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IS THERE ANY ASSOCIATION BETWEEN HAIR GROWTH ANDURINE KETONES?

QADIR MI AND ISHAQ A*

Institute of Molecular Biology and Biotechnology, Baha Uddin Zakariya University, Multan, Pakistan

***Correspondence:** arzoosamejaa@gmail.com

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ABSTRACT

Main objective of this study was to out that how does hair growth change with urine ketones. Total 100 subjects were present in this study that was conducted at Baha Uddin Zakariya Multan, Pakistan. Body uses glucose or sugar to get energy but if glucose or sugars are not present in sufficient quantity then it breaks down fats to get energy. This breakdown of fats releases ketones. It is a type of acid that may accumulate in blood or urine and can result in serious sickness. People with diabetes type I or II should regularly got to doctor for checkup. Ketones are usually not present in urine. Low level of ketones in urine is associated with some symptoms like body weight loss, fasting, vomiting or exercise. The growth of human hair strand completes in 3 steps. In starting anagen phase new fibers of air are produced from division of germinated layer. It is followed by a catagen phase during which hair strand is pushed upward. A signal is send from body to end this phase and start next phase. Next phase is Telogen and 10-15% hair strand always remain in this phase. A urine test strip was taken and dipped into urine. The color of test strip was changed according to the ketone level in urine. This color was compared with color chart given with test strip. It was concluded from results that hair growth has no association with ketones in urine.

Keypoints: Ketones, Beta-hydroxybutyric acid, Acetoacetate, Germinated layer

INTRODUCTION

If the level of ketones increases in urine then it may indicated some serious medical condition. It is mostly common in diabetic patients. Body uses glucose or sugar to get energy but if glucose or sugar are not present in sufficient quantity then it breaks down fats

to get energy. This breakdown of fats releases ketones. It is a type of acid that may accumulate in blood or urine and can result in serious sickness. People with diabetes type I or II should regularly got to doctor for checkup. Ketones are usually not present in urine. That is why increased concentration of ketones in urine indicates that fats are being utilized as a source of energy. More concentration of ketones in urine is present in type I diabetes. There are some other conditions that can lead to increases level of ketones like pregnancy, vomiting, infection, eating disorder, alcohol usage or heart attack. Ketone level in urine can be detected by a test done in state of fasting. This is useful in order to provide information about health conditions. A diabetic patient has extremely elevated level of ketones then it leads to ketoacidosis. It is a condition which is complicated form of diabetes that can even leads to coma or death if not properly treated. These patients are unable to treat and metabolize carbohydrates. Two ketone bodies are involved in human metabolism. These are acetoacetate and beta-hydroxybutyric acid. When glucose level decreases in body then blood transports these ketone bodies in tissues where these are used to produce energy. Acetone is least abundant ketone in body. Small level of ketones is always present in body. But this level is significantly in condition of fasting or exercise. This condition is called ketosis. More amount of ketones is present in body, more ketones are released with urine. So it's very important to heck the level periodically. Low level of ketones in urine is associated with some symptoms like body weight loss, fasting, vomiting or exercise.

The growth of human hair strand completes in 3 steps. In starting anagen phase new fibers of air are produced from division of germinated layer. It is followed by a catagen phase during which hair strand is pushed upward. A signal is send from body to end this phase and start next phase. Next phase is Telogen and 10-15% hair strand always remain in this phase. Strand is broken at root and shed from scalp during phase. Here completes one cycle of hair growth. This cycle continues to repeat and newer strands of hair are produced.

MTERIALS AND METHOD

Total 100 subjects were present in this study that was conducted at Baha Uddin Zakariya Multan, Pakistan.

Ketone level Measuring Method:

The urine of patient was collected in a bad. A urine test strip was taken and dipped into urine. The color of test strip was changed according to the ketone level in urine. This

color was compared with color chart given with test strip. In this way, ketone level was measured for patient.

Project Designing

A questionnaire was prepared to study that how does hair growth change with urine ketones.

RESULTS AND DISCUSSION

Percentage between hair growth and urine ketones is given in **Table 1**.

It was calculated from results that 41% females with negative values of urine ketones and 0% females with positive values of urine ketones had fast hair growth. 36% females with negative values of urine ketones and 0% females with positive values of urine ketones had slow hair growth.15% males with negative values of urine ketones and 0% males with positive values of urine ketones had fast hair growth.8% males with negative values of urine ketones and 0% males with positive values of urine ketones had slow hair growth.

Table 1: Percentage between urine ketones and hair growth

URINE KETONES	FEMALES (FAST HAIR GROWTH)	FEMALES (SLOW HAIR GROWTH)	MALES (FAST HAIR GROWTH)	MALES (SLOW HAIR GROWTH)
-ve	41%	36%	15%	8%
+ve	0%	0%	0%	0%

CONCLUSION

It was concluded from results that hair growth has no association with ketones in urine.

REFERENCES

[1] Qadir MI, Javid A (2018) Awareness about Crohn's Disease in biotechnology students. Glo Adv Res J Med Medical Sci, 7(3): 062-064.

[2] Qadir MI, Saleem A (2018) Awareness about ischemic heart disease in university biotechnology students. Glo Adv Res J Med Medical Sci, 7(3): 059-061.

[3] Qadir MI, Ishfaq S (2018) Awareness about hypertension in biology students. Int J Mod Pharma Res, 7(2): 08-10.

[4] Qadir MI, Mehwish (2018) Awareness about psoriasis disease. Int J Mod Pharma Res, 7(2): 17-18.

[5] Qadir MI, Shahzad R (2018) Awareness about obesity in postgraduate students of biotechnology. Int J Mod Pharma Res, 7(2): 14-16.

[6] Qadir MI, Rizvi M (2018) Awareness about thalassemia in post graduate

students. MOJ Lymphology & Phlebology, 2(1): 14-16.

[7] Qadir MI, Ghalia BA (2018) Awareness survey about colorectal cancer in students of M. Phil Biotechnology at Bahauddin Zakariya University, Multan, Pakistan. Nov Appro in Can Study, 1(3): NACS.000514.2018.

[8] Qadir MI, Saba G (2018) Awareness about intestinal cancer in university student. Nov Appro in Can Study, 1(3): NACS.000515.2018.