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IS THERE ANY CORRELATION BETWEEN LEUKOCYTES IN URINE AND CAPACITY OF DRINKING WATER PER DAY?

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ABSTRACT

The main objective of our latest study was to check out the relationship of leukocytes in urine with capability of drinking water in a day. An enzyme leukocyte esterase is mostly present in white blood cells (WBCs). Due to bacterial urinary tract infection (UTI) in bladder and kidney, white blood cells pass into urine. We should drink 8 glass of water daily and follow 8 by 8 rule. Almost 100 subjects from Bahauddin Zakariya University were took part in our latest study. We used dipstick method for the measurement or checking of leukocytes in urine. In dipstick method dipstick strips were used on which different bands were present. Percentage (% age) parameter was used for the calculation of our latest research data. It was concluded that leukocytes in urine have no important relation with capability of drinking water in a day. From results it was concluded that males and females who drink 1-4 glasses in a day have 100% chance of leukocytes in urine.

KEYWORDS

Leukocytes, Dipstick method and Water.

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INTRODUCTON

An enzyme leukocyte esterase is mostly present in white blood cells (WBCs). A very small amount of white blood cells are present in urine and give negative results. But due to bacterial urinary tract infection (UTI) in bladder and kidney, white blood cells pass into urine. If infection of urinary tract take place in bladder and patient do not look for treatment, the infection may be spread to kidneys and ureters. Leukocytes or white blood cells may be an indication of an infection and red blood cells may be symbol of kidney disorder. In urine presence of high number of white blood cells specify swelling or infection in urinary tract.

Absence of leukocytes esterase in urine shows that urine is not contain white blood cells and have no infectious agents. In blood normal range of leukocytes in blood is 4500-11000 WBCs per microliter and in urine 0-5WBCs per high power field (wbc/hpf). High amount of white blood cells in urine is not actually a disease but it is an indication of many other diseases such as stress, trauma, allergy, inflammation, infection and allergy. Causes of leukocytes in urine are bladder infection, kidney stones, urinary system blockage, kidney infection and holding in urine. Some cancers, skill cell anemia, medication and intestinal cystitis also increase the number of white blood cells in urine. Symptoms of leukocytes in urine are acute pelvic pain, shivering and fever, back or side pain, nausea and vomiting. By changing life style we can control raised level of leukocytes in urine. We can treat or control increased level of leukocytes in urine by drinking more water, staying healthy and urinating when we have to go. We can diagnose leukocytes in urine by urinalysis such as dipstick test, microscopic exam and visual exam.

Drinking water is also termed as potable water and that it is clean enough to drink for public and consumed for preparation of many food commodities. Water is a necessary nutrient for all living things. In human body almost all cellular reactions take place in the presence of water. Without drinking water human can only live for few days. In summer season consumption of water increases. We should drink 8 glass of water daily and follow 8 by 8 rule. In taking of high amount of water is harmful and it cause hyponatremia. Loss of water from the body cause dehydration and it leads to diarrhea. Drinking water prevents us from heart diseases, kidney diseases, dry skin and many other problems.

The main objective of our latest study was to check relation of leukocytes in urine with capability of drinking water in a day.

MATERIAL AND METHODS

Almost 100 subjects from Bahauddin Zakariya University were took part in our latest study. We used dipstick method for the measurement or checking of leukocytes in urine. In dipstick method dipstick strips were used on which different bands were present. We collected urine samples from all subjects in small containers or bottles separately. We hold the strip in stream of urine sample for 2-3 seconds and then took out from container. After that we hold this strip in the open air for 1-2 minutes. Strip started to change the colour. We observed the colour changes and noted its readings.

RESULTS AND DISCUSSION

From results it was showed that male who consume water 1-4 glass of water daily had 1% positive results and 9% had negative results. Males who drink 5-8 and 9-12 glasses of water had no positive results. All results are given in table.

In females who drink 1-4 glasses had maximum positive results. Near about 10% females had positive results and 32% had negative results. And females who drink 9-12 and 5-8 water’s glasses had no positive results.

Our latest study was questionnaire based study and in our study we relate leukocytes in urine with capability of drinking water. For our research first of all we get permission from all subjects and asked them how many glass of water they drink in day. Then we test leukocytes in urine by dipstick method and note the readings.

Table No.1: Relation of urine leukocytes with capability of drinking water in males

S.No	Male	Urine leukocytes negative (%age)	Urine leukocytes positive (%age)		
		0(negative)	25	75	500
1	1-4 glass	9%	1%	0%	0%
2	5-8 glass	5%	0%	0%	0%
3	9-12 glass	0%	0%	0%	0%

Table No.2: Relation of urine leukocytes with capability of drinking water in females

S.No	Female	Urine leukocytes negative (% age)	Urine leukocytes positive (% age)		
		0(negative)	25	75	500
1	1-4 glass	32%	2%	8%	1%
2	5-8 glass	15%	0%	0%	0%
3	9-12 glass	2%	0%	0%	0%

Table No.3: Relation of urine leukocytes with capability of drinking water in males and females

S.No		Male	Female
1	Water glasses in ranges between 1-4	100%	100%
2	Water glasses in ranges between 5-8	0%	0%
3	Water glasses in ranges between 9-12	0%	0%

CONCLUSION

It was concluded that leukocytes in urine have no important relation with capability of drinking water in a day. From results it was concluded that males and females who drink 1-4 glasses in a day have 100% chance of leukocytes in urine.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

BIBLIOGRAPHY

- Qadir M I, Malik S A. Comparison of alterations in red blood cell count and alterations in hemoglobin concentration in patients suffering from rectal carcinoma undergoing 5-fluorouracil and folic acid therapy, *Pharmacologyonline*, N13, 2010, 240-243.
- Qadir M I, Noor A. Anemias. Rare and Uncommon Diseases, *Cambridge Scholars Publishing, Newcastle, England*, ISBN: 978-1-5275-1807-0, 2018, 1-158.
- Qadir M I, Javid A. Awareness about Crohn's Disease in biotechnology students, *Glo Adv Res J Med Medical Sci*, 7(3), 2018, 062-064.
- Qadir M I, Saleem A. Awareness about ischemic heart disease in university biotechnology students, *Glo Adv Res J Med Medical Sci*, 7(3), 2018, 059-061.
- Qadir M I, Ishfaq S. Awareness about hypertension in biology students, *Int J Mod Pharma Res*, 7(2), 2018, 08-10.
- Qadir M I, Mehwish. Awareness about psoriasis disease, *Int J Mod Pharma Res*, 7(2), 2018, 17-18.
- Qadir M I, Shahzad R. Awareness about obesity in postgraduate students of biotechnology, *Int J Mod Pharma Res*, 7(2), 2018, 14-16.
- Qadir M I, Rizvi M. Awareness about thalassemia in post-graduate students, *MOJ Lymphology and Phlebology*, 2(1), 2018, 14-16.
- Qadir M I, Ghalia B A. Awareness survey about colorectal cancer in students of M. Phil Biotechnology at Bahauddin Zakariya University, Multan, Pakistan, *Nov Appro in Can Study*, NACS.000514.2018, 1(3), 2018, 1-5.
- Qadir M I, Saba G. Awareness about intestinal cancer in university student, *Nov Appro in Can Study*, NACS.000515.2018, 1(3), 2018, 1-3.

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