

Correlation of Cheek Dimple with Urine Specific Gravity

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ABSTRACT

Urine specific gravity is the parameter of urinalysis that is used to check the functions of kidney and various disease diagnoses. The main function of the kidney is to clear the water-soluble compounds like toxins and waste of metabolism. Many wastes are removed through the urination, and concentration of urine is also done by kidney so that there is minimum loss of nutrients and water in the waste. Dimple is also identified as gelasin. Dimples are the small natural hollows in the flesh of human body mostly known as cheek or chin dimple. Cheek dimple usually express when people make different expressions of the face. The objective of present study was to check the association between the cheek dimples of human and Urine specific gravity. First of all, we asked the subjects to have a urine test. They gave us permission and we told them the procedure for taking sample. 100 subjects participated in the analysis. It is concluded that subject whose urine has specific gravity of 0.1 get more chances of having dimples on their cheeks.

Keywords: *Specific gravity, Hypersthenuria, Urine diagnosis, Cheek dimples.*

INTRODUCTION

Urine specific gravity is the parameter of urinalysis that is used to check the functions of kidney and various disease diagnoses. The main function of the kidney is to clear the water-soluble compounds like toxins and waste of metabolism. Many wastes are removed through the urination, and concentration of urine is also done by kidney so that there is minimum loss of nutrients and water in the waste. The concentration of the urine indicates the specific gravity of urine. The increasing specific gravity (which mean there is more concentration in the urine, a condition called hypersthenuria) may linked to dehydration, emesis, diarrhea, excessive sweating, and the flow of blood may less to kidney (as a result of failure of heart). The urine specific gravity more than 1.035 leads to more dehydration. The deceasing urine specific gravity means decrease in the urine concentration may link with the renal failure, diabetes insipidus, and tubular necrosis. If a person has more specific gravity due to dehydration then doctors suggest drinking more and more water. If person is more dehydrated or not able to drink more water then doctors give intravenous fluids. If a person is over hydrated then doctors recommend more tests and check the causes and summary of results for treatment plan. The doctors do many tests for urine like urinalysis, urine culture, and ketone testing and urine osmolality and their results help doctors to make a precise diagnosis. The test of urine specific gravity associates density of urine with the density of water. A sample of urine for the specific gravity test may have 1 to 2 ounces of urine.

Dimple is also identified as gelasin. Dimples are the small natural hollows in the flesh of human body mostly known as cheek or chin dimple. Cheek dimple usually express when people make different expressions of the face. Sometimes dimples are temporary which disappear with the age, they may be due to fats on the face usually in the babies. Professor McDonald research results that dimples are genetically inherited and dimples are dominant traits. But University of Utah study dimples as irregular dominant trait that is linked with one gene but their expression is influenced with the other genes. Dimples can cause differences in the facial muscles structure also called zygomaticus major. Only these muscles are responsible for the formation of the cheek dimples. In the daily routine life, many people smile with one or two dimples on their face which makes them look beautiful and shows their

innocence. People with dimples, when they smile, they look versatile, popular and kind. Commonly, boys with the cheek dimples are well-mannered and obedient while girls with the dimples are simple, beautiful, lively and pleasing.

The objective of present study was to check the association between the cheek dimples of human and Urine specific gravity.

MATERIAL AND METHODS

Measuring specific gravity of urine

One main thing in urine test that mostly checked is specific gravity of urine. Before taking a sample, doctor may ask you to do some things that prepare you for a test. First of all, doctor may ask you to stop taking medicines that may disturb your results. The main time for taking a sample is in the morning when the urine is more concentrated. The doctor will give you a plastic cup with a lid to collect sample of urine in it. You should use antibacterial wipe to clear your genital area to reduce the chances of contamination by bacteria. Then fill half cup with the sample. This method is called clean-catch. Then the doctor will send your sample in the lab where strip is used to check the level of the urine components. Strip is dipped in the sample for 5 to 10 seconds. After removing the strip, it will show you the change in colors. Then doctor compare it with the color chart and tell us the results.

Project Design

First of all, we asked the subjects to have a urine test. They gave us permission and we told them the procedure for taking sample. We also gave each of them a cup with a lid for collecting a sample. They collected urine in the cups and took them to the lab. Then we used strip, dipped in the sample and noticed the change in the color of strip. Then we compared the results of both by comparing colors with the color chart. The doctor gave us results of subjects and we made a list. Then we asked a question to all the subjects that they have dimple on cheek or not? They answered and we wrote their answers with the results of urine sample. Total of 100 subjects participated in the survey.

Statistical Analysis

We calculate the percentage of urine specific gravity in subjects who have cheek dimple and who do not have cheek dimple.

RESULTS AND DISCUSSION

Table 1: Correlation of urine specific gravity (percentage) with cheek dimple

Gender	Having cheek dimple		
	Specific Gravity		
	1.01	1.02	1.03
Male	80%	9%	11%
Female	78%	12%	10%

Table 1 shows that most male subjects who have cheek dimple have urine specific gravity of about 1.01, it shows highest percentage in 1.01 specific gravity. Female subjects with cheek dimple also show the same pattern of percentage of specific gravity of 1.01.

Table 2: Correlation of urine specific gravity (percentage) with cheek dimple

Gender	Not having cheek dimple		
	Specific Gravity		
	1.01	1.02	1.03
Male	76%	14%	10%
Female	71%	16%	13%

Table 2 shows the data of subjects who don't have cheek dimple, this table also show the results like table 1, both male and female subjects show the highest percentage in 1.01 specific gravity column.

DISCUSSION

Table 1 and 2 both shows the highest percentage in 1.01 urine specific gravity column, by comparing the percentages of both tables, we evaluate that subjects with dimples has higher percentage than the subjects with the absence of dimples and hence we can say that subjects who have urine specific gravity of 0.1 has more chance of getting dimples.

In past research works, cheek dimple had been correlate with blood group and blood glucose level, and we found the correlation of blood group with cheek dimple as it is concluded in the study that subjects with O+ Blood group get more chances of having dimples while blood glucose level has no linkage with the appearance or absence of cheek dimple that was concluded on the basis of the *t* test and *p* value where value ≤ 0.5 is considered significant.

CONCLUSION

It is concluded that subject whose urine has specific gravity of 0.1 get more chances of having dimples on their cheeks.

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