

To Evaluate the Link Between Ketones in Urine and Perfume Allergy

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ABSTRACT

This study presents the relation between perfume allergy and presence of ketones in urine. When glucose level is low in our body or we don't have enough insulin to absorb glucose then our body compensates by starting breaking fats to provide energy and ketone is produced as a byproduct. The normal value of ketone in urine is less than 0.06mmol/L. Ketones are normally present in blood and urine but an increased value shows acidosis that can be fatal. Some people love scents. Perfumes contain certain chemicals that can cause allergy. The most common one is contact allergic dermatitis. The most common symptoms of perfume allergy are headache, difficulty in breathing, wheezing, chest tightening, asthma and stuffy nose. The present study shows that 25% males have Ketones in urine and are also allergic to perfumes while 2.25% females have ketone in urine and also allergic to perfumes.

Keywords: Glucose, Perfume allergy, Unconsciousness and ketone in urine, Acidosis, Ketone in urine.

1. Introduction

When glucose level is low in our body and we don't have insulin to absorb glucose then our body starts breaking fats to provide energy and ketone is produced as a byproduct. The normal value of ketone in urine is less than 0.06mmol/L. High level of ketones in body tell that your body is too acidic. When its value increases it can cause swelling of brain, unconsciousness and even lead to death. The main causes of high ketone level in urine is diabetes. In diabetic patients when insulin is not sufficient to breakdown glucose, body compensates for this loss by shifting to alternate mechanism for energy supply. The alternate mechanism is fat breakdown but one downfall of this process is ketone production as byproduct. Normal level of ketones in urine has no effect but if it is present in high amount it can cause serious health issues that can even lead to death. The main symptoms of urine ketone are strong thirst, dry mouth, frequent urination, nausea, and vomiting and stomach pain. Urinary test strips are used to detect ketone levels. Result is evaluated by the change in the color of strip. When ketone level is increased it is called ketonuria. We can also check it with strip at home. Proper healthy diet, diabetes management and keeping hydrated can prevent us from such diseases.

Some specific chemicals present in perfumes can cause allergy. The most common one is contact allergic dermatitis. The most common symptoms of perfume allergy are headache, difficulty in breathing, wheezing, chest tightening, asthma and stuffy nose. Use cool compressors as a cure of itching and wear smooth cotton dress to avoid skin irritation. Symptoms may resolve within 2-4 weeks. It is also caused by some basic products like soap, creams having strong scents. The detection of these chemicals and treatment at initial stage is very important in order to prevent us from harsh consequence.

2. Materials and Methods

The students of Bahauddin Zakariya University, Multan, Pakistan took part in this study. 100 subjects participated in this study.

Ketones in urine

We can pass test strip during urination or dip in the clear sample of urine. This test indicates the presence of Ketones in our urine by different colors. This test strip method is easy and cheap.

Study Objective

Association of urine Ketones with perfume allergy is explained in this paper.

3. Results and Discussions

Total 25% males have urine ketone and also show perfume allergy. 50% males have no urine ketone but have perfume allergy. 10% males have urine ketone and they don't show perfume allergy. 15% males have no urine ketone and also don't show perfume allergy. 2.25% females have urine ketone and also show perfume allergy. 54% females have no urine ketone but have perfume allergy. 2.5% females have urine ketone but they don't show perfume allergy. 41.25% females have no urine ketone and also show no perfume allergy. The results show that more than 50% of both male and female having perfume allergy show normal to trace level of ketones in urine. This result suggests that having perfume allergy alone cannot be the cause of high ketone in urine. We can thus conclude that perfume allergic people can have normal levels of ketones in urine. Questionnaire based studies are always very reliable and give insight to the people's opinions which is the main aim of questionnaire i.e., to engage the general public.

Table 1. Association of urine Ketones with perfume allergy explains in this project

Gender	Perfume Allergy		Don't have perfume allergy	
	Ketones in urine	No Ketones in urine	Ketones in urine	No Ketones in urine
Male	25%	50%	10%	15%
Female	2.25%	54%	2.5%	41.25%

4. Conclusion

25% males have Ketones in urine and are also allergic to perfumes while 2.25% females have ketone in urine and are allergic to perfumes as well. While on the other hand more than 50% of both male and female, having perfume allergy show normal to trace level of ketones in urine. This study thus concludes that perfume allergic people can have normal levels of ketones in urine.

Declarations

Source of Funding

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing Interests Statement

The authors declare no competing financial, professional, or personal interests.

Ethical Approval

Ethical approval for this study was obtained from Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan.

Consent for publication

The authors declare that they consented to the publication of this research work.

Availability of data and material

The authors are willing to share the data and material according to relevant needs.

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