

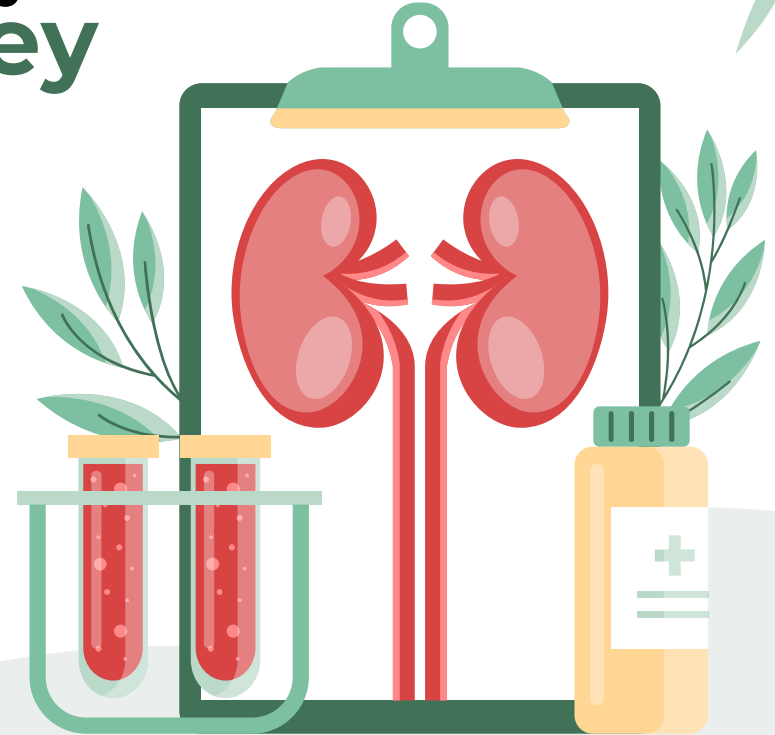


**Libyan International Medical
Faculty of Pharmacy
University**



Prevalence of Kidney Stone Diseases in Benghazi; Libya

Presented by:
Saleh Kamal 3616
Khaled Alansary 3641
Mohamed Ashraf 3511
Abdulsalam Alfarse 3694
Tasneem 3405
Eman Abdel naser 3316
Esraa Alomami 3401



Introduction

Kidney stone disease (KSD) is a common disorder globally. Despite some improvements in detection methods and prevention strategies for kidney stones but increase in KSD prevalence remain a problem.

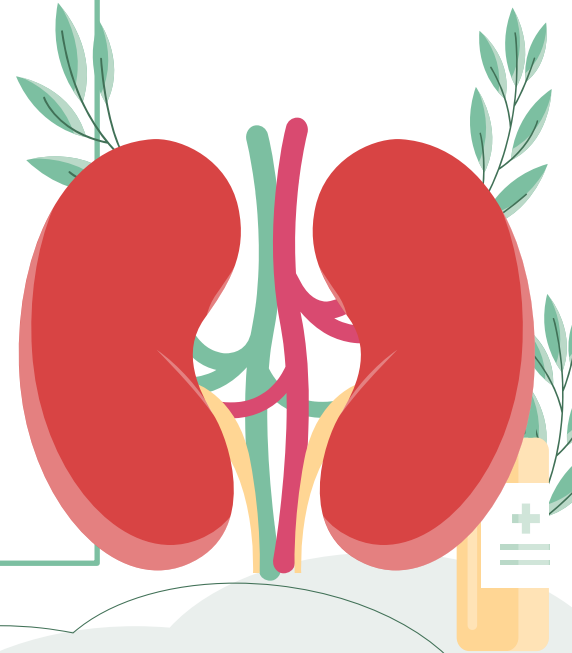
Introduction

- Kidney stones disease (KSD) is one of the most common and painful urologic disorders.
- Renal stones can form as a result of the precipitation or crystallization of minerals and urinary constituents in the kidney, such as calcium oxalate, calcium phosphate, cystine, or uric acid.
- Genetic factors that play a major role in the pathogenesis of this condition have been recognized.



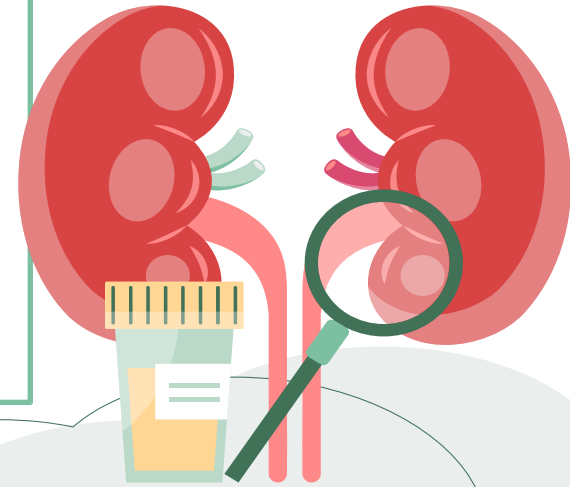
Introduction

- KSDs are quite common and usually affect middle age group people. They affect men more than women due to the androgens hormone
- KSD is usually linked to gout, obesity, metabolic derangement, and diabetes.
- Renal stones may cause trauma, ulceration, and bleeding; which stimulates prostaglandin synthesis, resulting in inflammation, and edema, and predisposing patients to bacterial infection.



Aim

- The current study aims to determine the prevalence of renal calculus disease in Benghazi; Libya based on the location of the stones, age, and gender of the patients; the comorbid conditions also have been determined.

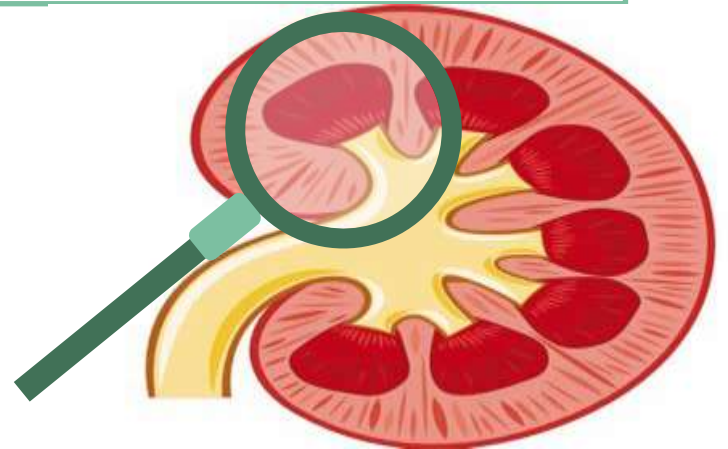


Methods

- The study was a retrospective study designed on the prevalence of renal calculus disease in Benghazi city.
- Samples of both genders were included in the study and age groups ranging from 13 years up to 84 years were collected from the medical records of all patients who treated in Urology Department at AL Hawari Hospital –from. January 2020 until 2021. with the total of cases 155.

Methods

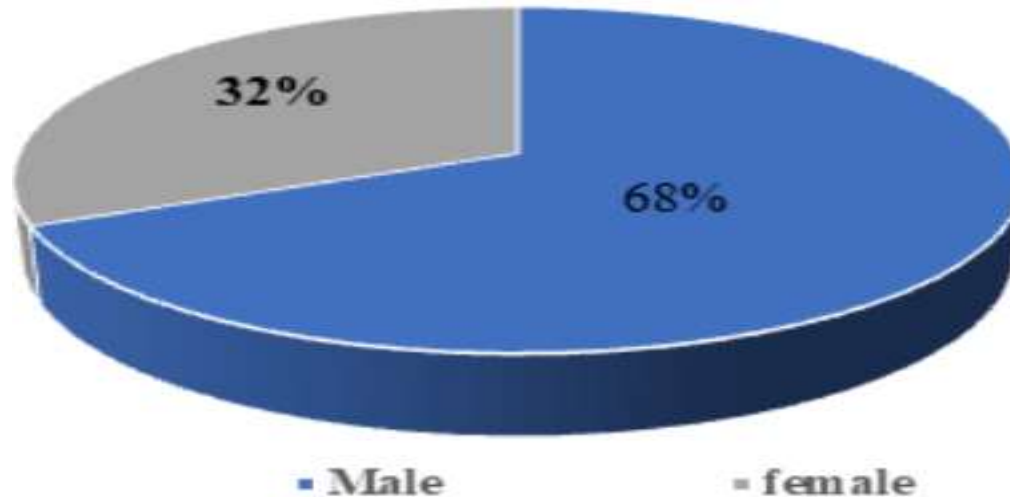
- All required basic information and data regarding the history of comorbid diseases such as diabetes and hypertension were obtained from their medical documentation.



Results

The study was conducted among 155 patients. Out of them , 106 (68%) were males and 49 (32 %).

Male to female ratio in this study was 2.2 : 1.



Results

The patient's ages encountered in the study ranged in age between 13 and 84 years with a mean of

Age group (years)	Male	Female	Total N (%)
10-19	2	1	3 (1.9%)
20-29	11	4	15 (9.7%)
30-39	18	7	25 (16%)
40-49	32	14	<u>46 (30%)</u>
50-59	23	13	36 (23%)
60-69	15	8	23 (15%)
70-79	2	2	4 (2.5%)
80-89	0	3	3 (1.9%)

Results

- Details of the anatomical distribution of the 155 kidney stones were assessed.
- A ureteric stone is the most common location found in 94 (60.6%) of patients.
- Ureteric stones were much more prevalent in the males in our sample, 62 (40%) compared to 32 (20.6%) for females.
- The second site of kidney stone is renal stone either unilateral or bilateral.

Results

- The prevalence of unilateral renal stones was 42 (27.1%), and bilateral renal stones were found in 19 (2.3%) of patients, there was a higher prevalence of renal stones in males (25.7%) than in females (13.5%) in both unilateral and bilateral types.

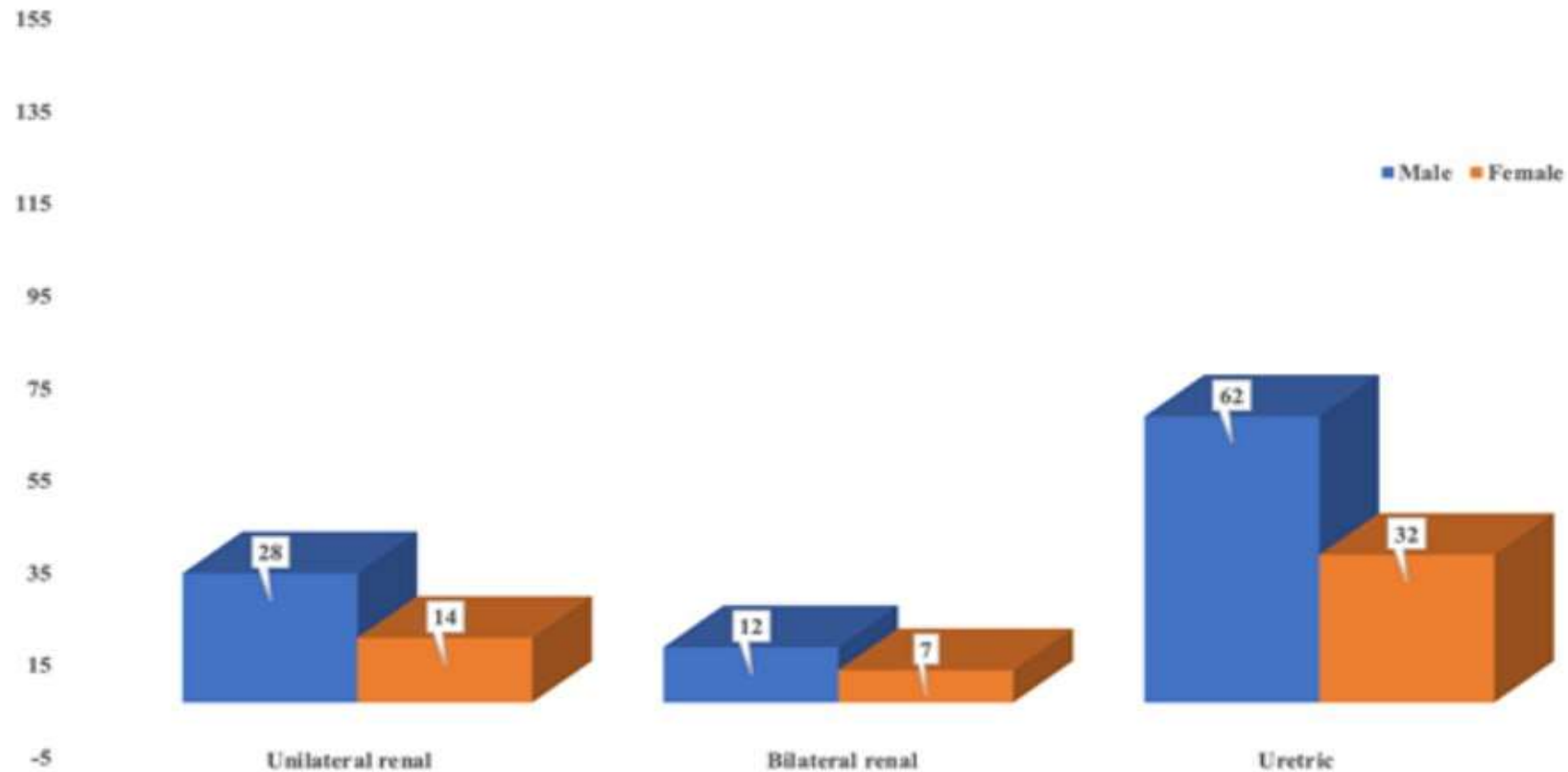
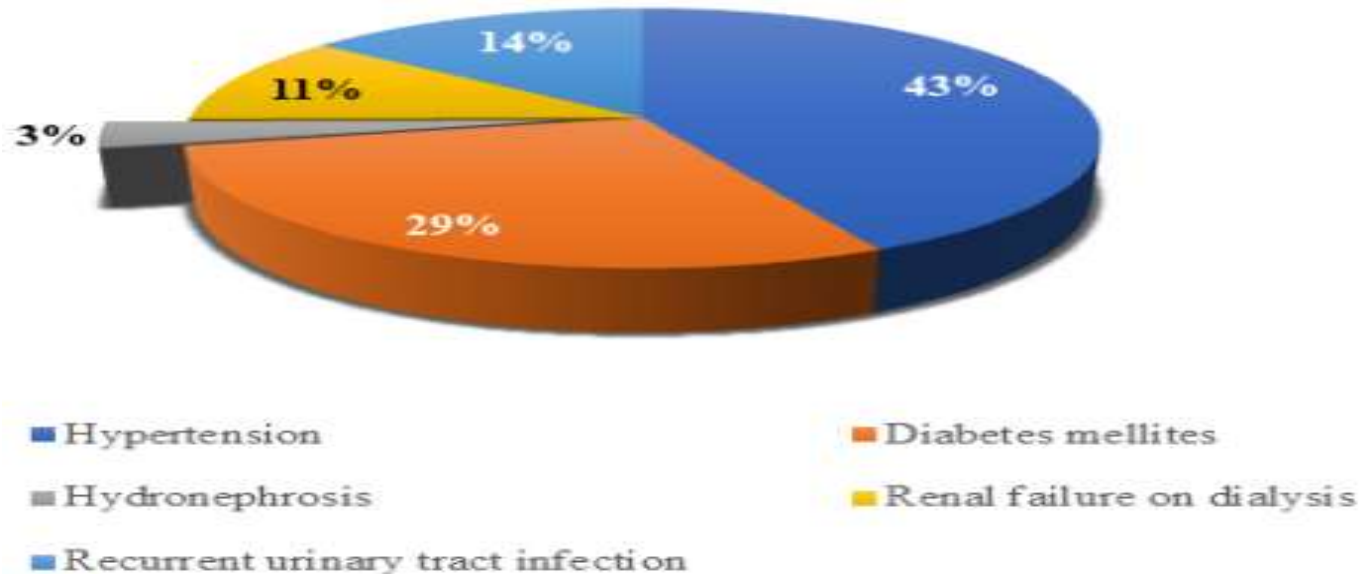


Figure-2. Prevalence of kidney stones according to Location

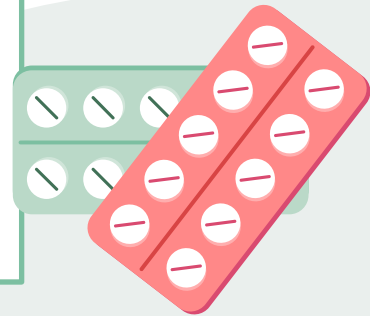
Results

- Medical history as reported in inpatient medical records was used as a source of associated comorbid conditions. Our data indicated that the prevalence of kidney stones was higher among hypertensive patients 66 (43%).



Discussion

- Study, a sample of 155 patients was collected from in Urology Department at AL Hawari Hospital, Retrospective chart reviews were done to collect the necessary data to assess the prevalence of kidney stone disease and its comorbid conditions.
- 1. Rule Regarding gender-specific prevalence, the data showed a higher prevalence of KSD in male patients than females with a male to female ratio of 2.2:1, the findings are close to that of who reported an overall sex ratio prevalence of 2.03:1.



Discussion

- Other studies have reported that kidney stone was more prevalent among men. The sex hormones in both genders can be responsible for the higher risk of kidney stones, Androgen increases the risk of KSD in men.
- However, estrogen in females prevents the formation of renal stones by increasing the production of citric acid.
- This result is in agreement with the findings of some other researchers who indicated that ureteric stone predominates in males. In this study, the highest numbers of renal stones were found unilateral (27%).

Discussion

- The analyzes showed a higher frequency of formation of kidney stones (43%) followed by diabetes , found that the severity of Type 2 diabetes was an important risk factor for kidney stone disease.
- Our data also showed that the frequency of renal stones was 14% in patients with recurrent urinary tract infections (RUTI).
- Another study showed the association between recurrent RUTI, and stone was 10-15% .

Discussion

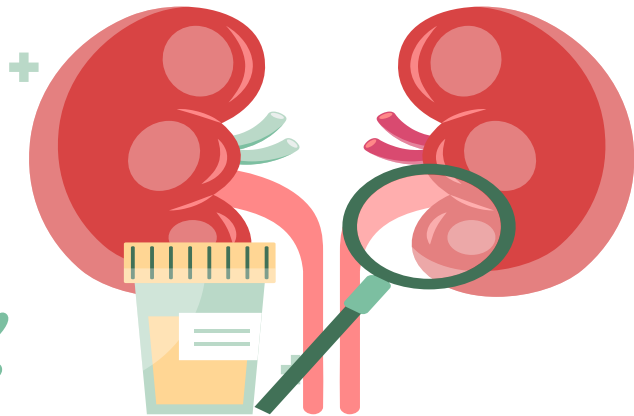
- In our study, only 11% of the KSD patients had a renal failure on dialysis.
- However, Foley a reported more incidence of hemodialysis in patients with renal stones.

Conclusion

- It is concluded that the highest prevalence of kidney stone disease is in the age group 40-49 in males.
- The disease is more common in males than females.
- According to the results of the present study, the prevalence of kidney stone diseases is related to gender, and several medical comorbidities like hypertension, and diabetes.
- The results of this study are helpful to health care providers for preventive planning for kidney stone disease.

Referance

- Hanan M Garalla. Anisa M Elnaas, Retaj Abdulrahman Shalgami, A.M. (2022) 'Prevalence of Kidney Stone Diseases in BENGHAZI; Libya', CO, 2 (6), pp. 208–212.





Thank
you!