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Original Research Article

Role of *Raktapradoshaja Nidana* in the manifestation of *Kushtharoga* in Ayurveda: a cross sectional survey study

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ABSTRACT

Background: In Ayurveda all the skin diseases are described under the term *Kushtha* which is mentioned as a *Raktapradoshaja vikara*. Due to *Rakta dusti* several disease pathogenesis accurse in population which leads to *Raktapradoshaja vikara*.
Methods: Present study aimed to conduct a cross-sectional survey based study for investigating the role of *Raktapradoshaja nidana* in the pathogenesis *Kushtha* (skin diseases). A duly prepared proforma was prepared based on various etiology of *Raktapradoshaja vikara* mentioned in classical texts of Ayurveda. Total 500 patients diagnosed as skin disease were screened on the basis of prepared questionnaires prior obtaining the ethical clearance form IEC, NIA, Jaipur (IEC/ACA/2017/60 dated 26/04/2017).
Results: Based on over all observation the present survey study explains an easy diagnostic criterion for the different types of *Raktapradoshaja vikara* mentioned in Ayurveda. Here a unique attempt was taken for quantitative analysis of various classical nidana in relation to the pathogenesis of the disease *Raktapradoshaja vikara*.
Conclusions: Analyzed data of all these extreme exposure of *nidana* may provide a significant role for diagnosis, prognosis, as well as prevention of the disease of *Raktapradoshaja vikara*.

Keywords: *Kushtha*, *Nidana*, *Raktapradoshaja*, Survey

INTRODUCTION

The foremost objective of Ayurveda is to prevent the disease as well as cure the diseases. This is achievable when the physicians have proper knowledge regarding the pathological development and the severity of sign and symptoms of the diseases.[1] In the pathogenesis of disease, *Dosha*, *Dushya*, *Srota*, *Agni* and *Ama* (Prime causative factors of diseases) are required to be analyzed for fruitful treatment.[2] In Ayurveda diagnosis is done on the basis of *Pancanidana*.[3] Forproper diagnosis of disease various classical methods as *Trividha*, *Chaturvidha*, *Shadhavidha*, *Asthavidha* and *Dashavidhapariksha* (classical investigation) are need to be applied in proper way.[4] In this present study a vast area of Ayurveda have been selected where a group of different types of skin diseases are mentioned under the term *Kushtha*. The word Kushtha depicts the ugly skin generally; three *Dosha* (~humor) and four *Dushya* (~pathological factors) are involved at a time. The Dosha are aggravated due to the particular *Nidana* (~etiological factor) and then it vitiates the Dhatu (~tissues) and *Upadhatu* (~sub tissues) i.e *Tvaka* (~skin),

Mamsa (~muscle), *Rakta* (~blood) and *Lasika* (~lymph). These seven constitutes are the prime pathogenic substance of *Kushtha*.[5,6] As the common basic pathology for all these disease is *Raktadusthi* which is primary cause of each and every type of *Kushtha*. Hence, a cross sectional survey study was conducted to find out the prevalence of different *Rakta-dusti nidana* (~etiopathogenesis of blood)for the manifestation of classical *Kushtha roga* (~skin disorders).

METHODS

A cross sectional survey was conducted to gather the data for role of *Rakta-dushti nidana* in the pathogenesis *Kushtha* (~skin disease). A duly prepared proforma was prepared based on various etiology of *Raktapradoshaja* vikara mentioned in classical texts of Ayurveda. The study was conducted at the Hospital of National Institute of Ayurveda, Jaipur from the period of December 2018 to March 2019. For this survey total 500 patients diagnosed as skin disease were screened on the basis of prepared questionnaires, prior obtaining the ethical clearance from Institutional Ethical Committee (IEC)vide reference no.-IEC/ACA/2017/60 dated 26/04/2017. The whole study was conducted in the following 5 steps:

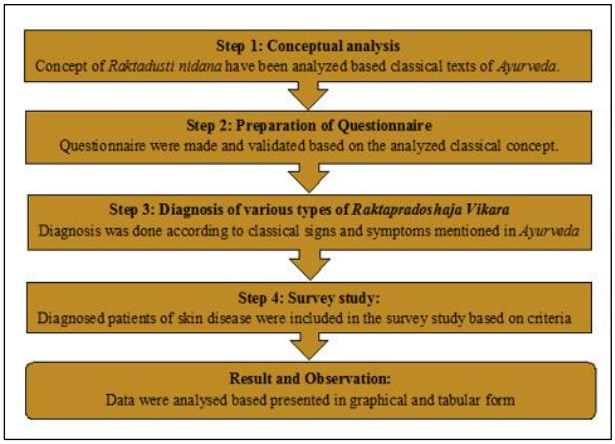

Figure 1: Details of study design.

Inclusion criteria

- Patients with the classical sign and symptoms of *Kushtha* (~skin diseases).
- Patients above 16 years and below 70 years of age.
- Patients belonging to either gender.

Exclusion criteria

- The patient suffering from malignant, any systemic disorders, especially those are mentioned as *Asadhya vyadhi* as per clinical text of Ayurveda were excluded.
- The pregnant women and lactating mother were excluded.

Analysis on *aharaja nidana* (~etiological factors related to diet and food habits) shows that 72.0% of patients were vegetarian (Table 1) and 73.2% patients were habituated to intake spicy food in daily diet.67.6% patients used to consume fast food, whereas 20.6% were habituated with fast food and cold drinks (Table 2). 70.0% patients were habituated to regular consumption of milk, 74.8% used to intake ghee and 90.0% patients were habituated to use oily food (Table 3). The finding also shows 12.8% patients used to drink water in excessive amount, 66.8% patients consumed sugarcane juice, 57.6% patients consumed lemon juice, 31.2% patients used to drink favorite fruit juice, 12.8% patients were habituated with aerated drinks,47.2% used to drink liquids in empty stomach and 67.2% patients used to drink liquid immediately after food (Table 4).Table 5, shows 9.4% patients consumed beer, 6.6% patients consumed wine, 5.6% patients consumed *gin/rum/whiskey* and 7.0%patients were addicted *tovodka*. Table 6 shows that maximum 47.0% patients were habituated with excessives this food items, and 35.6% patients consumed excessive pungent taste in diet and 35.0% patients used to consume excessive salt in diet.

RESULTS

Various observations which were made during this survey study are presented scientifically. The analysis of the demographic profiles shows maximum number (38%) of patients were in between 16-26 years of age group (Figure 2), maximum (58%) were male subjects (Figure 3), 81% subjects were Hindu (Figure 4). Data shows 99% patients were from *Anupa desha* (~wet and humid region) (Figure 5). 27% patients were housewife and 37% were employer (Figure 6). 57% patients were diagnosed as *Madhyam kostha* (~medium digestive power) (Figure 7). 72% patients were suffering from disturbed sleep (Figure 8). Maximum patients were diagnosed as *Pittavataja prakriti* (~constitution), followed by *Pittakapha prakriti* (~constitution) (Figure 9) besides maximum patients were found under Madhyam sara (Figure 10), *Madhyam samhanana* (~medium compactness) (Figure 11), *Madhyam pramana*(~medium measurement) (Fig.-12), *Madhyam satmya* (Figure 13), Madhyam satva (Fig.-14), *Madhyam vaya* (~middle aged) (Figure 15), *Madhyam vyamshakti* (~physical strength) (Figure 16), *Madhyam abhyavaran shakti* (~capacity to ingestion)(Figure 17) and *Madhyam jarana shakti* (~medium digestive power) (Figure 18).

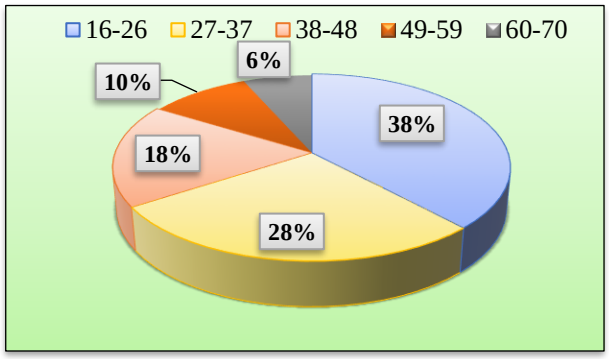

Figure 2: Age wise distribution of 500 patients.

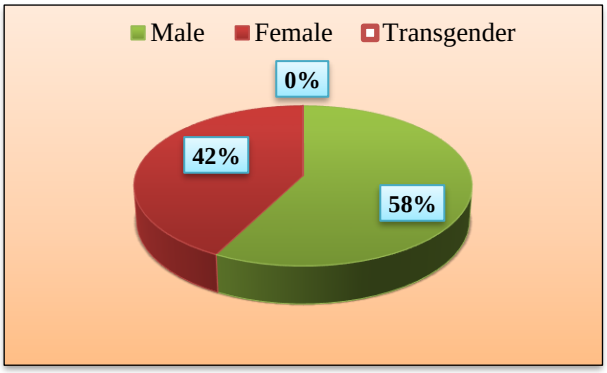

Figure 3: Sex wise distribution of 500 patients.

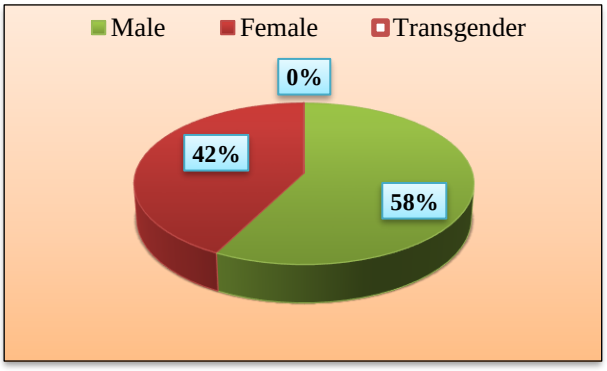

Figure 4: Religion wise distribution of 500 patients.

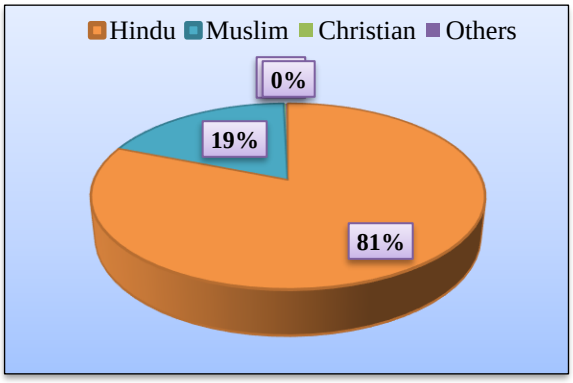

Figure 5: Distribution of 500 patients according to *deśa* (region).

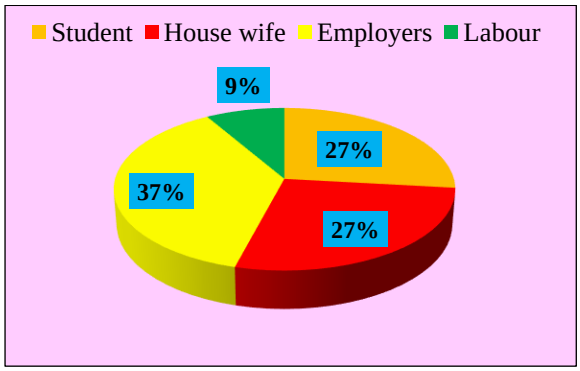

Figure 6: Occupation wise distribution of 500 patients.

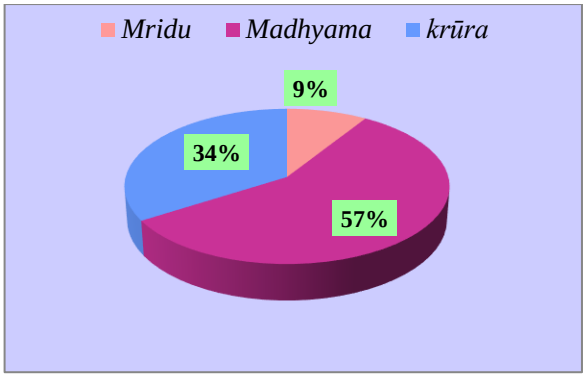

Figure 7: *Kostha* wise distribution of 500 patients.

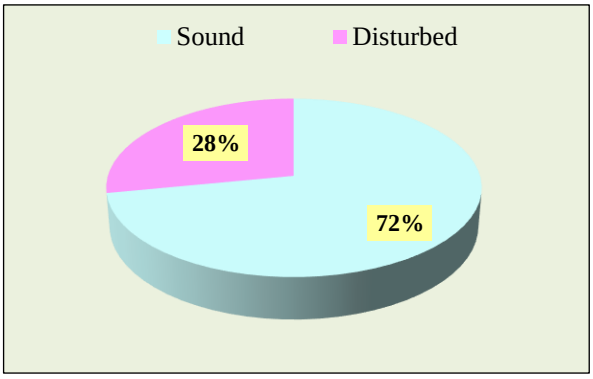

Figure 8: *Nidra* wise distribution of 500 patients.

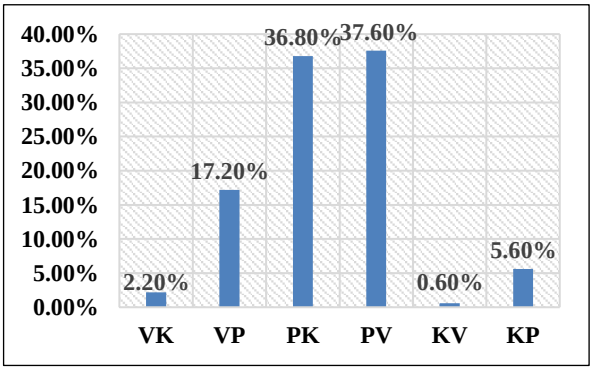

Figure 9: *Sharirika Prakiti* wise distribution of 500 patients.

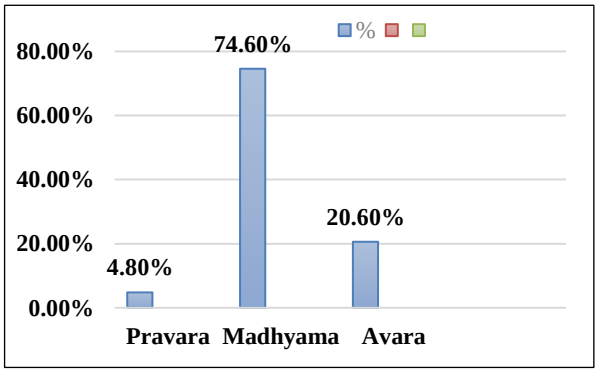

Figure 10: *Sara* wise distribution of 500 patients.

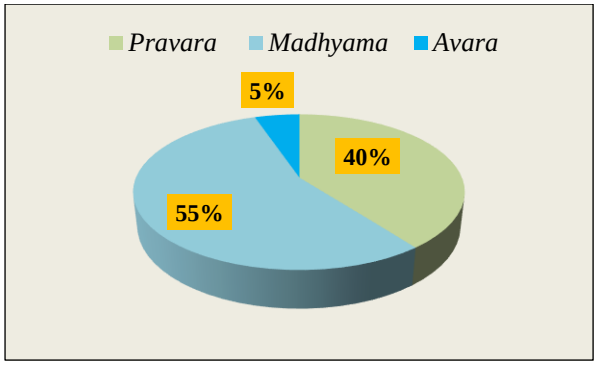

Figure 11: *Samhanana* wise distribution of 500 patients.

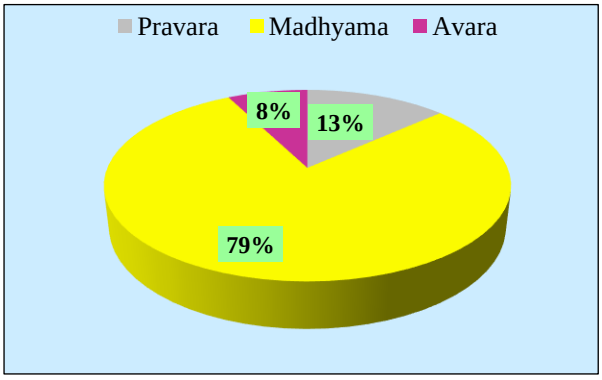

Figure 12: *Pramana* wise distribution of 500 patients.

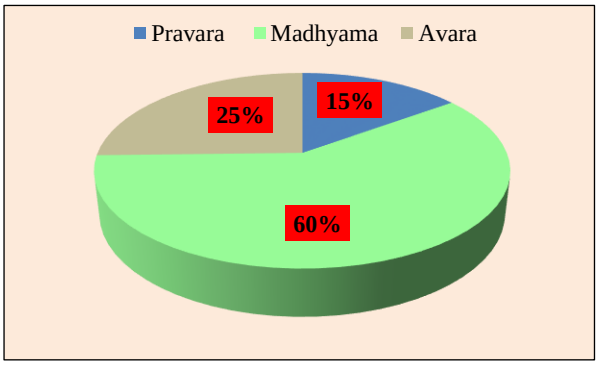

Figure 13: *Satmya* wise distribution of 500 patients.

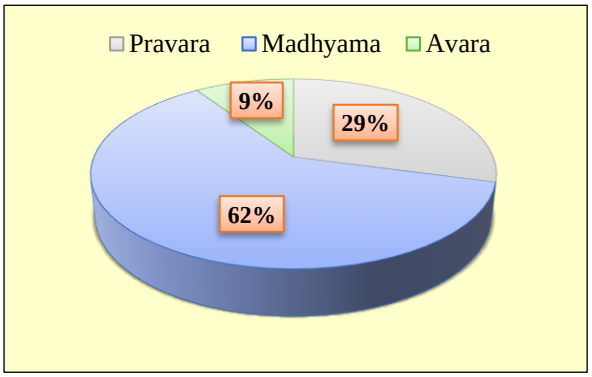

Figure 14: *Satva* wise distribution of 500 patients.

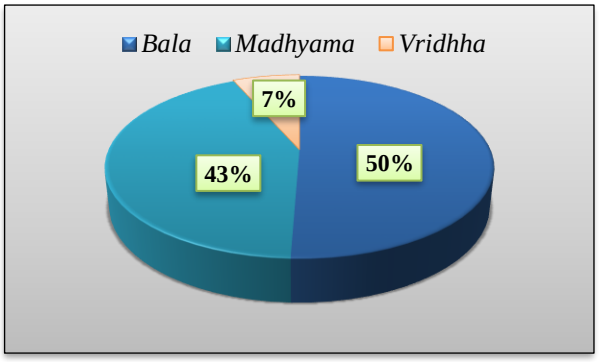

Figure 15: *Vaya* wise distribution of 500 patients.

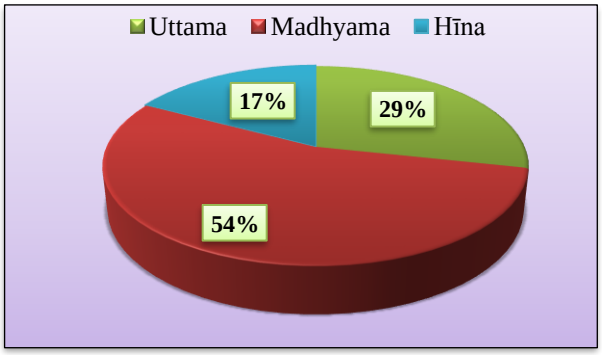

Figure 16: *Vyayama* shakti wise distribution of 500 patients.

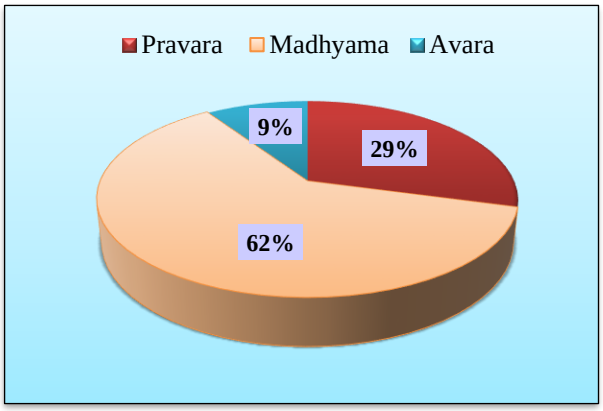

Figure 17: *Abhyavarana* shakti wise distribution of 500 patients.

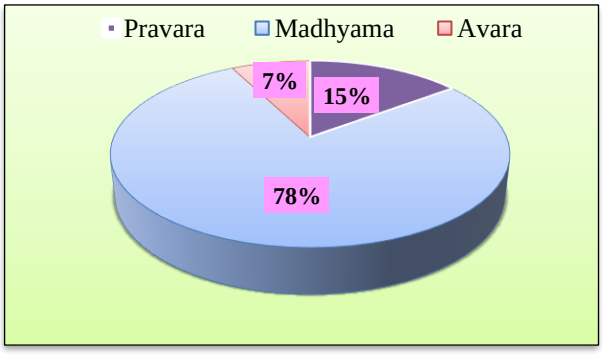

Figure 18: *Jaranshakti* wise distribution of 500 patients.

Table 1: Diet wise distribution of 500 patients.

No.	Diet	No of patients	%
1.	Veg	360	72.0%
2.	Mixed	140	28.0%
Total		500	100.0%

Table 2: Distribution of patients based on intake of *vidahi ahara*.

Vidahi ahara	No of Patients	%
Fast Food	338	67.6%
Fast Food + Cold drinks	103	20.6%
Preserved food	188	37.6%
Refrigerated food	235	47.0%
Food items stored for long time (lunch box)	125	25.0%
Not taken	60	12.0%

Table 3: Distribution of patients based on intake of *snigdhaahara*.

Snigdhaahara	No of Patients	%
Milk	350	70.0%
Ghee	374	74.8%
Oil	450	90.0%

Table 4: Distribution of patients based on intake of *Drava ahara*.

Drava ahara	No of patients	%
Water in excess	64	12.8%
Sugarcane juice	334	66.8%
Lemon juice	288	57.6%
Favorite fruit juice	156	31.2%
Aerated drinks	64	12.8%
Liquids in empty stomach	236	47.2%
Intake of liquid immediately after food	336	67.2%

Table 5: Distribution of patients based on intake of *pradushta bahu ushna tikshna madya*.

No.	Pradushta bahu ushna tikshna madya	No of patients	%
1.	Beer (ABV: 4-8%)	47	9.4%
2.	Malt Beverage (ABV:15%	00	0.0%
3.	Wine (ABV:14-24%)	33	6.6%
4.	Gin /Rum/ Whiskey (ABV: 36-50%)	28	5.6%
5.	Brandy (ABV: 35-60%)	00	0.0%
6.	Vodka (ABV: 40-95%)	35	7.0%
7.	Tequila (ABV: 50-51%)	00	0.0%

Table 7 shows that in this survey study maximum 75.6% patient's intake dahikadi. Maximum 53.0% patients usually take food in Adhyashana (~taking food before digestion of previously consumed food) and 39.0% intake food in Ajirnashana condition (~taking food in indigestion condition) (Table 8).

Table 6: Distribution of patients based on intake of *Rasa*.

No.	*Rasa*	No of patient	%
1.	*Atilavana* (excess salt intake)	175	35.0%
2.	*Atikshara* (excess alkali)	122	24.4%
3.	*Ati amla* (excess intake of sour)	235	47.0%
4.	*Ati katu* (excess intake of pungent)	178	35.6%

Table 7: Distribution of patients based on intake of *Viruddhaahara*.

Viruddhaahara (incompatible diet)	No of patients	%
Milk with Fish together	00	0.0%
Curd with Fish together	07	1.4%
Milk with Egg together	60	12%
Fruits with Egg together	00	0.0%
Chicken with Milk together	00	0.0%
Chicken with Curd together	41	8.2%
Milkshakes	364	72.8%
Banana with Milk together	165	33.0%
Honey with Hot water together	42	8.4%
Curd with rice with milk together	31	6.2%
Udad with Milk/Curd (Dahi vada)	103	20.6%
Milk with Sweets together	86	17.2%
Raddish with Milk together	28	5.6%
Garlic with Milk together	34	6.8%
Khichdi with Milk together	162	32.4%
DahiKadi	378	75.6%
Raita with fruits together	210	42.0%
Milk/ Curd with Green leafy Vegetables	155	31.0%
Honey with Ghee together	00	0.0%
Namkeen with Milk together	22	4.4%

Table 8: Distribution of patients based on intake of *Mithyaahara*.

Type of *Mithyaahara* (improper diet)	No of patients	%
Upaklinna and *Putibhakshana* (~unhygienic food items)	162	32.4%
Atyasana (~intake of excessive food)	120	24.0%
Ajirnashana (~intake of food in indigestion)	195	39.0%
Adhyashana (~intake of food before digestion of the previous food)	265	53.0%

Table 9: Distribution of patients based on other *aharanidana*.

No.	Type of othersaharanidana	No of patients	%
1.	*Shami dhanya varga* (~pulses and beans)	295	59.0%
2.	*Taila varga*(~vegetative oil)	92	18.4%
3.	*Mamsa varga* (~meat)	43	8.6%
4.	*Harita varga* (~green vegetable)	333	66.6%
5.	*Dadhi varga* (~curd)	428	85.6%
6.	*Madya varga* (~alcohol/wine)	47	9.4%
7.	*Kritanna varga* (~processed food)	298	59.6%

Table 10: Distribution of 500 patients wise *Viharaja nidana*.

Type of Viharaja nidana	No of patients	%
Bhajatam catapa anala (~exposure to sunlight and air)	156	31.2%
Chardi vega pratighata (~suppression of urge of vomiting)	124	24.8%
Bhukta diva prasvapata (~day sleep after lunch)	298	59.6%
Shrama abhighata (~excessive fatigue)	44	8.8%
Samtapa (~ excessive heat)	15	3.0%
Kale anavasecana (~improper bloodletting)	12	2.4%

Table 11: Distribution of 500 patients based on *Vyadhi kala*.

No.	*Vyadhi kala* (duration of disease)	No of patients	%
1.	*Navina vyadhi* (<6months)	153	30.6%
2.	*Naatikalam*(6months to 1yr)	140	28.0%
3.	*Naatikalam* (2yrs to 5 yrs)	141	28.2%
4.	*Dirgha kalanubandhi* (>5years)	66	13.2%
	Total	500	100%

Data shows that in this study maximum 85.6% patients consumed dadhi varga(~milk and milk product) than 66.6% patients intake harita varga (~green leafy vegetable) (Table 9).

Analysis on Viharaja nidana (~etiological factors related to lifestyle) shows 46.67% patients were habituated to exposure of Krodha (~excessive anger). Maximum 59.6% patients were habituated tobhukta diva prasvapata (~day sleep after lunch) (Table 10). Table 11 shows that 30.6% patients had newly manifested disease, 28.0% and 28.2% patients had 6 months to 1 year and 13.2% patients were suffering from chronic disease. Based on classical sign and symptoms of skin disorders mentioned in Ayurveda texts 38.4% patients were diagnosed as Dadru, 22% patients were diagnosed as Vipadika, 10.2% patients were diagnosed as Vicarcika, 8.6% of patients were diagnosed as Eka kushtha, 3.8% patients were diagnosed as Svitra, 2.4% patients were diagnosed as Vyanga, 2.2% patients were diagnosed as YuvanaPidika, 1.6% of patients were diagnosed as Pama (Table 12).

Table 12: Distribution of patients based on clinical diagnosis.

No.	Diagnosis	No. of patients	%
1.	*Asargdara*	01	0.2%
2.	*Carmakhya*	04	0.8%
3.	*Dadru*	192	38.4%
4.	*Eka Kustha*	43	8.6%
5.	*Eka Kustha with Dadru*	01	0.2%
6.	*Kamala with vyanga*	01	0.2%
7.	*Kitibha*	05	01%
8.	*Mandala Kustha*	04	0.8%
9.	*Mukha paka*	01	0.2%
10.	*Nilika*	02	0.4%
11.	*Pama*	08	1.6%
12.	*Pidika*	04	0.8%
13.	*Pidika with Dadru*	01	0.2%
14.	*Pitta kaphaja Kustha*	03	0.6%
15.	*Rakta dusti*	01	0.2%
16.	*Rakta dusti with Vicarcika*	01	0.2%
17.	*Sidhma*	02	0.4%
18.	*Shita-Pitta*	02	0.4%
19.	*Shvitra*	19	3.8%
20.	*Tilakalaka*	01	0.2%
21.	*Vata kaphaja Kustha*	01	0.2%
22.	*Vata pittaja Kustha*	02	0.4%
23.	*Vicarcika*	51	10.2%
24.	*Vicarcika with Dadru*	01	0.2%
25.	*Vidhardhi*	04	0.8%
26.	*Vipadika*	110	22%
27.	*Vipadikawith Dadru*	01	0.2%
28.	*Vishphota*	01	0.2%
29.	*Vyanga*	12	2.4%
30.	*Yuvana Pidaka*	11	2.2%
Total		500	100%

DISCUSSION

According to classics of Ayurveda verities of *Kushtha* are occurred by the vitiation of seven fold of pathogenic substance. However, for diagnosis purpose, knowledge regarding predominant *Dosha* (~humor) is very much essential. As the predominant vitiating pathogenic factors depict the specific verity of *Kushtha* and the treatment principle is also designed on the basis of *Dosha*.[5,7] In present study to find out the prevalence of different *Rakta-*

dusti nidana (~etiopathogenesis of blood)for the manifestation of classical *Kushtha roga* (~skin disorders) were assessed by cross-sectional survey study conducted in 500 subjects selected based on the inclusion and exclusion criteria (the study design depict on Flowchart 1). The data obtained through the prepared questioners were analyzed and presented in graphical (Figure 1-17) and tabular form (Table 1-12). Analyzed data indicates that the majority of the patients were suffering from *Raktapradshaja vikara*,belonged to the young age group, because in this stage, they are maximum prone to expose in different etiological factors-like *drava* (liquid), *singdha* (oily), junk food, dahi(excess curd and milk product) etc. Due to sedentary lifestyle intake of *Mithyahara* (~improper diet) is a common phenomenon in the pathogenesis of *Raktapradshaja vikara*. All these *aharajanidana* (causative factor related to diet) are responsible for vitiating the *Rakta Dhatu* and reflect as skin diseases.Therefore considerations on *Ahara* (diet) should be done with specificity to the individual. *Ahara* (diet) when taken in proper quantity at proper time following all *niyamas* (guideline) contribute health. By understanding the personage constitution of every human being, physicians can distinguish which food and drink appropriate for maintaining their healthy life.[8-11] The study indicates that *jatharagni* has no direct role in the pathogenesis of *Raktapradoshajavikara*, only the samagni gets impaired by irregularity in food intake. If food is not taken in accordance with the *bala* of *agni*, then it may become incompatible and leads to pathogenesis of the skin disease. The data also indicates that Pitta-*vataprakrtiand Pitta-Kapha prakrtiare* most prone to *Raktapradoshajavikara*. Though prakriti won't affect the individual just like visa of the kita won't affect itself. But *prakopa karana* (etiology) of the vitiation of *particulardosha* in prakriti has more chances of leading to that particular *doshavikriti* due to *samana guna dharma* (~theory of equilibrium). As it is occurring in *Raktapradoshaja vikara* (*Pitta)*. Based on over all observation the present survey study explain an easy diagnostic criterion for the different types of *Raktapradoshajavikara* mentioned in Ayurveda. Here a unique attempt was taken for quantitative analysis of various classical *nidana* in relation to the pathogenesis of the disease *Raktapradoshaja vikara*. Analyzed data of all these extreme exposure of *nidana* may provide a significant role for diagnosis, prognosis, as well as prevention of the disease of *Raktapradoshaja vikara*.

CONCLUSION

The analyzed quantitative data of *nidana* may play a significant role in diagnosis, prognosis as well as prevention of *Raktapradoshaja vikarain* this particular survey area. Further the study should be carried out with large sample size for better evidence on the obtained results. Also, the observed findings on quantitative analysis of various classical *nidana* in relation to the *Raktapradoshaja vikarais* recommended for further validation.

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REFERENCES

1. Nath R, Mandal SK. Classical diagnostic approach of the disease Vyanga (A type of dermatological disorder). J Sci Innovat Res. 2017; 6(4):135-7.
2. Nath R, Mahajon B, Sengupta A, Chaterjee A, R. Remadevi. A Review on Clinical Examination of Agnibala (Digestive Power). Int J Ayur Pharma Res. 2014; 2(2):79-82.
3. Kar M. In: Acarya YT, eds. Madhav Nidana Reprint ed. Chapter 1. Version 4, Varanasi, Chaukhambha Sanskrit Sansthan; 2010:3.
4. Nath R, Mahajon B, Sengupta A, Chattopadhyay A. Importance of Nidana (Ayurvedic diagnosis) for treatment of an anonymous disease in Ayurveda: a case study. J Ayu Herb Med. 2016;2(1):3-5.
5. Nath R, Mandal SK, Mahajon B. Rational diagnostic advance of Kushtha (integumentary diseases) by a preliminary arbitrary grading system based on Ayurveda fundamental principles. J Sci Innovat Res. 2019;8(2):37-45.
6. Nath R, Mandal SK. A view on classical diagnostic advance of Dadru kushtha (type of skin disorder). Int J Curr Res. 2017;9(10):59913-6.
7. Agnivesha, Samhita C. In: Acharya JT, eds. Nidana Sthana. Reprint ed., Chapter 5, Version 3. Varanasi, Chaukhambha Prakashan; 2011:216.
8. Mahajon B, Nath R, Remadevi R. A Scientific Review on Dietetics in Ayurveda According to Prakriti (Innate Constitution). Intern Ayurvedic Med J. 2014;2(6):1031-6.
9. Nath R, Mahajon B, Sengupta A, Chattopadhyay A. Manifestation of Signs and Symptoms In Agnidusti Int J Res. Ayurveda Pharm. 7(2):150-3.
10. Nath R, Mahajon B, Mandal SK. Pathogenesis of Sadhya Udara Roga-An Ayurvedic View. J Drug Res. 2016; 5(2):30-40.
11. Mahajon B, Nath RR. Remadevi. A Scientific Analysis of Single Drug Remedies in Chakradutta (A Convenient Ayurvedic Transcript). J Pharm Sci Innov. 2014;3(6):492-4.

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