



## Research Article

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### CASE SERIES STUDY OF DIFFERENT PREDOMINANT DEHA PRAKRITI WITH SPECIAL REFERENCE TO FITZPATRICK SKIN TYPE CLASSIFICATION

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#### ABSTRACT

Prakriti is unique concept of Ayurveda, according to which every human is different from other. Prakriti remains same throughout life. Acharya has mentioned different characteristics of different Deha Prakriti. The predominance of dosha Prakriti shows different skin characteristics. Present study is carried out with the objective to classify the skin of predominant Deha Prakriti volunteer with the help of Fitzpatrick skin type. The Fitzpatrick Scale is a numerical classification schema for the color of skin. It is a way to classify the response of different types of skin to ultraviolet light. It is a recognized tool for dermatologic research into the color of skin. It measures several components: Genetic Disposition, Reaction to Sun Exposure, and Tanning Habits of skin. Total 280 female volunteers were screened from various colleges of Nagpur, India. After that they are grouped as Vata, Pitta, and Kapha predominant Prakriti containing 50 volunteers in each. In this study it was found that maximum Pitta predominant Prakriti volunteer were having skin type III, Kapha predominant were having skin type IV while Vata predominant shows mixed picture of type III, IV and V. In this study, not a single volunteer of skin type I was found. After statistical analysis with chi square test results were found statistically significant (i.e. P value < 0.0001).

**Keywords:** Prakriti Fitzpatrick skin type Vata Pitta Kapha

#### INTRODUCTION

According to Ayurveda every individual is different from other and hence should be considered as a different entity called as Prakriti. Prakriti means Swabhav or nature of an individual<sup>1</sup>. According to Vagbhata the Prakriti remains inherits throughout the life prior to death. Ayurveda categorizes human population in to sub population such as Vata Prakriti, Pitta Prakriti and Kapha Prakriti or their combination on the basis of anatomical, physiological, and psychological characteristics with completely avoidance of racial, ethical, and geographical consideration. Ayurveda has designed Prakriti such as Vata, Pitta and Kapha or combination of either two or three of them<sup>2</sup>. Acharya has mentioned different characteristics for different Prakriti. They have mentioned special characteristics of skin. Due to dominance of dosha Vata Prakriti person shows lusterless skin. Due to Parusha Guna hairs, skin, nails are rough in texture, Being Vishada guna body develops cracks due to dryness, skin shows predominant network of veins<sup>3</sup>. Pitta Prakriti person has fair body colour; they have red- black spots on their body. They have moles and have a tendency for wrinkles and the hairs to turn gray. Generally the hairs are soft, feeble and are golden coloured<sup>4</sup>. Pitta Prakriti person's body is yellowish and his nails, eyes, lips, palms and soles are copper coloured<sup>5</sup>. The complexion of Kapha Prakriti person resemble either the colour of a blade glass, blue lotus, polished sword, aadra arista or that of the stem of the sara grass<sup>6</sup>. Being Snigdha Kapha Prakriti has oily skin. Being Mrudu<sup>7</sup> they are beautiful, tender and of fair

colored. The Fitzpatrick Scale (also Fitzpatrick skin typing test or Fitzpatrick photo typing scale) is a numerical classification schema for the color of skin. It was developed in 1975 by Thomas B. Fitzpatrick, a Harvard dermatologist, as a way to classify the response of different types of skin to ultraviolet light. It remains a recognized tool for dermatologic research into the color of skin. It measures several components: Genetic Disposition, Reaction to Sun Exposure, and Tanning Habits of skin<sup>8</sup>. The classification depends on the amount of melanin pigment in the skin. Melanin, along with water and hemoglobin, is the target chromophore in skin for lasers and light devices. This is an important consideration because laser energy intended for deeper targets can be absorbed by melanin in the basal layer of the epidermis and can cause unintended epidermal damage, risk of blistering, permanent dyspigmentation, textural changes, focal atrophy, and scarring in darker skin types. Volunteers are categorized from very fair skin types (Fitzpatrick skin type I) to very dark skin types (VI) based on two parameters: constitutive skin color and response to sunlight and UV radiation. The Fitzpatrick classification describes the susceptibility for sun reactivity. In general, all skin types are susceptible to photo damage but at different rate. Pale or white skin burns easily and tans slowly and poorly: it needs more protection against sun exposure. Higher Fitzpatrick Photo types are less susceptible to sun burns, likely due to the protective role of melanin. However, higher skin photo

types are more prone to develop post-inflammatory pigmentation after cutaneous injury (brown marks).

**MATERIAL AND METHODS**

This study is carried out from September 2012 to January 2013 with objective to classify the skin type of predominant Deha Prakriti with the help of Fitzpatrick skin type classification. The volunteers were selected from various arts, sciences, management, commerce, engineering and Ayurveda colleges in the Nagpur city of Maharashtra, India. Total 280 female volunteers were initially screened with the help of a special screening Performa containing a unique screening number, demographic data, and inclusion and exclusion criteria.

**Inclusion criteria**

- Healthy volunteers
- Unmarried female volunteers
- Age: - 21 – 30 years
- Volunteer residing in particular area since last six months
- Volunteer residing 50 km periphery from study site
- Occupation- student
- Volunteer with middle socioeconomic class
- Willing for consent

**Exclusion criteria**

- Pregnant and Lactating women
- Volunteers participated in any other clinical trial 4 weeks prior to enrolment into this study
- Volunteer with history of Anemia
- Volunteer with history of any allergic disorder
- Volunteer with family H/O Congenital or hereditary disorders
- Volunteer with history of travelling in another environment in last 4 weeks
- Volunteers with premature sign of skin aging
- Volunteers with addiction of smoking and chronic Alcohol intake

The volunteers fulfilling the eligibility criteria were enrolled for further study. After the enrollment each volunteer was given a separate ID form to hide their identity in questionnaire for the ethical issue. Each volunteer was given questionnaire which contain background information like age, education, religion, socio-economic status, dietary habits, height, weight and questions related to Prakriti Parikshana was also given to fill in proforma. All the volunteers were given 30 minutes to fill the Proforma. All the volunteers were categorized into three groups i.e. Vata, Pitta and Kapha Prakriti according to their predominant Prakriti. 50 volunteers from each group were randomly selected for further study. The Fitzpatrick skin type classification form was given for further study which contains genetic deposition, reaction to sun exposure and tanning habits. After that data were classified accordingly.

**RESULTS**

In this proposed study following results were found, maximum volunteers were from age group between 21 – 24 years (Table 1). 97 volunteers were graduate (Table 2). The maximum volunteers of 112 were of normal BMI while 22 were underweight and remaining 13 were overweight and 3 were obese (Table 3). 61 volunteers were having Tikshnagni while 51 were of Vishmagni and 37 were Mandagni (Table 4). The Kosta wise classification shows 66 volunteers were having Mrudu kosta and 33 were of Madhyam kosta (Table 5). Among total volunteers maximum 114 volunteers were using cosmetics on routine basis (Table 6). In this study, among total 150 participated maximum volunteers were having the characteristic of type III and type IV skin type. 58 % Pitta Predominant Prakriti volunteers had type III skin type, 34 % were of type IV. While 66 % Kapha predominant volunteers were of type IV characteristics and 20 % of type III. The Vata predominant Prakriti volunteers demonstrated mixed picture i.e. 32 % of skin type III and 32 % of skin type IV while 34 % were of skin type V. In the present study, not a single volunteer of skin type I was found (Table 7).

**Table 1: Age Wise Distribution of Total Enrolled Volunteers**

S. No	Age (in years.)	No. of volunteer	Percent
1	21 – 24	120	80.0 %
2	24 – 27	27	18.0 %
3	27 – 30	03	02.0 %
Total		150	100.0 %

**Table 3: BMI Wise Distribution of Total Enrolled Volunteers**

S. No	BMI	No. of volunteer	Percent
1	Under weight	22	14.6 %
2	Normal	112	74.6 %
3	Overweight	13	08.6 %
4	Obese	03	02.0 %
Total		150	100.0 %

**Table 2: Education Wise Distribution of Total Enrolled Volunteers**

S. No	Education	No. of volunteer	Percent
2	Higher secondary	31	20.7 %
3	Graduate	97	64.7 %
4	Post graduate	21	14.0 %
5	Doctorate	01	0.7 %
Total		150	100.0 %

**Table 4: Agni Wise Distribution of Total Enrolled Volunteers**

S. No	Agni	No. of volunteer	Percent
1	Vishamagni	51	34.0 %
2	Tikshanagni	61	40.7 %
3	Mandagni	37	24.7 %
4	Samagni	01	00.7 %
Total		150	100.0 %

Table 5: Koshta Wise Distribution of Total Enrolled Volunteers

S. No	Koshta	No. of volunteer	Percent
1	Krura	51	34.0 %
2	Mrudu	66	44.0 %
3	Madhyama	33	22.0 %
Total		150	100.0 %

Table 6: Distribution of Total Volunteers Enrolled according to Cosmetics Use

Use of cosmetics	No. of volunteer	Percent
1. Yes	114	76.0 %
2. No	36	24.0 %
Total	150	100.0 %

Table 7: Distribution of Deha Prakriti of Volunteers according to Fitzpatrick Skin Type Classification

S. No.	Deha Prakriti	Fitzpatrick skin type classification					Total
		Type I	Type II	Type III	Type IV	Type V	
1	Vata	0	0	16	16	18	50
2	Pitta	0	0	29	17	04	50
3	Kapha	0	01	10	33	06	50

## DISCUSSION

In present study it was found that 58 % Pitta Prakriti volunteers were of type III i.e. their skin was sun sensitive, sometimes burn and slowly tans to light brown. This finding was due to Ushna Guna of Pitta Dosha. 66 % of Kapha Prakriti volunteer's skin were of type IV i.e. skin was sun insensitive rarely burn, tan well. This finding was due to Sheeta Guna of Kapha Dosha. While the skin of Vata Prakriti volunteer showed mixed picture i.e. type III, Type IV and V. Some volunteer's skin was sun sensitive; some volunteer's skin were minimal sensitive and remaining volunteer's skin were insensitive. Some time their skin burns, some time minimally burn or sometimes rarely burn. Their tanning habits were some time light brown, some time moderate brown, and some time showed well tans skin. These various characteristics of Vata Prakriti were due to Yogavahi Guna of Vata Dosha. Overall Whole study showed that Dosha involved in Prakriti were manifesting on their skin; after statistical analysis of data with the help of chi square test showed significant result.

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## REFERENCES

1. Trikamji Yadavji editor, Ayurveda dipika sanskrit commentary charak samhita, Varanasi, India choukhambha surbharti publication; 2005. p. 277.
2. Tripathy R, Shukla V. editor, Vaidyamanorama hindi commentary Charak Samhita part 1, 2<sup>nd</sup> edition, Varanasi, India. choukhambha surbharti publication; 2000. p. 645.
3. Tripathy R, Shukla V. editor, Vaidyamanorama hindi commentary Charak Samhita part 1, 2<sup>nd</sup> edition, Varanasi, India. choukhambha surbharti publication; 2000. p. 644.
4. Tripathy R, Shukla V. editor, Vaidyamanorama hindi commentary Charak Samhita part 1, 2<sup>nd</sup> edition, Varanasi, India. choukhambha surbharti publication; 2000. p. 644.
5. Tripathy B. editor, Nirmala hindi commentary Astanga hrudayam, Delhi, India choukhambha Sanskrit pratisthan reprint; 2003. p. 382
6. Shastri Ambikadatta editor, Ayurvedatva sandipika hindi commentary Sushruta samhita part 1, Varanasi, India. choukhambha surbharti publication; 2005. p. 38.
7. Tripathy R, Shukla V. editor, Vaidyamanorama hindi commentary Charak Samhita part 1, 2<sup>nd</sup> edition, Varanasi, India. choukhambha surbharti publication; 2000. p. 643.
8. Miranda A Farage, Kenneth W Miller, Howard I Mibach. Textbook of aging skin. Cincinnati and San Francisco, springer; 2009.

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