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Is There Any Relation Between Bitter Gourd Likeliness and Urine in Blood?

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ABSTRACT

The objective of the recent project was to explore the association between bitter gourd likeliness and blood in urine. The number of subjects who responded to this survey were 100. The process adopted was acquiring their consent and collection of their urine samples. The hematuria conditions of the subjects were checked by performing dipstick test. In the meanwhile, the subjects were asked whether they liked bitter gourd or not. Then, the collected data was organized, presented in form of table and observed the relationship of bitter gourd liking to hematuria. The comparative analysis of different conditions of blood in urine of the participants was made. At the end, the results were defined. This study concluded that no relationship was found between bitter gourd likeliness and hematuria.

Keywords: *Bitter gourd, Hematuria, Blood in urine, Dipstick test, Urinalysis.*

INTRODUCTION

The medical term used for the blood in urine is hematuria. Hematuria may be gross means can be seen with naked eye or microscopic means the blood cells in urine only visible in light microscopy or urinalysis. The appearance of blood cells in urine may vary from light pink to dark red instead of normal pale yellow color of urine. The amount of blood in urine depends on the cause of hematuria. The main cause of hematuria is the bleeding from anywhere in the urinary tract. Evaluation of blood in urine requires consideration of all parts of the urinary tract. Only physician can distinguish the cause or bleeding site of the blood found in urine. There are different causes of blood in urine including bladder cancer, urinary tract infection (UTI), Benign (non-cancerous) tumors and kidney stones. Certain substances like hemoglobin without red blood cells, myoglobin, betanin, semen, porphyrin, certain drugs like quinine, sulfonamides, rifampicin, phenytoin and phenazopyridine and menses can mimic hematuria resulting in false or positive result on dipstick during urinalysis. These substances can mimic hematuria resulting into red or brown urine. Urinary tract infection including kidney stones, any bladder and urethra infections and pyelonephritis infection of kidneys, renal vein thrombosis and polycystic disease of kidney can cause hematuria. Either urine is sterile but due to kidney or bladder stones that causes abrasion of the urinary tract resulting in irritation and infection of the urine. Medications like Plavix, warfarin and aspirin increases the risk bleeding that leads to bloody urine. Cancer of kidney or anywhere along the urinary tract also leads to the hematuria. 40% of gross hematuria is due to the cause of cancer of any part of urinary tract. Excessive exercise can also induce hematuria. 30% of hematuria in long distance runners is exercise-induced. In many people, microscopic hematuria can be found in routine urine analysis with 0.18% to 37% prevalence as it does not cause discoloration of the urine. Microscopic hematuria can be increased with age. 5% of microscopic hematuria is due to cancer of prostrate, bladder, kidney or testes. In most cases, no certain cause is found for microscopic hematuria. Diagnosis of blood in urine can be done by urinalysis, light microscopy, dipstick, CT scan abdomen, Cystoscopy, MRI, urine culture, IVP, urine cytology and ultrasound. Urinalysis is a test in which urine sample is analyzed. Hematuria is a symptom and there is no exact treatment for hematuria. If the physician found the underlying cause of the microscopic or gross hematuria, then the treatment is aimed (1-2).

Momordica charantia is the scientific name of bitter gourd; a vegetable belongs to family Cucurbitaceae of genus Momordica. Bitter gourd is name after its bitter taste. Charantin are the compounds responsible for the bitterness of this fruity-vegetable. Bitter gourd is an annual climbing vine cultivated in all the tropics and sub-tropics. It is summer season crop grown best in hot and humid conditions from March through September. Bitter melon is monoecious, male and female parts borne individually on same plant and pollination done through insects. This plant is reported to have bioactive components like triterpene, phenolic acids, saponins oils, flavonoids, triterpenoids, essential oils, glycosides, proteins and fatty acids. It constitutes certain nutritional components like dietary fiber, carbohydrates, vitamins, carotene and minerals like potassium, calcium, phosphorus, potassium and ascorbic acid. Bitter gourd is reported to poses anti-inflammatory, anti-diabetic, anti-obesity, anti-cancer, anti-oxidant, anti-bacterial and show defense activities. . Bitter gourd compounds also shows biological activity. There is consumption of bitter melon to treat and control diabetes naturally. *Momordica charantia* extract inhibits the growth of cancer cells by inducing the phenomenon cell cycle arrest, autophagy, inhibition of cancer stem cells and apoptosis. 3-β, 7β-dihydroxy-25-methoxycucurbita-, 23-diene-19-al extracted from wild bitter gourd showed activity against breast cancer cells (3-4).

The objective of the present study was to analyze the relation of bitter gourd relish and blood in urine of the subjects.

MATERIALS AND METHODS

It was a questionnaire based survey. The 100 participated subjects were the biology students of Bahauddin Zakariya University of Multan, Pakistan.

Project designing

The subjects gave their consent about bitter gourd likeness and urinalysis was performed by dipstick test by collecting their urine sample. The stick was dipped in the urine box for 60 seconds and leave it for few seconds. Within 2 minutes, the comparison of any notable color change of strip with the standards. Also, the subjects were asked about their likeliness towards bitter melon and noted their respective answers. Then, data analysis was performed for the collected information to determine the results of the recent study.

RESULTS

The relationship between bitter gourd likeliness and blood in urine is shown in **Table1**. The results present that 15% male subjects that liked bitter gourd had negative hematuria. 3% males had hemolytic hematuria that showed likeliness towards bitter melon. The males that liked bitter melon and had non-hemolytic hematuria were 3%. The 40% female subjects that liked *Momordica charantia* had negative blood in urine. Females that liked bitter squash with hemolytic hematuria were 6% while 3% females had non-hemolytic hematuria that showed likeliness towards *Momordica charantia*. The relationship between bitter gourd dislikeliness and blood in urine of participated subjects is shown in **Table 2**. With respect to bitter gourd dislikeliness, 5% males had negative hematuria. 2% males that showed dislikeliness had hemolytic hematuria. 1 % male subjects had non-hemolytic hematuria that disliked bitter melon. The females that disliked bitter melon were 17% had negative hematuria. 6% participated

females that showed dislikeliness had hemolytic blood in urine. 3% females had non-hemolytic hematuria which disliked *Momordica charantia*. Table 3 represents the relation between bitter gourd likeliness and participated subjects that had positive hematuria. Total males with positive hematuria were 9. Table 3 represented that 66.7 males who liked bitter melon had hematuria, while 33.3 % males who showed dislikeliness had blood in their urine. 64.3% females that liked *Momordica charantia* had blood in urine. The females who disliked bitter melon had blood in their urine were 35.7 %.

Table 1: Relation of bitter gourd dislikeliness and blood in urine

	Bitter gourd Likeliness						
	Negative	**Positive**					
		Hemolytic			**Non-hemolytic**		
Categories		**10 H**	**50 H**	**250 H**	**10 NH**	**50 NH**	**250 NH**
Males	15 %	0%	1%	2%	3%	0%	0%
Females	40%	3%	1%	2%	2%	1%	0%

Table 2: Relation of bitter gourd likeliness and blood in urine

Bitter gourd Dislikeliness							
Categories	**Negative**	**Positive**					
		Hemolytic			**Non-hemolytic**		
		10 H	**50 H**	**250 H**	**10 NH**	**50 NH**	**250 NH**
Males	5 %	0%	2%	0%	0%	0%	1%
Females	17%	2%	0%	1%	1%	1%	0%

Table 3: Relation of positive hematuria of the subjects and the Bitter gourd relish

Total positive males = 9		
Total positive females = 14		
	Bitter gourd likeliness	**Bitter gourd dislikeliness**
Male	66.7 %	33.3 %
Females	64.3 %	35.7 %

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DISCUSSION

The present study has shown advancements in recent researches. In one of the studies, the researcher found that consumption of bitter melon juice is good for high urea levels and creatinine levels. The patients should consumed recommended amount because high urea levels causes decline urine output or swelling and high fluid intake causes burden for kidneys. In another research, the in vitro studies of bitter gourd juice shows positive effects in curing urinary tract infections (UTI) and expelling toxins from the body (5-19).

CONCLUSION

The recent study concluded that no relationship was examined between biter gourd likeliness and blood in urine.

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