3.054%), indicating minimal moisture content, which is desirable for enhanced shelf life and reduced microbial growth. The total ash value was within acceptable limits, suggesting absence of inorganic impurities. Higher water-soluble extractive value compared to alcohol-soluble extractive indicates the predominance of water-soluble phytoconstituents, supporting the formulation's anti-inflammatory and soothing action in *Mukhadushika*. TLC profiling revealed multiple Rf values, reflecting the presence of diverse phytochemicals and serving as a reference fingerprint for standardization.

The conversion of *lepa* into *Mukhasaundaryakar Yavadi* Cream using an oil-in-water emulsion technique resulted in a smooth, homogenous, and easily spreadable formulation. The pH of the cream (5.29) was within the normal skin range, indicating its suitability for topical use. Adequate spreadability and viscosity values suggest good application properties and retention over the skin surface. Total fatty matter was sufficient to support skin barrier function and enhance penetration of lipid-soluble constituents.

TLC analysis of the cream showed Rf values comparable to those of the *lepa*, indicating retention of phytochemical integrity after dosage form modification. Overall, the pharmaceutico-analytical evaluation confirms that *Mukhasaundaryakar Yavadi Lepa* can be successfully transformed into a stable, patient-compliant cream without compromising its quality or therapeutic potential.

CONCLUSION

The present study successfully carried out the pharmaceutico-analytical evaluation of *Mukhasaundaryakar Yavadi Lepa* and developed its modified dosage form as a cream to improve patient compliance and usability. The classical *lepa* formulation showed acceptable

organoleptic and physicochemical parameters, indicating good quality, purity, and stability. Analytical findings such as low loss on drying, appropriate ash values, and satisfactory extractive values support its suitability for topical application.

The conversion of *Mukhasaundaryakar Yavadi Lepa* into a cream using an oil-in-water emulsion technique resulted in a smooth, stable, and aesthetically acceptable formulation. The cream exhibited skin-friendly pH, good spreadability, appropriate viscosity, and adequate total fatty matter, making it suitable for prolonged topical use. TLC profiles of both formulations demonstrated comparable chromatographic patterns, suggesting retention of phytochemical constituents after dosage form modification.

Overall, the study establishes that classical Ayurvedic formulations can be scientifically modified into contemporary dosage forms without compromising their fundamental principles or quality. *Mukhasaundaryakar Yavadi* Cream may serve as a patient-friendly and stable alternative to the traditional *lepa* for the management of *Mukhadushika.*

REFERENCES

1. Shastri KAS *Sushruta Samhita* (Vol-1) *Nidanastha- adhyaya Kshudraroga nidana* / 13-38, Varanasi: Chaukhamba Sanskrit Sansthan, 2021; edition. p.no.372.
2. Susruta, Susruta Samhita. Ayurved Tatva Sandipika. Commentary, edited by Dr. Ambika Datta Shastri, Chaukhamba Sanskrit Publication, Varanasi, reprint 2005; Nidanasthana, 13(39).
3. Brahamanand Tripathi. *Astanga Hridayam Sutrasthana*, Delhi: Chaukhamba Sanskrit Pratishthan; 2009; shlok 1/25, p.no.19.
4. Indradev Tripathi. *Chakradatta* with *vaidyaprabha* hindi commentory, *Kshudra roga chikitsa adhyaya* 55/52 Chaukhamba Sanskrit Bhavan, Varanasi Reprint 2012; p.n.316.
5. Tripathi B. *Sharanghdhar Samhita* with Dipika hindi commentary *Madhyamkhanda*/9-1 Chaukhamba Subharti Prakashan, Varanasi Reprint 2023; p.n.144.
6. M. Vimaladevi Textbook of Cosmetics Reprint 2010, CBS Publishers & Distributors Pvt. Ltd., New delhi.p.n.54.