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IS THERE ANY RELATION OF GLUCOSE LEVEL IN URINE WITH *ALOPECIA AREATA* (AA)?

Shahida*¹ and Muhammad Imran Qadir¹

¹Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan.

ABSTRACT

Alopecia areata (AA) is an autoimmune disorder which makes the scalp patchy. 2% of the people is affected by AA. Beside stress and viral infections, Thyroid autoimmune disorder. Psychological, developmental and evolutionary factors are considered to influence AA are considered as the main cause of it. In this study it is estimated that glucose level in body may stimulate the AA. Insulin and glucagon are the two hormones which regulate the level of glucose in the body. Level of glucose in the body is check simply by urine test known as dipstick process. It was found that there is no affect of presence of glucose in urine with intense hair fall. As only 10% individuals show positive result.

KEYWORDS

Alopecia areata (AA) glucose, Autoimmune disorder and Dipstick process.

Author for Correspondence:

Shahida,

Institute of Molecular Biology and Biotechnology,

Bahauddin Zakariya University,

Multan, Pakistan.

Email: shahida3120@gmail.com

INTRODUCTON

Alopecia areata (AA) is nonscarring autoimmune disorder in which there is patchy hair fall which affects 2% of the population. It can result into the loss of whole body hair or it may affect the entire scalp. Nonspecific immune reactions, genetic basis, organ-specific autoimmune processes are considered as potential causes of AA (Garcia-Hernandez, Ruiz-Doblado, Rodriguez-Pichardo, and Camacho, 1999)¹. Different studies are done to find the actual etiology of AA but of some ends with an idea that stress and viral infection may initiate the autoimmune disorder of T-cells which affect the hair follicles as a result AA is caused (Ruiz-Doblado, Carrizosa, and Garcia-Hernandez, 2003)². It is also linked to a

Thyroid autoimmune disorder. Psychological, developmental and evolutionary factors are considered to influence AA (Franca, Rodrigues, Ledon, Savas, and Chacon, 2013)³.

Glucose is a main source of energy present in human body. Increase level of glucose in human body is controlled by insulin hormone. Insulin moves the glucose from blood vesicles into the body cells. This removes the excess glucose through urine. Presence of excess sugar in urine is the indication of diabetes. More frequent urination, Blurred vision, Fatigue, Increased thirst are some of the symptoms found in the person whose urine contain excess quantity of glucose in it. The level of glucose in blood can be checked by simple urine test. This test is a part of urinalysis (Yin, Qin, and Gao, 2017)⁴.

MATERIAL AND METHODS

Sample collection

Urine strips, sample of urine, medium size bottle and standard color pad are required to undergo the dipstick process. Hundred individuals were randomly selected to perform dipstick process.

Method

Following procedure is followed by the hundred individuals who are arbitrarily chosen to check the level of glucose in urine and relate the level of it with AA.

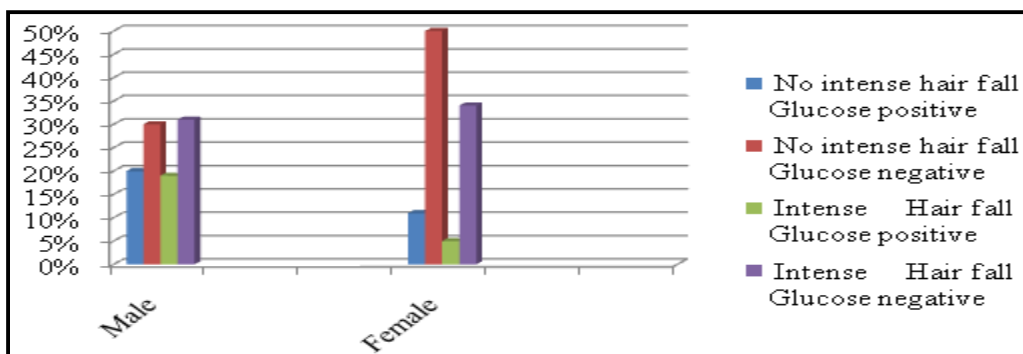
A stick with reagent strip is dipped into the fresh and well mixed the uncentrifuged urine solution. The test areas of the strip must be fully immersed into the specimen. Immersion of strip for long time into the specimen, May washed out the test reagent of the strip. So, stick must be removed immediately from the mixture. The excess urine may be removed by touching it to the absorbent towel, then hold the strip horizontally followed by running it against the rim of urine container or by touching it to the absorbent towel. If dipstick reader is used, it must be placed onto the reader tray immediately and relate the colors to find the glucose level in urine. Cap of the container should be replaced for the prevention of deterioration of further part of the reagent strip.

RESULTS

The study object was to relate the level of glucose with baldness caused by AA. It was initiated that 20 % male shows positive result for glucose in their but they do not have intense hair fall because of AA. While 5% male are affected by both with high level glucose in their urine as well as with intense hair fall as shown in Table No.1. While the affected ratio of female is 5%. Rest of the individual show negative results in both of the condition as presented in Graph No.1.

Table No.1: Level of glucose and its affect on hair fall

S.No		No intense hair fall		Intense Hair fall	
		Glucose positive	Glucose negative	Glucose positive	Glucose negative
1	Male	20%	30%	5%	45%
2	Female	11%	50%	5%	34%



Graph No.1: Level of glucose with AA prevalence in the population

CONCLUSION

AA is an autoimmune disease which affects both male and females. There are many reasons behind the cause of it. Observed analysis through the dipstick method shows that males can have AA if their glucose level is high than the females. No relation was found between glucose and intense hair fall.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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