



An ayurvedic review on effect of Dehik Prakriti on Pakshma and Shukla Mandala

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Abstract

Mainstay of human body are three doshas viz. Vata, pitta and Kapha those are combinedly name as tridosha. Particular Dosha which chiefly take part in constitution of human body and predominantly present inside the body will decide individual's prakriti. The individuals of different prakriti having different variation in many ways as appearance, structure, function, response of various stimuli, susceptibility of different diseases for ex vatic prakriti people have poor sleep, black and cracked lip and palate, paittic people have disturbed sleep, pink lip and palate and kaphaja prakriti people have sweet, pleasant sleep and white moist lip and palate.

The present study i.e. An Ayurvedic review on effect of Dehik Prakriti on Pakshma and Shukla mandala was conducted on 90 individuals 30 from each prakriti in shalakyia OPD at Govt. Dhanwantari Ayurved College Ujjain, M.P. prakriti of each individual were decided on the basis of certain questions.

Keywords: prakriti, mandala

Introduction

Each individual is different from other in terms of structure, function, genetic composition and so on. At the same time they are similar in many respects. These individuals can be grouped, according to Ayurveda, into seven categories (viz., vata, pitta, kapha, vata-pitta, pitta-kapha, vata-kapha, sannipatic) according to the constitutional excess of one or more doshas, these categories are known as deha prakriti^[1]. Charaka has also categorized them in three categories viz., vata, pitta and kapha prakriti according to dominance of particular doshas^[2]. The interaction of the environment with the body depends upon Deha prakriti since the individuals of different prakriti react in different ways with the environment^[3,4]. Ayurveda believes that the susceptibility to disease, vary according to prakriti, Even the management of diseases also depend upon prakriti as the intensity of pain is more pronounced in vatic individuals than paittic and kaphaja similarly drug prescribed for the same disease may be suitable for a person of Vata Prakriti but may not be suitable for Pitta Prakriti.

Deha Prakriti also shows impact on eye and the present study is showing effect of Doshaj on Pakshma and Shukla Mandala that density of eye lashes viz Pakshma mandala^[5], color and appearance of sclera viz. Shukla Mandala generally shows difference according to deha prakriti.

Pakshma Mandala can be correlated with eyelashes of eye-hair that grows at the edge of the eye lid & protects the eye from dust and debris and providing warning that an object (such as an insect) is near the eye which reflexly closes the eyes. The follicle of eyelashes are associated with gland of Zeis and gland of Moll and they directed outward and upward

in upper lid and outward and downward for lower lid^[6,7].

Shukla Mandala is Sclera according to modern science and it is most outer tunic of eye amongst from 3 coats of eyeball. It forms the posterior opaque five-sixth of the external fibrous tunic. Its whole outer surface is covered by Tenon's capsule. In the anterior part it is also covered by bulbar conjunctiva. Its inner surface lies in contact with choroid with a potential suprachoroidal space in between. In its anterior most part near the limbus there is a furrow which encloses the canal of Schlemm.

Thickness of sclera varies considerable in different individuals and with the age of the person. It is generally thinner in children than the adults and in females than the males. Sclera is thickest posteriorly (1 mm) and gradually becomes thin when traced anteriorly^[8,9].

This study was carried out in the Department of Shalakyia Tantra, Government Autonomous Dhanwantari Ayurved College, Ujjain.

Material and Methods

Place of study: Department of Shalakyia Tantra, Government Autonomous Dhanwantari Ayurved College, Ujjain.

Aim of study

1. To study on evidence basis that biological variation exists in the eyes of individuals belonging to different prakriti.
2. More objective ways can be found to determine prakriti of individuals so that modification in the diet, life style and treatment can easily be done with a view to prevent and cure ocular diseases.

Plan of study

90 cases were selected of 18 to 45 yrs age group in which 30 individuals were of each prakriti viz. Vataja, Pittaja and Kaphaja. These individuals were randomly selected from the Shalakyia O.P.D of Government Autonomous Dhanwantari Ayurved College, Ujjain.

Grouping of individuals

90 individuals were taken, in which 30 individuals were

selected of each prakriti.

1. Vatik prakriti - 30 individuals
2. Pittaj prakriti - 30 individuals
3. Kaphaj prakriti - 30 individuals

The deha prakriti of these individuals were determine by a 70 questions questionnaire proforma based on Charaka Samhita which was prepared in Department of Basic Principle, Faculty of Ayurveda, IMS, BHU.

A proforma to Assess Deha Prakriti based on Charak Samhita**Table 1**

No.	Ques	Answer	Maximum score	Allotted score
1	Whether your skin remains oily throughout the year in comparison to others?	Yes	100	
2	Your body hairs & skin are shiny even when no oil or moisturizer is used.	Yes	100	
3	Are you considered attractive among your friends?	Yes	33.33	
4	Do even mild or trivial injuries on your body make you upset?	Yes	33.33	
5	Among your family members is your complexion considered fairer?	Yes	33.33	
6	In comparison to your friends do watch adult movies more often or have a desire to watch them? Or Do you like reading magazines/ novels containing romantic /pornographic literature?	Yes	50	
7	Question from bachelors- Do you masturbate? If yes, then frequency of masturbation. If it is > 5 times /week- Question for married- Frequency of intercourse. If it is >5 times/ week-	Yes	50	
8	You have got well-built muscles.	Yes	25	
9	Your BMI is towards the upper limits of normal range (23-25). BMI= weight(in kg)/height(in m2)	Yes	25	
10	You don't feel like changing your body postures frequently. You can manage yourself in a stable posture for long duration.	Yes	50	
11	You have a well-nourished & normally developed body. (You don't have dwarfism/ cretinism like abnormalities & malnourishment disorders.)	Yes	100	
12	a) Do you like morning walk/ jogging/ swimming or any type of outdoor sports? or b) Do you complete a work given to you slowly in comparison to others?	Yes	33.33	
13	Are you slow in consuming the food? Even after all have left the dining hall, are you still consuming?	Yes	33.33	
14	When you go to morning walk or college or office, do you walk slowly in comparison to others?	Yes	33.33	
15	If you assigned any work, do you take some time to start it?	Yes	33.33	
16	Do you get irritated easily? When you don't get the auto for office or college on time or when power goes off while you are watching your favorite TV serial.	No	33.33	
17	After the consumption of Ice cream / Cold drinks, do you get pharyngitis /common cold from the very next day?	No	33.33	
18	Does your gait vary with respect to speed or manner frequently?	No	100	
19	Do you feel hungry more frequently and the quantity of food you consume is more, in comparison to others?	No	25	
20	Do you tolerate heat easily?	Yes	25	
21	Do you consume liquids in more quantity and repeatedly in comparison to others?	No	25	
22	Do you perspire less in comparison to others?	Yes	25	
23	On body movements is any sound produced in your joints?	No	100	
24	You have got a good complexion.	Yes	50	
25	You have got sweet & pleasant voice.	Yes	50	
	Total = $K=X/1200*100$ $K=X/12$		1200	X=
26	Do you prefer cold drinks over warm drinks?	Yes	6.25	
27	Are you more comfortable in winter than summer?	Yes	6.25	
28	Do even mild or trivial injuries on your body make you upset?	Yes	12.5	
29	Among your family members is your complexion considered fairer?	Yes	12.5	
30	Is your temperature of oral cavity towards upper limit of normal temperature? (normal temp.=97.6-98.4 F) If it is 98.2 or 98.4	Yes	12.5	
31	Do you have excessive black moles, freckles etc. or Have you noticed new appearance of black moles often?	Yes	12.5	
32	Do you feel excessive hunger & thirst in comparison to others?	Yes	12.5	
33	Have you experienced premature graying, wrinkling of skin & early baldness?	Yes	12.5	
34	Do you have soft, scanty, brown hair on your face, body & head?	Yes	12.5	

35	Do you involve yourself in risky & heroic activities requiring physical strength often?	Yes	20	
36	Do you have ability to digest large quantities of food easily?	Yes	20	
37	Do you take large quantities of food & drinks in comparison to others?	Yes	20	
38	Do you get easily irritated for small / negligible problems in day to day life?	Yes	20	
39	Do you keep consuming food frequently? (5-6 times/day)	Yes	20	
40	Do you have soft & loose muscle bulk especially around the joints?	Yes	50	
41	In comparison to others, do you pass urine& stools in large quantities and do you perspire more?	Yes	50	
42	Do your friends complain of bad smell being emitted from your body & mouth?	Yes	100	
43	In comparison to your friends do you watch adult movies often or have a desire to watch them? or Do you like reading magazines / novels containing romantic / pornographic literature?	No	100	
	Total = $P=X/600 \times 100$, $P= X/6$		600	X=
45	Whether your skin remains dry throughout the year in comparison to others?	Yes	20	
46	You have got an undernourished / emaciated body.	Yes	20	
47	Yours is underdeveloped body. BMI= towards the lower limit of normal. (19-21)	Yes	20	
48	You've got a rough, low, broken or obstructed voice.	Yes	20	
49	Your sleep lasts for less then 6 hrs. Per day. or Can your sleep be disturbed easily?	Yes	20	
50	Do you change your walking speed & style from time to time?	Yes	25	
51	Do you keep your body parts moving often?	Yes	25	
52	Does your food habit keep changing from time to time?	Yes	25	
53	Do you change your walking / jogging habits from time to time?	Yes	25	
54	Do you keep your joints, eyes, eyebrows, jaw, lips, tongue, head, shoulder, hands & feet frequently moving often?	Yes	100	
55	Are you considered a talkative person among your social circle or your friends?	Yes	50	
56	Do you have prominent veins & tendons all over the body?	Yes	50	
57	Do you start the work assigned to you immediately?	Yes	14.2	
58	Do you get irritated easily?	Yes	14.2	
59	After the consumption of Ice cream / Cold drinks, do you get pharyngitis /common cold from the very next day?	Yes	14.2	
60	Do you get frightened easily?	Yes	14.2	
61	Do you make friends easily & also lose them easily?	Yes	14.2	
62	Do you learn things immediately? or Do you have a good grasping power?	Yes	14.2	
63	You can remember how many names of your friends during 1 st standard of primary school? If it is less than 5-	Yes	14.2	
64	Are you more comfortable in summer? or Do you prefer warm drinks over cold drinks?	Yes	25	
65	Do you easily afflicted with disorders related with cold like common cold etc.	Yes	25	
66	Do you shiver in winter season more than your friends?	Yes	25	
67	Do you get attacks of stiffness in your body often?	Yes	25	
68	Are your hairs on body & face; nails teeth, hands & feet rough?	Yes	100	
69	Do you have cracks on the body especially in the heels?	Yes	50	
70	Are some sounds heard on movements of your joints?	Yes	50	
	Total = $V=X/800 \times 100$ $V= X / 8$		800	X=
49	Your sleep lasts for less then 6 hrs. Per day. or Can your sleep be disturbed easily?	Yes	20	
50	Do you change your walking speed & style from time to time?	Yes	25	
51	Do you keep your body parts moving often?	Yes	25	

Scoring

There are 70 questions in this proforma. Each question consists of option as Yes or No.

If your answer is according to option, you will get full marks, otherwise zero.

After that the percentage of total marks will be taken for each prakriti (Vata, Pitta and Kapha).

In these three prakriti, in which the individual gets maximum percentage of marks it will be his/her dehic prakriti (according to Doshic predominance).

Method of Study

A detail history and prakriti assessment proforma was prepared and at first deha prakriti was assessed by that questionnaire proforma. After that effect of prakriti on Pakshma and Shukla Mandala were studied.

Inclusion criteria

1. All the persons falling in the age group of 18 to 45 years
2. All the individuals were normal, healthy, without any ocular and systemic diseases

Exclusion criteria

1. Age below 18 year and above 45 years
2. Eyelid disorder (Blepharitis, Chalazion, Enteropion, Ectropion)
3. Acute conjunctivitis
4. Keratitis and Corneal ulcer
5. Uveitis, Glaucoma
6. Ptosis
7. Squint & nystagmus
8. Retinal disorders

Assessment

1. Deha prakriti was assessed by a 70 questions questionnaire.
2. Appearance or color of Shukla Mandala (sclera) – Color of

sclera was seen in different group of individuals. It's colour was noted under following grading –

- Muddy / Picchil
 - Reddish white / Tamra nayana
 - Clear white / Shuklaksh
3. Number of eye lashes – Number of eye lashes were counted by –

For this at the center of eyelid 5 mm area was measured in which eyelashes were counted. Mean of each group was taken and we found that in number of eyelashes in each group were (in 5 mm area)

- Ghana- 18-20
- Madhyam- 14-16
- Alpa- 10-12

Observations and Result**1. Appearance of Eye (Sclera)****Table 2**

Appearance of eye	Group I (<i>Vata</i>)		Group II (<i>Pitta</i>)		Group III (<i>Kapha</i>)		Total	
	No.	%	No.	%	No.	%	No.	%
Muddy	20	66.67	5	16.67	5	16.67	30	100.00
Reddish White	6	20.00	21	70.00	3	10.00	30	100.00
Clear White	4	13.33	4	13.33	22	73.33	30	100.00
Tota	30	100.00	30	100.00	30	100.00	90	100.00

$$\chi^2 = 55.20 \text{ p} < 0.001 \text{ HS.}$$

2. Number of Eyelashes**Table 3**

Number of Eyelashes	Group I (<i>Vata</i>)		Group II (<i>Pitta</i>)		Group III (<i>Kapha</i>)		Total	
	No.	%	No.	%	No.	%	No.	%
Alpa	5	16.67	18	60.00	4	13.33	27	30.00
Madhyam	15	50.00	7	23.33	8	26.67	30	33.33
Ghana	10	33.33	5	16.67	18	60.00	33	36.67
Total	30	100.00	30	100.00	30	100.00	90	100.00

$$\chi^2 = 25.17 \text{ p} < 0.001 \text{ HS.}$$

Discussion

Ayurveda believes that the *tridosas* transmitted from the parents through the *Sukra* and *Shonita* play the basic and most significant role in development of *deha-prakriti* [10].

Individuals can be grouped according *Charaka* into seven categories. However, the individuals having all the *doshas* in perfect equilibrium are rare. Therefore, according to the dominance of *doshas prakriti* can be of following types.

- *Vatal prakriti* (having the dominance of *vata*)
- *Pittala prakriti* (having the dominance of *pitta*)
- *Slesmala* (having the dominance of *kapha*)

The individuals of each category behave/respond differently in many ways in a given situation, and effect on pakshma and shukla mandala is-

- On Pakshma Mandala / number of eyelashes - They were counted at the central 5 mm area of eyelid. And we found that number of eyelashes were more in *Kapha* group. Medium in *Vata* group and less eyelashes in *Pitta* group. This comparison was statistically highly significant.

- On appearance of Shukla Mandala /sclera - In our study we found that *Kapha* group has white eye, *Pitta* group has reddish white eye and *Vata* group has muddy eye. This comparison between all the three groups was statistically highly significant.

Summary and Conclusion

According to ancient *Ayurvedic* texts the individuals can be classified into *vata*, *pitta* and *kapha prakriti* groups depending upon the differences in their body structure, functions and behaviour patterns. The differences in the appearance of eyes also exist.

In the modern literature studies regarding variations in body structure and function do not exist because the concept of *deha prakriti* is unique to *Ayurveda*.

This study consists of:

- a. Determination of *deha prakriti* of subjects under study (by a questionnaire as shown in Appendix I).
- b. Determination whether the studied characteristics vary according to the *deha prakriti*.

For this study 90 healthy individuals, 30 from each prakriti of 18-45 yrs. of age were selected and divided into 3 groups according to prakriti. After that highly significant result were found in both studied characteristics i.e. for density of eyelashes ($p < 0.001$ H.S.) for appearance of eye (Sclera) ($p < 0.001$ H.S.) After study number of eyelashes were found more in *kapha* group and less in *pitta* group. Appearance of Shukla Mandala (Sclera) was muddy in *vata* group reddish white in *pitta* group and clear white in *kapha* group. Hence we concluded that individual's prakriti shows effect on his eye.

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