

---

## **SURVEY OF URINARY TRACT CALCULI IN SULEIMANIYAH**

**Ismaeel Ham Ameen**

Arab Board Certified Surgeon, Urologist, College of Medicine University of Suleimaniyah, IRAQ.

### **Summary**

A total of 1339 patients operated on from 1994 to 2000 for urinary tract calculi. There were 851 male patients (63.5%) and 488 female patients (36.5%) with 891 renal stones. Three hundred eighty three ureteric stones and 103 vesical stones. The age incidence, sex differences, anatomical sites, residency and seasonal variation were studied.

---

### **Introduction**

Urinary tract stones is a common problem, with this in mind, we embarked upon this study which is a retrospective analysis of those patients who were admitted and operated for urinary stones in two main hospitals (Chwarbakh Surgical Teaching Hospital and Ashtee Private Hospital) in Suleimaniyah city.

### **Patients and Methods**

During the period from 1994 to 2000, a total of 1339 patients were operated upon for different urinary tract stones.

Age incidence, sex variation, anatomical site, residency and seasonal variation were studied

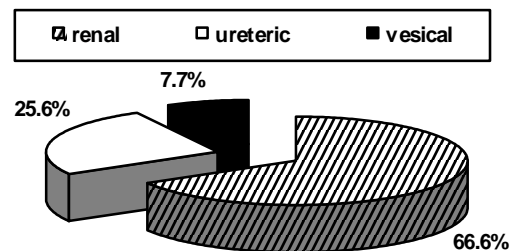
---

#### **Correspondence to:**

Dr. Ismaeel Ham Ameen  
College of Medicine University of  
Suleimaniyah, IRAQ

### **Results**

In this series there were 891 (66.6%) renal stones, 343 (7.7%) vesical stones, Figure 1.



**Figure 1. Anatomical sites of stones.**

Out of 1339 patients there were 851 (63.5%) male patients and 488 (36.5%) female patients.

The incidence of stone in different age groups shown in Table I, Figure 2.

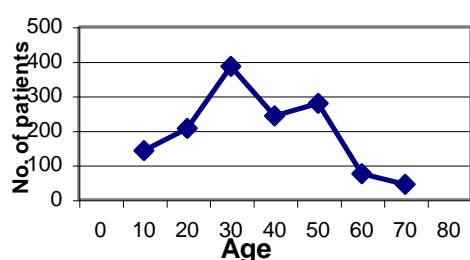
Data regarding residency were not available for all patients. There were 515 patients from the city of Suleimaniyah

and 542 patients from outside the city. Most of patients were operated on in summer as shown in Figure 3.

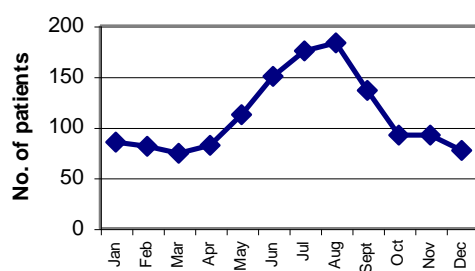
**Table I. Number of patients according to age.**

Age in years	No. of patients
0-9	141
10-19	205
20-29	385
30-39	242
40-49	178
50-59	74
60-69	44

**Figure 2. Incidence in different age group of 1339 patients.**



**Figure 3. Monthly incidence of No. of urinary tract operations.**



## References

1. Charles V. Mann, RCG Russell. Short practice of surgery, 22<sup>nd</sup> ed. P.925.
2. Salah Al-Askari, Golimbu M, Morales P. Essential of basic science in urology. 1<sup>st</sup> ed., 1981, p.238.
3. Cortan, Kumar, Robbins. Robbins pathological basis of disease. 4<sup>th</sup> ed. 1989.
4. ESWL the 1<sup>st</sup> experiment in middle east, Saudi Medical Journal 1986; 7(6).
5. Schwartz, Shires, Spencers. Principles of Surgery. 6<sup>th</sup> ed. 1994, p.1743.
6. Walsh, Retik, Stamy, Vaughan. Campbell's Urology. 6<sup>th</sup> ed. 1992, p.2091.
7. Lamia M. Al-Naama, Luay Susan, Yasin B Bakir. Incidence and composition of urinary tract calculi. Saudi Med J 1987; 8(5): 460.

## Discussion

Our survey show that 4.5% of the patients admitted to hospital for operation were for urinary calculi

Upper tract calculi (87%) are more common than lower tract calculi (13%), Figure 1.

Incidence in males is more than in females with a ratio of 1.75:1 which is less than that of western countries<sup>1</sup>.

The peak incidence is between 20-30 years and about more than 50% of patients present between 30-50 years, and this is later than in other studies which showed most cases presented between 3rd and 4th decades of life<sup>4</sup>.

The available data show that stones are common in the rural areas than in urban with higher incidence in summer with peak incidence in July, August and September where temperature reach the highest level<sup>2,6</sup>.

The incidence of vesical calculi is 13%, this is in contrast with what has been stated in urological books and literature, that lower urinary tract calculi are more than upper urinary tract calculi in middle east countries, and it is lower than the incidence in Basrah (south of Iraq)<sup>7</sup>.