



CODEN [USA]: IAJPBB

ISSN : 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4436078>Available online at: <http://www.iajps.com>

Research Article

**FREQUENCY OF KIDNEY STONES AMONG PATIENTS
PRESENTING WITH BURNING MICTURITION**DR. NUBESHA QURAIISH¹, DR. SAWAIRA², DR. SHABBIR AHMAD WATTO³

Article Received: November 2020 Accepted: December 2020 Published: January 2021

Abstract:

Kidney stone disease, also known as nephrolithiasis or urolithiasis, is when a solid piece of material (kidney stone) develops in the urinary tract. Kidney stones typically form in the kidney and leave the body in the urine stream. A small stone may pass without causing symptoms. If a stone grows to more than 5 millimeters (0.2 in), it can cause blockage of the ureter, resulting in severe pain in the lower back or abdomen. This cross-sectional study was conducted among outdoor patients presenting in different hospitals. Name, age, gender, history of burning micturition and kidney stones (after ultrasonography) was noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. There were 40 patients that were included in this study. The mean age of the patients was 33.89 ± 3.45 years. There were 30 (75%) males and 10 (25%) females included in this study. Out of 40 patients presenting with burning micturition, only seven had one sided kidney stones and one patient had stones in both kidneys.

Keywords: *Burning Micturition, Kidney Stones***Corresponding author:****Dr. Nubesha Quraish**

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Please cite this article in press Nubesha Quraish et al, *Frequency Of Kidney Stones Among Patients Presenting With Burning Micturition.*, Indo Am. J. P. Sci, 2021; 08[1].

INTRODUCTION

Kidney stone disease, also known as nephrolithiasis or urolithiasis, is when a solid piece of material (kidney stone) develops in the urinary tract. Kidney stones typically form in the kidney and leave the body in the urine stream. A small stone may pass without causing symptoms. If a stone grows to more than 5 millimeters (0.2 in), it can cause blockage of the ureter, resulting in severe pain in the lower back or abdomen. A stone may also result in blood in the urine, vomiting, or painful urination. About half of people who have had a kidney stone will have another within ten years.

Most stones form by a combination of genetics and environmental factors. Risk factors include high urine calcium levels; obesity; certain foods; some medications; calcium supplements; hyperparathyroidism; gout and not drinking enough fluids. Stones form in the kidney when minerals in urine are at high concentration. The diagnosis is usually based on symptoms, urine testing, and medical imaging. Blood tests may also be useful. Stones are typically classified by their location: nephrolithiasis (in the kidney), ureterolithiasis (in the ureter), cystolithiasis (in the bladder), or by what they are made of (calcium oxalate, uric acid, struvite, cystine).

In those who have had stones, prevention is by drinking fluids such that more than two liters of urine are produced per day. If this is not effective enough, thiazide diuretic, citrate, or allopurinol may be taken. It is recommended that soft drinks containing phosphoric acid (typically colas) be avoided. When a stone causes no symptoms, no treatment is needed, otherwise pain control is usually the first measure, using medications such as nonsteroidal anti-inflammatory drugs or opioids. Larger stones may be helped to pass with the medication tamsulosin or may require procedures such as extracorporeal shock wave lithotripsy, ureteroscopy, or percutaneous nephrolithotomy. Between 1% and 15% of people globally are affected by kidney stones at some point in their lives. In 2015, 22.1 million cases occurred, resulting in about 16,100 deaths. They have become more common in the Western world since the 1970s. Generally, more men are affected than women. Kidney stones have affected humans throughout history with descriptions of surgery to remove them dating from as early as 600 BC (1-3). The objective of this study was to see the frequency of kidney stones among the patients presenting with burning micturition.

MATERIAL OF METHODS:

This cross-sectional study was conducted among outdoor patients presenting in different hospitals. Name, age, gender, history of burning micturition and kidney stones (after ultrasonography) was noted on a predefined proforma. All the data was entered and analyzed with SPSS Ver. 23.0. The quantitative variables were presented as mean and standard deviation. The qualitative variables were presented as frequency and percentages.

RESULTS:

There were 40 patients that were included in this study. The mean age of the patients was 33.89 ± 3.45 years. There were 30 (75%) males and 10 (25%) females included in this study. Out of 40 patients presenting with burning micturition, only seven had one sided kidney stones and one patient had stones in both kidneys.

DISCUSSION:

The hallmark of a stone that obstructs the ureter or renal pelvis is excruciating, intermittent pain that radiates from the flank to the groin or to the inner thigh. This pain, known as renal colic, is often described as one of the strongest pain sensations known. Renal colic caused by kidney stones is commonly accompanied by urinary urgency, restlessness, hematuria, sweating, nausea, and vomiting. It typically comes in waves lasting 20 to 60 minutes caused by peristaltic contractions of the ureter as it attempts to expel the stone. The embryological link between the urinary tract, the genital system, and the gastrointestinal tract is the basis of the radiation of pain to the gonads, as well as the nausea and vomiting that are also common in urolithiasis.

Postrenal azotemia and hydronephrosis can be observed following the obstruction of urine flow through one or both ureters. Pain in the lower-left quadrant can sometimes be confused with diverticulitis because the sigmoid colon overlaps the ureter, and the exact location of the pain may be difficult to isolate due to the proximity of these two structures. Dehydration from low fluid intake is a major factor in stone formation. Individuals living in warm climates are at higher risk due to increased fluid loss. Obesity, immobility, and sedentary lifestyles are other leading risk factors.

High dietary intake of animal protein, sodium, sugars including honey, refined sugars, fructose and high fructose corn syrup, and excessive consumption of fruit juices may increase the risk of kidney stone formation due to increased uric acid excretion and elevated urinary oxalate levels (whereas tea, coffee,

wine and beer may decrease the risk). Kidney stones can result from an underlying metabolic condition, such as distal renal tubular acidosis, Dent's disease, hyperparathyroidism, primary hyperoxaluria, or medullary sponge kidney. 3–20% of people who form kidney stones have medullary sponge kidney. Kidney stones are more common in people with Crohn's disease; Crohn's disease is associated with hyperoxaluria and malabsorption of magnesium. A person with recurrent kidney stones may be screened for such disorders. This is typically done with a 24-hour urine collection. The urine is analyzed for features that promote stone formation (4-6).

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