Original Research Paper

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Clinical Research

A CASE SERIES TO EVALUATE THE VARNYA (SKIN TONE LIGHTENING) EFFICACY OF RAKTCHANDANADI LEPA ON VARNA VIKRITI

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ABSTRACT Facial beauty is so essential for the younger generation. Varna Vikriti considered as very common skin issue. Vata, Pitta, and Kapha are the three doshas in ayurveda. Pitta dosha is responsible for metabolic reactions and hormonal changes, and has five subtypes. Pathological vitiated Pitta causes yellow skin, eyes, and a reduced Pitta leads to loss of lustre and low glorification. Pitta has five subtypes, including Aalochaka, Ranjaka, Sadhaka, Pachaka, and Bhrajaka pitta. Bhrajaka pitta regulates body warmth, skin colouration, absorption, and digestion of medications used on skin. **Methodology:** This study was aimed at characterizing the colour of Indian skin, its characteristics in terms of overall skin complexion, and the impact of medicated lepa on these features. An extensive descriptive study, including skin colour parameters (objective parameters and clinical evaluations or from photographs) was carried out involving 5 female volunteers of different ages living in four different Indian cities. **Result:** Ayurvedic lepa of herbs was found to be effective in enhancement of skin tone.

KEYWORDS : Varna Vikriti, Bhrajaka Pitta, Skin, Medicated lepa

INTRODUCTION

Ayurveda is a historical fitness science that aids in the prevention and maintenance of illness, renowned for its primary Sidhantas. e.g., Tridoshas, Panchmahabhootas, Dincharya, Ritucharya, Sadvrita etc. The Ritucharya and Dincharya of Ayurveda science emphasize the importance of melanin concentration in skin colouration. Excess melanin results in tanning, while absence causes albinism. Acharya Sushrut has given term Bhrajaka Agni to Bhrajaka Pitta[1], which is located in the skin and helps maintain the skin's natural colour, absorb perspiration, and express the skin's glow. The Prakriti is determined by the collaboration of Tridosha (Vata, Pitta, Kapha) with Shukra and Shonit[2]. According to Acharya sushrut skin has seven layers[3], with Avabhasini being the first layer, replicating all colours. Acharya Charak and Acharya Vagbhata have identified different types of Pitta. Bhrajaka Pitta[4] holds the skin's shade, lustre, irradiates the glow of herbal complexion and governs the body's temperature[5]. The colour of pores and skin generally upon the pigment Melanin and MSH hormone secreted from pituitary gland. Melanin is additionally having a function in temperature law also[6]. The Indian population, with over 2,000 ethnic groups and significant variations in climate, diet, and social parameters, reflects the wide variability in skin colour and features. Skin tone issues are a major concern in India and have a significant psychosocial impact on quality of life. This study aimed to describe facial skin colour characteristics in Indian women, including overall skin complexion and pigmentary disorders, and evaluate the impact of age on these findings. Assessments were conducted using individual clinical examination, visual evaluation with photographs, and skin tone chart measurement.

Methodology

The case series involved participants with a primary history of Varna Vikriti over face skin at the OPD of Kriya Sharir, Umri Road, Kurukshetra. The evaluation included history, physical examination, and grading based on the Skin tone scale. Demographic data included age, gender, and medical history. Pre and post-assessment was conducted.

Case Presentation

Case 1

A 26-year-old female patient visited the OPD with skin tone issues. Her skin texture over forehead & cheeks was normal and nose Bridge was oily. She used skin care products and sunscreen occasionally. Her face was mild lustrous, sometimes shiny, and 'A' shade darker as compared to inner forearm. Her cheeks were shiny and glossy, and she didn't need to moisturize frequently. Her skin was firm and rarely flushed with temperature or reacted to skin care products. The patient had not received any medical management so far. For the above complaints, she visited IASR, Kurukshetra.

Clinical Examination

The skin health score before treatment was 12/30, with a ++ve blotting paper test indicating oiliness, and in skin tone chart showed D7 before treatment.

Case 2

A 59-year-old female patient visited the OPD with concerns about skin tone issues. Her skin texture was normal, with mild oiliness felt by touch in the T-zone, she felt her skin sometimes shiny after applying moisturizer. She used skin care products and sunscreen, and her skin was moderately lustrous. In photos, her face appeared shiny but rough at mid-day. Her skin 2 shades darker than her inner forearm, and she noticed marked sagging. The patient had not received any medical management so far. For the above complaints, she visited IASR, Kurukshetra.

Clinical Examination

Before treatment, skin health was rough, with 17/30 score. Blotting paper test showed no oiliness, and skin tone chart showed a C5 before treatment.

Case 3

A 31 year old female patient came to the OPD with concern of skin tone issue. Her skin texture over forehead, cheeks and nose bridge was oily. Overall the skin was mostly dry. Her Skin usually felt like rough and dull at mid-day. If not moisturized facial skin felt sometimes tight, generally firm and mild dry, not seen but felt. Her face was frequently oily in the T-zone (forehead & nose). She used skin care products and occasionally applied sunscreen. Her skin was moderately lustrous. Her face appeared shiny in photos, several shades darker than her inner forearm. The patient had not received any medical management so far. For the above complaints, she visited IASR, Kurukshetra.

Clinical Examination

The study assessed skin health before treatment, calculating roughness as 15/30 by skin health score, oiliness as ++ve, and using a skin tone chart to measure tone, with a score of C8.

Case 4

A 39-year-old female patient presented with skin tone issues at the OPD. Her skin texture was normal, dry, and rough at midday. Oiliness was moderately visible, requiring frequent face washing. She felt tight if not moisturized and sometimes oily in the T-zone. After applying moisturizer, cheeks became smooth. She used skin care products and sunscreen occasionally, rarely reacting. Her skin was mildly lustrous, but often shiny in photos. Her face was 2 shades darker than her inner forearm, and she was generally firm. The patient had not received any medical management so far. For the above complaints, she visited IASR, Kurukshetra.

Clinical Examination

Before treatment, skin health was rough, with 15/30 score. Blotting paper test showed no oiliness, and skin tone chart showed score D6.

Case 5

A 39-year-old female patient presented with skin tone issues at the OPD. Her skin texture was normal, with dryness and mild oiliness. She only needed to wash her face 1-2 times and felt tight when not moisturized. She used skin care products and sunscreen daily, but her skin flushed with temperature daily. She used tila-tailam (sesame oil) for about one and a half months. Her skin rarely reacted to skin care products, and her face appeared slightly lustrous in photos and was 2 shades darker than her inner forearm and slightly sagging. The patient had not received any medical management so far. For the above complaints, she visited IASR, Kurukshetra.

Clinical Examination

The study assessed skin health before treatment, calculating 17/30 for roughness, ++ve for oiliness, and using a skin tone chart to measure tone, with a C5 score.

Treatment Plan

A total of 5 patients of Varna Vikriti visited the OPD of Kriya Sharir, Institute for Ayurved Studies and Research, Kurukshetra, Haryana. Considering the clinical features and involved Pitta, Vata, Rakta in pathology, patient's treatment protocols were decided after assessing all haematological and biochemical aspects of their present condition. Raktchndanadi lepa from Sharangadhara Samhita, Uttara Khanda chapter 11 was selected as a local application along with Pathyapathya. Name, Dose, Route, Kala, of the drug and how to apply methods are described below:

Name of the Medicine: Raktchandanadi lepa
Dose: QS
Route: Local Application on face (with honey/water)
Time: Day time (9am-5pm)
How to Apply: once daily; Left for 10-15 minutes and rinsed off using cold water.
Type of Treatment: OPD Basis
Duration: 30 Days

Name of dravya, their Latin name, used part and proportion of Raktchndanadi lepa (Sharangadhara/uttara khanda/11):

1. Rakta Chandana Kandasara: Pterocarpus santalinus Linn.
2. Manjishtha Mula: Rubia cordifolia Linn.
3. Kushtha Mula: Saussurea lappa C.B.Clarke.
4. Lodhra Tvak: Symplocos racemosa Roxb.
5. Priyangu Bija: Callicapra macrophylla Vahl.
6. Vata Ankura: Ficus benghalensis Linn.
7. Masur Bija: Lens culinaris

Proportion: 1 Part Each

Preparation of Drug: The drug was prepared under the supervision of H.O.D. of Rasa shastra & Bhaishajya Kalpana in Pharmacy of Institute for Ayurved Studies and Research, Kurukshetra, Haryana.

Method of Preparation: All the drugs taken in equal quantity were cleaned properly and dried under sunlight. After complete drying of the drug, they were pulverized to make powder in Pharmacy of Institute for Ayurved Studies and Research, Kurukshetra, Haryana, Kurukshetra under the supervision of H.O.D. of Rasa shastra & Bhaishajya Kalpana. These powders were packed in air tight poly packs of 150 gm. This powder was administered to patient locally by making its thin paste with simple water/honey as per quantity sufficient (5gm), once daily for 30 days. Ahara and Vihara advised during treatment.

Pathya: Patient was advised to, Take Green gram, rice, wheat, green vegetable, fruits, light & easily digestible diet. Adequate sleep at night (8 hours), Wash face and use soft napkin to clean face after face wash. Always cover the face when strong sun exposure & dust atmosphere.

Apathya: Patient was advised to avoid oily/spicy food/junk food/cold drinks and all such things which vitiate Rakta, Pitta and Kapha. Avoid oil base cosmetic items like; cream, lotion, face wash.

Counselling: The patient experienced psychological distress and received counseling, learning about hormonal changes and stress as common causes, and being assured it is treatable.

Assessment

- By skin tone chart
- Blotting paper

Data was observed of 5 subjects, according to questionnaire (symptoms) & Skin tone Score assessment chart. t - Test for 2 dependent means was used & p - values were calculated in analysis of association in qualitative variables by using SPSS software. [P value < 0.05] as significant whereas [P value of >0.05] was considered as non-significant. All the results were calculated by using Microsoft Excel, SPSS software.

Table No.1: Descriptive Statistics Of Subjective And Objective Parameters Among Studied Subjects

Skin Health Score			
	t-Value	df (n-1)	p-value
Paired t-test	10.694783	5-1=4	0.00022
No. of Cases	5		
Blotting Paper Test			
	t-Value	df (n-1)	p-value
Paired t-test	3.162278	5-1=4	0.01705
No. of Cases	5		
Skin Tone Chart			
	t-Value	df (n-1)	p-value
Paired t-test	3.959085	5-1=4	0.00835
No. of Cases	5		

OBSERVATION AND RESULTS

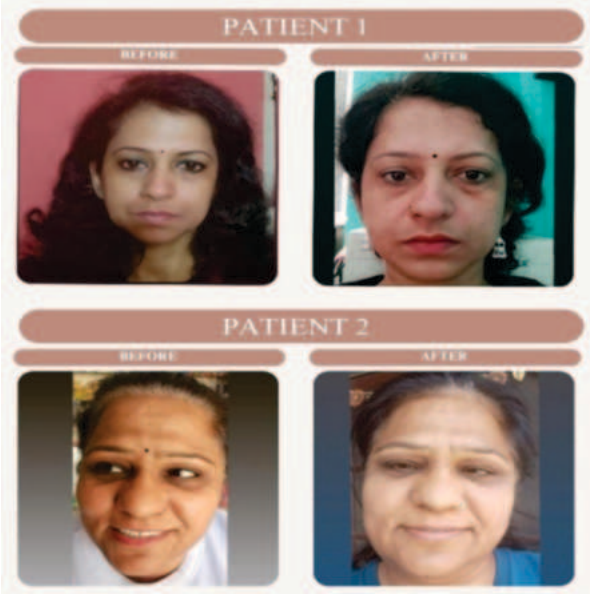

Figure No.1-BT-AT Pateint Of Varna Vikriti

Statistically Explanation of Results: (As Shown in Table No. 1)

- Skin Health Score: The value of t is 10.694783. The value of p is 0.00022. The result is significant at p .05
- Blotting Paper Test: The value of t is 3.162278. The value of p is 0.01705. The result is significant at p .05
- Skin Tone Chart: The value of t is 3.959085. The value of p is 0.00835. The result is significant at p .05.

Table 2: BT–AT Demographic Data Of All Patients (Varna Vikriti)

Case Series	PATIENT 1		PATIENT 2		PATIENT 3		PATIENT 4		PATIENT 5	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
Skin tone chart	D7	D3	C5	C2	C8	C4	D6	D2	C5	C1
Skin health score	12/30	6/30	17/30	7/30	15/30	4/30	15/30	6/30	17/30	7/30

Skin health type	Neither Rough nor Smooth	Smooth & Healthy	Rough	Smooth & Healthy	Rough	Smooth & Healthy	Rough	Smooth & Healthy	Rough	Smooth & Healthy
Blotting paper test	++T- zone 2	0	++T- zone 2	0	++T- /B/L malar/chin 4	0	0	0	++T- zone 2	0
Relief	3	2	2	1	3	2	3	1	2	1

DISCUSSION

The study found that aging does not significantly affect complexion, using skin tone measurement chart to objectively record changes, after 25 years of age. It showed slight whitening of unexposed skin and mild darkening on exposed areas. Patients were treated with applying Raktchandanadi lepa once daily for 30 days, resulting in 90% skin tone enhancement after treatment, indicating its effectiveness in treating Varna Vikriti symptoms.

Conclusion

The herbs that have used have a wide range of characteristics and important consequences for skincare. The benefits of Varnya drugs on improving skin have been well investigated as shown above in Table no.2. These herbs exhibit tyrosinase i.e.; enzyme skin needs to make melanin that makes the skin darker and melanin blockers are used in treatment for all kinds of skin hyperpigmentation. The unusual fusion of conventional Ayurvedic knowledge with contemporary biological understanding reveals the complex processes behind skin lightening.

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