

## A CORELLATIVE STUDY OF DEHAPRAKRUTI AND GLUCOSE TOLERANCE

**\*Vd. Shruti Prakash Vibhute and Dr. Sampada S. Sant**

\*P.G. Scholar, Dept. of Kriyasharir, Govt. Ayurved College, Nanded, India.

H.O.D. Dept. of Kriyasharir, Govt. Ayurved College, Nanded, India.

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### \*Corresponding Author

**Dr. Vd. Shruti Prakash  
Vibhute**

P.G. Scholar, Dept. of  
Kriyasharir, Govt. Ayurved  
College, Nanded, India.

### ABSTRACT

*Ayurveda*, states that the basic constitution of human being is determined at the time of conception, this constitution is called "*Prakruti*". *Prakruti* is physical and psychological constitution of the individual which is determined on the basis of three *Doshas*. According to *Ayurveda* some diseases are prone to specific *Prakruti*. Nowadays diabetes has been recognized among a large number of people. In the present era due to stress, hormonal changes, bad dietary, regimen habits, change in life style, number of young individual suffering from very challenging condition like Pre-diabetic condition. Oral Glucose Tolerance Test is one of the reliable test to diagnose the

patient in prediabetes phase. One in three individuals with IGT will develop type 2 diabetes within 10 years, if left untreated. The main and first aim of *Ayurveda* is to maintain the health of an individual rather than to treat the diseased one. *Prameha* is *Tridoshaj Vikara* but dominantly involves *Kapha Dosha*. As it involves all three *doshas* in formation of disease, it is interesting to know, is there any relation of *prakruti* and prediabetes, because in the formation of *prakruti dosha* plays an important role. In this study 105 volunteers are selected for examination of *Prakruti* and Oral Glucose Tolerance Test. Study shows that *Kapha pradhan Prakruti* is more prone to have higher values of OGTT while *Vata Pradhan Prakruti* has less values of OGTT. It is concluded from this study that there is correlation between dehaprakruti & Glucose tolerance.

**KEYWORDS:** *Prakruti*, Prediabetes, Oral Glucose Tolerance Test (OGTT).

## INTRODUCTION

According to *Ayurveda* some diseases are prone to specific *Prakruti*. Nowadays, diabetes has been recognized among a large number of people varied social condition throughout the world and especially in India. In India there are estimated 77.2 million people who are suffering from prediabetes.<sup>[1]</sup> Pre-diabetic is the state in which some but not all of the diagnostic criteria for diabetes are met, it is often described as the “grey area” between normal blood sugar and diabetic level. It is estimated that around 50 percent of those diagnosed with impaired glucose tolerance, go on to develop type 2 diabetes at some point. One in three individuals with IGT will develop type 2 diabetes within 10 years, if left untreated.<sup>[2]</sup> The main and first aim of *Ayurveda* is to maintain the health of an individual rather than to treat the diseased one.<sup>[3]</sup> There is urgent need to implement primary prevention in diabetes. Primary prevention refers to the action taken prior to the onset of disease. Primary prevention generally focus on high risk individual from the population. *Prameha* is *Tridoshaj Vikara* but dominantly involves *Kapha Dosha*.<sup>[4]</sup> This *Kapha* has unique property of ‘*Bahudravata*’. As it involves all three *doshas* in formation of disease, it is interesting to see is there any relation of *prakruti* and prediabetes, because in the formation of *prakruti dosha*’s plays an important role. In this study it is attempt to find out the *prakruti* which is at risk of prediabetes (Impaired Glucose Tolerance).

**Aim-** A correlative study of dehaprakruti and glucose tolerance.

**Objective-** To find out glucose tolerance in different dehaprakruti.

## MATERIALS AND METHODS

**Study design-** Randomized cross sectional observational study.

Sample size- 105 volunteers are selected for this study.

### Selection of Volunteers

Volunteers are selected from Govt. Ayurved college, Nanded. Maharashtra, India.

### Inclusive Criteria

1. Age 30 to 50 years.
2. Sex – male and female having normal dietary habits.
3. Healthy individuals.
4. Individuals willing for Oral Glucose Tolerance Test.

### Exclusive Criteria

1. Individuals below 30 years and above 50 years.
2. Individuals of known diabetes type 1 and 2.
3. Patients of any systemic disease.

### Method

Each volunteer was examined by the standard chart of “*prakruti parikshan*” and *prakruti vinishchaya* was done. Oral glucose tolerance test of each and every volunteer was done.

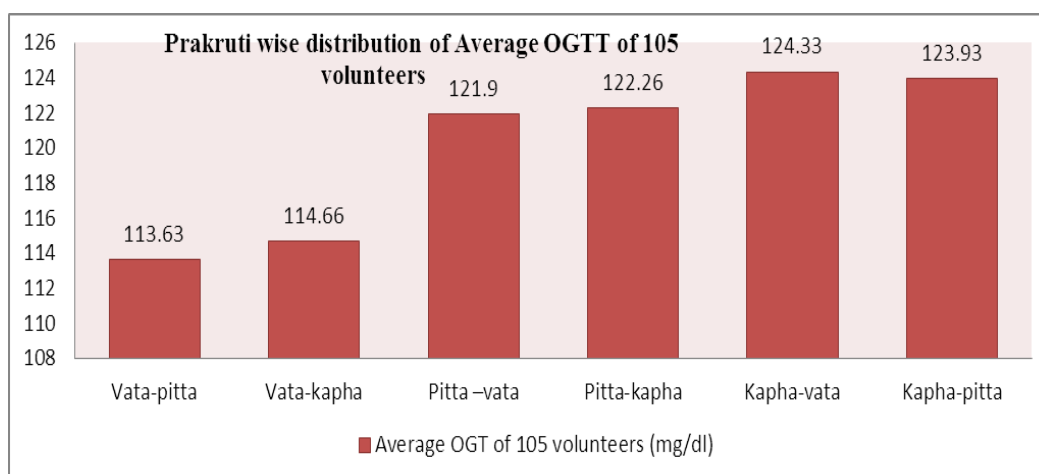
### Oral Glucose Tolerance Test

1. Individual are instructed about their diet prior to the day of examination.
2. Individuals are kept NBM for 8 hours prior to oral glucose tolerance test.
3. In OGTT Individuals have given 75 gm of glucose with 250 ml of water and after 2 hrs glucose level is observed with the help of glucometer.

## RESULT AND DISCUSSION

### Prakruti wise distribution of Average OGTT of 105 volunteers

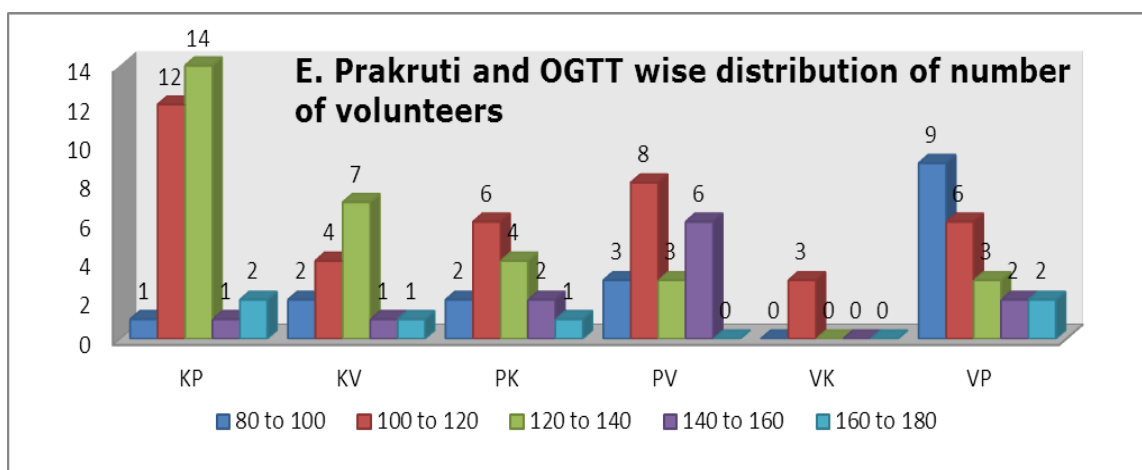
Prakruti	Average OGT of 105 volunteers (mg/dl)
Vata-pitta	113.63
Vata-kapha	114.66
Pitta –vata	121.90
Pitta-kapha	122.26
Kapha-vata	124.33
Kapha-pitta	123.93



Out of 105 volunteers; average OGTT of *Vata-pitta prakruti* is 113.63 mg/dl, *Vata-kapha prakruti* is 114.66 mg/dl, *Pitta-Vata prakruti* is 121.9 mg/dl, *Pitta-kapha prakruti* is 122.26 mg/dl, *Kapha-Vata prakruti* is 124.33 mg/dl, *Kapha-pitta prakruti* is 123.93 mg/dl.

**Prakruti and OGTT wise distribution of number of volunteers**

			Prakruti						Total
			KP	KV	PK	PV	VK	VP	
OGTT	80 to 100	Count	1	2	2	3	0	9	17
		%	3%	13%	13%	15%	0%	41%	16%
	100 to 120	Count	12	4	6	8	3	6	39
		%	40%	27%	40%	40%	100%	27%	37%
	120 to 140	Count	14	7	4	3	0	3	31
		%	46.67%	46.67%	26.67%	15.00%	0.00%	13.64%	29.52%
	140 to 160	Count	1	1	2	6	0	2	12
		%	3.33%	6.67%	13.33%	30.00%	0.00%	9.09%	11.43%
	160 to 180	Count	2	1	1	0	0	2	6
		%	6.67%	6.67%	6.67%	0.00%	0.00%	9.09%	5.71%
Total		Count	30	15	15	20	3	22	105
		%	100%	100%	100%	100%	100%	100%	100%



	Value	df	P-Value
Pearson Chi-Square	31.801	20	0.045
Likelihood Ratio	33.289	20	0.031
Linear-by-Linear Association	0.026	1	0.072
N of Valid Cases	105		

To test the association (correlation) between *Dehaprakruti* and OGTT, Chi-squared test is applied. P-Value is less than 0.05 hence it is concluded that there is significant association between *Dehaprakruti* and OGTT.

According to *Dosha pradhanta* of observed *prakruties*, the value of OGTT in *Kaphaj prakruti* is more than any other *prakruti*, while of *vataj prakruti* is on lower side. Due to *manda & stimita guna* the basic nature of *kapha prakruti*<sup>[5]</sup> individual are lead to sedentary life. Due to *sara, Sandra & guru guna* they have hidden tendency to gain weight. Because of

*Yogvahi* property of *vata*, *vata dosha* manifests the attributes of *dosha* with which it is combined. This might increase value of OGTT in *kapha prakruti* than any other *prakruti*.

*Pitta pradhan prakruti* i.e. *pitta-kapha* & *Pitta vata* have less value of OGTT than the *kapha pradhana prakruti*. In *pitta –kapha prakruti* there is *anubandh* of *kapha dosha* but the predominant *dosha* is *Pitta*. According to theory of *Panchmahabhuta*, *pitta dosha* has composition of *tej mahabhuta* as well as *pitta* shows *Tiksna, Ushna & Laghu guna*<sup>[6]</sup> which are responsible for lowering the values of OGT.

Value of OGTT in *vataj prakruti* is on lower side; because *Vata dosha* has combination of *Vayu & Aakash mahabhuta*. This is naturally lighter than combination of *Kapha mahabhuta*. Also *Vata dosha* has *Laghu, Sukshma & Chala guna*.<sup>[7]</sup> Due to *laghu & chala guna* naturally this *prakruti* does not have tendency to gain weight like *kapha prakruti*. Due to *laghu guna* these people are always moving i.e. they do not prefer sedentary life. They always tend to do some Physical activity, so because of all these reasons *vata pradhan prakruti* might have lower values of OGTT.

## CONCLUSION

This study revealed that *Kapha Pradhan Prakruti* have more average value of OGTT than any other *prakruti*. Knowledge of the most susceptible *Prakruti* will help the individuals to rethink about their lifestyle. Diabetes is one among silent killer and it need to be treated as early as possible to stop further complications. The knowledge of susceptible *Prakruti* will help for the primary prevention of disease and the manifestation of the disease can be controlled to an extent.

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