OPEN ACCESS

Ology Press

Research

Journal of Dental Science, Oral and Maxillofacial Research

Prevalence of dental disorders based on Tridosa concept of Ayurveda: a clinical study

Acharya Balkrishna,[1] Kuldeep Singh,[2] N. Karthikeyan,[3] Gaurav Shaurabh Sharma,[4] Paran Gowda[5]

[1]Patanjali Research Institute and Vice Chancellor, University of Patanjali, Haridwar, Uttarakhand, India

[2]Dental Clinic and Research Centre, Patanjali Ayurved Hospital, Haridwar, Uttarakhand India

[3]Patanjali Yogpeeth, Haridwar, Uttarakhand, India

[4]University of Patanjali, Haridwar, Uttarakhand, India

[5]University of Patanjali, Haridwar, Uttarakhand India

Correspondence: Kuldeep Singh, Dental Clinic and Research Centre, Patanjali Ayurved Hospital, Haridwar, Uttarakhand, India, Pin 249405, Tel +91 9760095217, Email drkuldeep.singh@divyayoga.com

Received: July 16, 2019 | **Published:** August 30, 2019

Abstract

Background: Tridosa concept of Ayurveda categorises human beings into Vata, Pitta, and Kapha groups based on the body constitutional type and prescribes precise health decisions specific to each type. The association of Tridosa and prevalence of oral disorders has not been studied so far. The present clinical study aims to understand such association.

Objective: To evaluate the prevalence of dental disorders based on Tridosa concept of Ayurveda.

Methods and materials: A total of 60 subjects who the dental clinic as patients were included in the clinical study. Their body constitutional types were identified using a checklist. Oral disorders were diagnosed through visual examination. Kruskal−Wallis test was applied to test the significance of difference between the means score values of Vata, Pitta, and Kapha groups.

Results: Majority of the subjects (55%) were of Pitta body constitutional type followed by Kapha and Vata types. Seven oral disorders were diagnosed among the subjects. Pitta body constitutional type was predominant among the subjects diagnosed with disorders namely caries, cervical abrasion, tooth loss, irregular teeth, general attrition and lichen planus. Caries was diagnosed among greater part of the subjects (60%). Kapha prakriti was the most prevalent among the subjects identified with tooth mobility, while Pitta constitutional type was predominant among the subjects diagnosed with rest of the six disorders. The mean values of Vata, Pitta and Kapha scores were significantly different ($p<0.01$ and $p<0.05$) for the seven oral disorders diagnosed.

Conclusion: The results confirmed that Pitta prakriti type was predominantly present among the most of the dental patients. The dosas can influence individuals' susceptibility to oral disorders.

Keywords: tridosa, oral disorders, dental caries, prakriti, tridosa, ayurveda, Kruskal−Wallis test, vata, pitta, kapha

Abbreviations: WHO: world health organization, BMI: body mass index, SNP: single nucleotide polymorphism

Background

For many centuries oral health disorders have been the most important health burdens worldwide. For example, dental cavity in permanent teeth affected 2.4 billion people in the world while 621 children suffered from the ailment as of 2010. The severe periodontitis prevailed approximately among 10% of the world people.[1] Oral health disorders have a significant impact on the overall health and also on the quality of life.[2] The World Health Organization (WHO) has ranked dental caries as number three among all chronic non–communicable diseases that require worldwide attention for prevention and treatment.[3] Dental caries has high prevalence all around the world involving the people of all region and society.[4] In developing countries like India the prevalence of dental carries is very high particularly among the children and adolescents. School age is an influential stage in people's lives, a time when lifelong sustainable health related behaviors, as well as beliefs and attitudes are being developed.[5,6]

Ayurveda, a health system which originated from India and considered to be an eternal could provide innovative leads to the concept of personalised medicine. Ayurveda imparts physiological, psychological, and spiritual well−being of living beings.[7] It is not only confined to medicine; rather it is a complete lifestyle and spiritual practice.[8] Tridosa ('Tri'=three+'Dosa'=capable of vitiation), a concept which encompasses three basic biological energy forces namely Vata, Pitta and Kapha, is central doctrine of Ayurveda. The dosas are responsible for homeostasis and health of living beings. When these energy forces are in equilibrium the living beings are in a normal health status and when they are vitiated, produce diseases. All bodily processes, physical or chemical are controlled by them. According to the Ayurvedic system, each individual is born with a unique body type determined by dominance of one or more of the three dosas and classified into Vata Prakriti, Pitta Prakriti and Kapha Prakriti.[8] Prakriti is established at conception stage of the living organisms and are unchanged throughout the living period.[9]

A considerable number of researches worldwide to understand the concept of Tridosa and validate the same with the principles of modern science have been undertaken. Recent research findings prove existence of association between Tridosa and metabolic functions of living organisms.[10] The research findings have concluded

Citation: Balkrishna A, Singh K, Karthikeyan N, et al. Prevalence of dental disorders based on Tridosa concept of Ayurveda: a clinical study. *J Dent Maxillofacial Res.* (2019);2(4):86-90. DOI: 10.30881/jdsomr.00035

that Tridosa is basic to all the living organisms and even the single cells. It also has been inferred that Prakriti must be a phenotypic phenomenon resulting from a particular genotype. The dosas regulate the metabolic pathways in the organisms. This understanding has led to evolution of a new discipline called 'Ayugenomics'.[11] Research has identified that the three dosas control the metabolic constitution and processes. Functions like cell division, movement, and excretion of waste are governed by Vata; while anabolism, growth, structure, and storage are influenced by Kapha. Metabolism and homeostasis are ruled by Pitta.[12] Association between Tridosas and Body Mass Index, peptide coenzyme A, basal metabolic rate related to aging and CYP2CI9 substrates, which are responsible for metabolic rate have been confirmed through research. Sierra proved connection between Tridosa and psychological and endocrinological elements and recommend potential biomarkers linked to the Prakritis.[9,11,13–15]

The relationship between Tridosa and vulnerability of individuals towards certain diseases like obesity has also been proved.[9] Mahalle et al., identified association between Tridosa and the levels of biomarkers of coronary artery diseases.[12] Juyal et al., confirmed link between Tridosa and levels of inflammatory genes causing rheumatoid arthritis.[16] Purvya and Meena proved association of Tridosa with aging and cancer.[13] Kumar et al., found out association between Tridosa and prevalence of diabetes.[17] However, no literature evidence linking Tridosa concept and oral health disorders could be found out. In this light, the present clinical study attempts to understand association between the Tridosa concept and prevalence of oral health disorders.

Objectives

The researchers in this clinical study intend to know the relationship between the Prakriti, the phenotypic expression or body constitutional type of Tridosa and the existence of oral disorders like caries, cervical abrasion, mobility, loss of tooth, irregular teeth, tooth attrition etc.

The null hypothesis is as follows

- H_0: The score values of Vata, Pitta and Kapha dosas of the individuals diagnosed with oral disorders are from an identical population.
- H_a: The score values of Vata, Pitta and Kapha dosas of individuals diagnosed with oral disorders are from different populations

Material and Methods

Subjects

For the present clinical study, the data was collected from the patients who visited the Dental Clinic and Research Centre, Patanjali Ayurved, Haridwar, India. Totally 60 patients suffering from oral disorders were selected as subjects. These subjects were post−classified based on the disorders with which they were diagnosed.

Criteria for selection

Male and female subjects of all ages who visited the clinic were considered. The subjects who were not willing to participate in the clinical study were excluded. In case of tooth loss disorder, subjects of >55 years were excluded since tooth loss after 55 years is a universal phenomenon and it cannot be considered as a disorder.

Ethical consideration

The subjects were explained about the clinical study and a written informed acceptance was received from the subjects. The subjects who were interested to participate only were selected.

Data collection

The data collection comprised two parts. In the first part, data related to demography and Prarkiti were collected. While the demography data was collected through interview, data on Prakriti was gathered using observation and interview techniques. The persons who were trained on Tridosa concepts were involved as evaluators to collect the data. A checklist was prepared to determine the Prakriti of the subjects. The ancient Ayurvedic texts namely as Charak Samhita, Sushruta Samhita, and Sartha Vabhatta describe characteristics or phenotypic expressions of Vata, Pitta and Kapha Prakritis in detail.

Acharya synthesized these details and evolved a checklist with 13 characteristics including body frame, type of hair, eyes, skin, mental activity, memory, gait, reaction to stress, sleep, effect of weather, temperament, hunger and body frame for each of three Prakriti types. The checklist was in a matrix form (13x4) with characteristics listed in the first column in 13 rows.[8] Against each characteristic, description of phenotypic expression under Vata, Pitta, Kapha Prakritis was provided. The clinical study made use of this checklist for data collection on Prakriti determination. The evaluator through observation and/or interview marked in a box given opposite to each description that what matched to the constitutional make up according to the characteristics of Vata, Pitta and Kapha. Total number of fitting characteristics under each dosa was added. The maximum number of characteristics among the three manifests the 'main Prakriti' and the lowest number represent 'subsidiary Prakriti'.

The second part of the data collection used a dental examination card developed by the Dental Clinic and Research Centre, Patanjali Ayurved, Haridwar, India based on the guidelines provided by WHO. Qualified dental doctors through visual clinical examination diagnosed oral disorders of the subjects. As many as 16 oral disorders were listed in the examination card. Based on the examination, the doctor recorded data in the card about prevalence of disorders in the subjects.

Analysis

The data were analyzed using SPSS 25 software. Statistical tools namely descriptive statistics and Kruskal−Wallis test were applied. The non−parametric tool 'Kruskal−Wallis test' was chosen since the data outcome was not normally distributed. In research, the test is recommended when the sample size is small and the outcomes are not normally distributed.[18]

Results

Demography

A total of 60 subjects who visited the clinic were engaged in the study. The subjects were of the age between 15 and 69 years. Mean age of the sample was 39.13 years (standard deviation=15.89). Slightly more than 68% of the subjects were less than 45 years. By sex, the sample was distributed as 41.67% of males and 58.33% of females.

Distribution of subjects based on body constitutional type

Body constitutional type or Prakriti of the individuals was determined by adding up the number of matching characteristics under each basic bio−energy force (dosa) category and identifying the greatest score among the three dosas. Existence of mixed Prakriti

Citation: Balkrishna A, Singh K, Karthikeyan N, et al. Prevalence of dental disorders based on Tridosa concept of Ayurveda: a clinical study. *J Dent Maxillofacial Res.* (2019);2(4):86-90. DOI: 10.30881/jdsomr.00035

is also possible (Vata−Pitta, Vata−Kapha and so on) and this can be determined using the checklist tool. However, mixed Prakritis were not considered for the present study since the since sample size was not adequate to make many cross sections. The subjects were categorized into three body constitutional types−Vata Prakriti, Pitta Prakriti, and Kapha Prakriti based on the score values. Distribution of the subjects based on the body constitutional types is shown in Figure 1.

Pitta body consititutional type was predominant (55%) among the subjects followed by Kapha (30%) and Vata (15%) body constitutional types. Similar pattern of distribution of observed when the subjects were classified based on sex. Percentage of subjects with Vata Prakriti was slightly higher in case of males (20%) than females (16%). On the other hand, the proprotion of Pitta Prakriti was higher among female subjects (48%) than their sexual counterparts. Kapha Prakriti was distributed in equal proportion among both the sexes.

After categorizing the subjects into three body constitutional types, mean score values of dosas for each body constitutional type were calculated and the results are presented in Table 1.

Table 1: Mean score values of Dosas across the Prakriti.

S. No.	Body constitutional type (Prakriti)	Mean score values of basic bio-energy forces (Dosas)		
		Vata	Pitta	Kapha
1.	Vata (n=9)	6.56 (0.73)	4.22 (0.83)	2.11 (0.78)
2.	Pitta (n=33)	2.70 (1.31)	7.42 (1.25)	2.85 (1.09)
3.	Kapha (n=18)	1.83 (1.29)	4.17 (1.10)	7.00 (1.03)
	Overall	3.02 (1.97)	5.987 (1.98)	3.98 (2.25)

Note: Figures in parentheses indicate standard deviation of the respective mean.

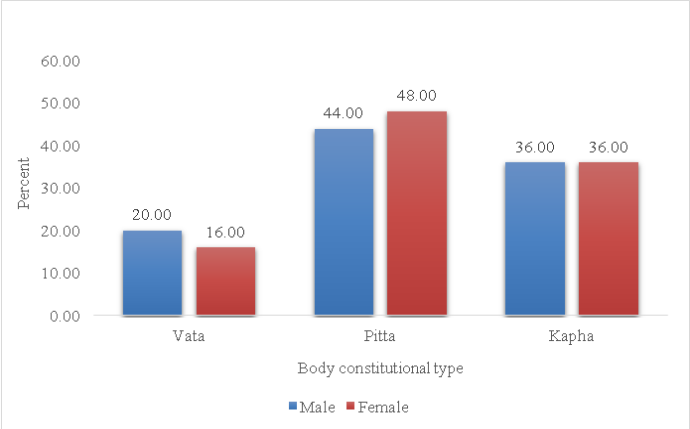

Figure 1: Distribution of subjects based on body constitutional type.

Obviously, the mean score value of a particular dosa was the highest under each Prakriti type due to the criterion considered for Prakriti type determination. Interestingly, though not the highest, mean score value of Pitta dosa was significant even in case of Vata and Pitta Prakritis. On the other hand, the mean score values of Vata and Kapha dosas were far less significant in the opposite Prakritis.

Prevalence of oral disorders was diagnosed by the qualified dentists and same was recorded. Analysis of the data showed that caries was the most predominant oral disorder prevailing among 60% of the subjects. This was trailed by tooth attrition (41.67%), tooth loss (26.67%), cervical abrasion (25%), mobility and irregular teeth (13.33%) and lichen planus (10%) in respective order. By connecting results of the body constitutional types, the subjects were further categorized for each disorder. Subjects with Pitta Prakriti were predominant in case of disorders namely caries (58.97%), cervical abrasion (46.67%), tooth loss (62.5%), irregular teeth (75%), tooth attrition (60%) and lichen planus (66.67%). Subjects with Kapha Prakriti were the highest in proportion (62.5%) in case of tooth mobility disorder. The percentage of subjects with Vata Prakriti was the lowest in case of all the disorders diagnosed, as shown in the graphical Figure 2.

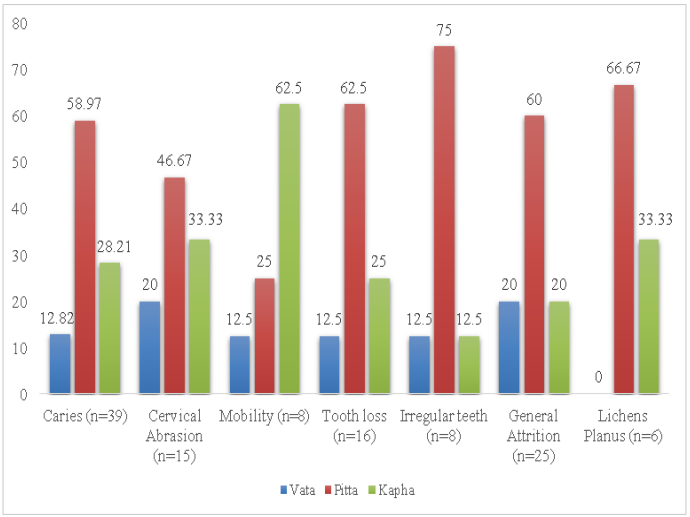

Figure 2: Distribution of body constitutional types under each disorder (%).

Visual examination by the dentists identified seven oral disorders among the subjects. Mean score values of the three dosas were grouped under each disease category. A non−parametric test namely Kruskal−Wallis test was applied to statistically compare the mean values and the results are presented in Table 2.

Mean for Pitta dosa was significantly high ($p<0.1$) in case of oral disorder categories namely caries, tooth loss, irregular teeth, and cervical abrasion. Pitta dosas mean value was the highest and significant at 5% level of significance ($p<0.5$) in case of cervical abrasion and lichen planus. Under mobility disorder category, mean value of Kapha dosa was high ($p<0.5$). Since the mean values varied significantly across the three dosas (at 5% and 1% level of significance) in case of all the seven disorders identified the null hypothesis was rejected and alternative hypothesis was accepted.

Citation: Balkrishna A, Singh K, Karthikeyan N, et al. Prevalence of dental disorders based on Tridosa concept of Ayurveda: a clinical study. *J Dent Maxillofacial Res.* (2019);2(4):86-90. DOI: 10.30881/jdsomr.00035

Table 2: Mean score values of dosas compared across seven oral disorders.

S. No.	Disorder	Mean score value of basic bio-energy sources (Dosas)			Statistical significance
		Vata	Pitta	Kapha	
1.	Caries (n=39)	2.85	6.00	4.15	p<0.01
2.	Cervical abrasion (n=15)	3.27	5.4	4.27	p<0.05
3.	Mobility (n=8)	2.75	4.88	5.38	p<0.05
4.	Tooth loss (n=16)	2.85	6.00	4.15	p<0.01
5.	Irregular teeth (n=8)	3.87	6.25	2.86	p<0.01
6.	Tooth attrition (n=25)	3.52	6.16	3.32	p<0.01
7.	Lichen planus (n=6)	2.33	6.33	4.333	p<0.05

Discussion

The present study intends to understand whether Prakriti of an individual determines her/his susceptibility to different oral disorders. A clinical study was designed and data were collected from 60 subjects on aspects such as demography, body type constitution and prevalence of oral diseases. The data was analyzed using tools namely descriptive statistics and Kruskal−Wallis test and presented. Since the mean score values of three dosas were significantly different against the seven oral disorders diagnosed, the null hypothesis was rejected and alternative hypothesis was accepted. To our knowledge, the Tridosa concept is getting recognition among the researchers only recently and no study has been undertaken to investigate relationship between the Tridosa and oral disorders. Hence, we do not have direct support evidence to validate results of the present clinical study. However, we have tried to endorse our findings using proxy variables available in the literature.

Caries was found out to be the most predominant oral disorder affecting 60% of the subjects. Characteristics of Pitta were found out to be significantly high among subjects diagnosed with the disorder. Caries is an outcome of reaction of acid that is produced in the oral environment on the teeth surface.[19] According to the Ayurvedic theory, Pitta is a source of thermal energy and it is hot, fluid, sour and pungent. It is responsible for digestion.[8] These properties could be related positively with characters of acids. It could also be inferred that higher Pitta levels lead to an acidic environment in the body. Studies suggest that Pitta Prikriti has a higher propensity to develop acidity induced disorders like ulcer.[9] Building on from the available evidence it could be assumed that an individual of Pitta Prakriti has higher likelihood of increasing acidity in the oral environment which may lead to caries.

Attrition was identified as the second largest prevailing oral disorder as 41.67% of the subjects were diagnosed of it. Mean values of Pitta dosa was significantly high for these subjects. Among the other factors, bruxism or clenching is identified as the major reason leading to the state of attrition and the practice of bruxism is an expression of stress.[20] Anger and stress are quoted as inherent characteristics of Pitta Prakriti in Ayurvedic texts.[8] Similarly, stress is one of the reasons of lichen planus. The present study identified that subjects diagnosed with the disorder were predominantly of Pitta Prakriti type.

Tooth loss was diagnosed among 26.67% of the subjects and the mean score values related to Pitta dosa was significantly high among these subjects. Tooth loss is primarily an outcome of dental caries and aging.[21] The association between Pitta Prakriti and caries has been discussed in the early part of this section and the same inference could be made applicable for tooth loss. Purvya and Meena described that people of Pitta predominance Prakriti have higher likelihood of premature aging. The phenomenon of premature aging and tooth loss could be positively associated in the light of Pitta Prakriti.[13]

Cervical abrasion was prevalent among 25% of the subjects and Pitta predominance Prakriti type had higher susceptibility against the disorder. According to Sadaf and Ahmad vigorous tooth brushing is the major cause of the disorder.[22] A vigorous action could positively be related with aggressive mind orientation. The Ayurvedic science describes people of Pitta Prakriti as aggressive.[8] Tooth mobility was identified among 13% of the subjects. Generally, pathogenic tooth mobility occurs due to reduction in attachment of periodontal ligament or inflammation of the periodontal ligament.[23] Kapha predominant body constitutional types of people have more likelihood of having pale and hypertrophic gums.[24]

The researchers were unable to identify direct/and proxy evidences from the literature to explain the relationship between irregular teeth and Pitta Prakriti though statistically significant results were found out in both cases.

Ayurveda advocates personalized medicine according to the Prakriti of the individuals. For example, chewing sticks of different plants specific to Vata (*Glycyrrhiza glabra*), Pitta (*Azardirachta indica*), and Kapha Prakriti (*Calotropis procera*) are recommended to clean the gums and teeth.[24] According to Acharya, Ayurveda goes one step ahead and advocates prohibition of desires (which is called Yoga) as an effective tool to manage pains of diseases.[8] It is explained in Ayurveda that when one is in the stage of Yoga, all misconceptions that exist in variable aspects of human beings vanish. These misconceptions make human minds unable to understand the cosmic actions because of which one has to bear pains. These misconceptions can be controlled by the practice of Yoga.

Conclusion

In conclusion, the mean values of Vata, Pitta, and Kapha dosas varied significantly among dental patients. The Pitta Prakriti type was predominantly present among most of the dental patients affected by different disorders. It could be concluded that Pitta is the main body constitution type and Vata is the subsidiary body constitution

Citation: Balkrishna A, Singh K, Karthikeyan N, et al. Prevalence of dental disorders based on Tridosa concept of Ayurveda: a clinical study. *J Dent Maxillofacial Res.* (2019);2(4):86-90. DOI: 10.30881/jdsomr.00035

type among the dental patients. The results of the present clinical study were statistically significant and are encouraging to widen and deepen the present research theme. Govindaraj et al., have undertaken a path breaking research and confirmed that 52 single nucleotide polymorphisms (SNPs) were significantly different between Prakritis.[25] Similar studies on relating Tridosa and oral disorders in the light of genome−wide parameters need to be undertaken which would advance the present understanding to the next plane and enrich the emerging concept of personalized medicine. More studies on effectiveness of the Prakriti specific prescriptions by Ayurveda on the oral health in the light of personalized medicine concept could be undertaken.

Acknowledgement

We are grateful to Swami Ramdev Ji for his blessings. We are also thankful to Scientists of Patanjali Research Institute specially Dr. Vinay Sharma and Dr. Swami Narsingh Chandra Dev, for their suggestions and support. We are grateful to the patients of Dental Clinic and Research Centre, Patanjali Ayurved Hospital Haridwar for their participation in the research.

Source of funding

None declared.

Conflict of Interest

None declared.

References

1. Frencken JE, Sharma P, Stenhouse L, et al. Global epidemiology of dental caries and severe periodontitis – a comprehensive review. *J Clin Periodontol*. 2017;44(18):S94–S105.
2. Petersen PE. Priorities for research for oral health in the 21st Century−the approach of the WHO global oral health programme. *Community Dent Health*. 2005;22(2):71−74.
3. Marrs JA, Trumbley S, Malik G. Early childhood caries: determining the risk factors and assessing the prevention strategies for nursing intervention. *Pediatr Nurs*. 2011;37(1):9−15.
4. Dhar V, Bhatnagar M. Dental caries and treatment needs of children (6−10 years) in rural Udaipur, Rajasthan. *Indian J Dent Res*. 2009;20(3):256−260.
5. Datta P, Datta PP. Prevalence of Dental Caries among School Children in Sundarban, India. *Epidemiol*. 2013;3(4):1-4.
6. Kassebaum NJ, Bernabé E, Dahiya M, et al. Global burden of severe periodontitis in 1990–2010: a systematic review and meta−regression. *J Dental Res*. 2014;93(11):1045–1053.
7. Dash VB, Junius AMM. A Handbook of Ayurveda. *Concept Publishing Company*; 1997.
8. Acharya B. A practical approach to the science of ayurveda: a comprehensive guide for healthy living. 1st Ed. *Haridwar: Divya Prakasam Divya Yog Mandir Trust*; 2013.
9. Bhalerao S, Deshpande T, Thatte U. Prakriti (Ayurvedic concept of constitution) and variations in platelet aggregation. *BMC Complement Altern Med*. 2012;12:248.
10. Hankey A. Establishing the scientific validity of tridosha Part 1: doshas, subdoshas and dosha prakritis. *Anc Sci Life*. 2010; 29(3):6−18.
11. Hankey A. A test of the systems analysis underlying the scientific theory of Ayurveda's Tridosha. *J Altern Complement Med*. 2005;11(3):385–390.
12. Mahalle NP, Kulkarni MV, Pendse NM, et al. Association of constitutional type of Ayurveda with cardiovascular risk factors, inflammatory markers and insulin resistance. *J Ayurveda Integr Med*. 2012;3(3):150–157.
13. Purvya MC, Meena MS. A review on role of prakriti in aging. *Ayu*. 2011;32(1):20−24.
14. Ghodke Y, Joshi K, Patwardhan B. Traditional medicine to modern pharmacogenomics: ayurveda prakriti type and CYP2C19 gene polymorphism associated with metabolic variability. *Evid Based Complement Alternat Med*. 2011;2011: 249528.
15. Rizzo−Sierra CV. Ayurvedic genomics, constitutional psychology, and endocrinology: the missing connection. *J Altern Complement Med*. 2011;17(5):465–468.
16. Juyal RC, Negi S, Wakhode P, et al. Potential of ayurgenomics approach in complex trait research: leads from a pilot study on rheumatoid arthritis. *Plos One*. 2012;7(9):e45752.
17. Kumar PVG, Deshpande S, Joshi A, et al. Association of arterial stiffness measured from Tridoshas with diabetes−A cross sectional study. *J Ayu Herb Med*. 2016;2(6):218−223.
18. Nahm FS. Nonparametric statistical tests for the continuous data: the basic concept and the practical use. *Korean J Anesthesiol* 2016;69(1):8−14.
19. Southam JC, Soames JV. Oral Pathology. 2nd Ed. *Oxford University Press*. 1993.
20. Mehta SB, Banerji S, Millar BJ, et al. Current concepts on the management of tooth wear: Part 1. Assessment, treatment planning and strategies for the prevention and the passive management of tooth wear. *Br Dent J*. 2012;212(1):17–27.
21. Burt BA, Ismail AL, Morrison EC, et al. Risk factors for tooth loss over a 28 year period. *J Dent Res*. 1990;69(5):1126−1130.
22. Sadaf D, Ahmad Z. Role of Brushing and Occlusal Forces in Non−Carious Cervical Lesions (NCCL). *J Biomed Sci*. 2014;10(4):265−268.
23. Odell E. Clinical problem solving in dentistry. 3rd Ed, India. *Elsevier:*2010.
24. Telles S, Naveen KV, Balkrishna A. Use of Ayurveda in promoting dental herb and preventing dental carries. *Indian J Dent Res*. 2009; 20(2):246.
25. Govindaraj P, Nizamuddin S, Sharath A, et al. Genome−wide analysis correlates Ayurveda Prakriti. *Sci Rep*. 2015;5:15786.

Citation: Balkrishna A, Singh K, Karthikeyan N, et al. Prevalence of dental disorders based on Tridosa concept of Ayurveda: a clinical study. *J Dent Maxillofacial Res.* (2019);2(4):86-90. DOI: 10.30881/jdsomr.00035