

FORMATION OF RENAL CALCULI IN HUMAN KIDNEYS

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INTRODUCTION

In this disease there occurs formation of stones in the kidney which causes adverse effects on kidneys. The stone which is formed in the kidney has central organic material which is covered by different types of crystals, these crystals are present in urine like crystalline form and in kidney stone they are in the form of amorphous granules

SITE OF STONE FOUND IN THE KIDNEY

The stone is found in the following three places in the kidney:

- ❖ Renal Pelvis
- ❖ Calyceal stones
- ❖ Upper ureteral stone

The disease is mostly found in male as compare to females, the ratio between male/female is 4/3%. Mostly 50% stones are formed after the age of 30 to 40 years. According to the size of the stone some stones are found big and some are small, the big stones cannot enter the ureter they are present in kidneys, these big stones are called silent stones, and small stones are easily enter in the ureters, Mostly these Small stones are responsible for the pain in kidney, these small stones are called symptomatic stones. The sites of the stone found in human kidney are shown in figure 1 below.

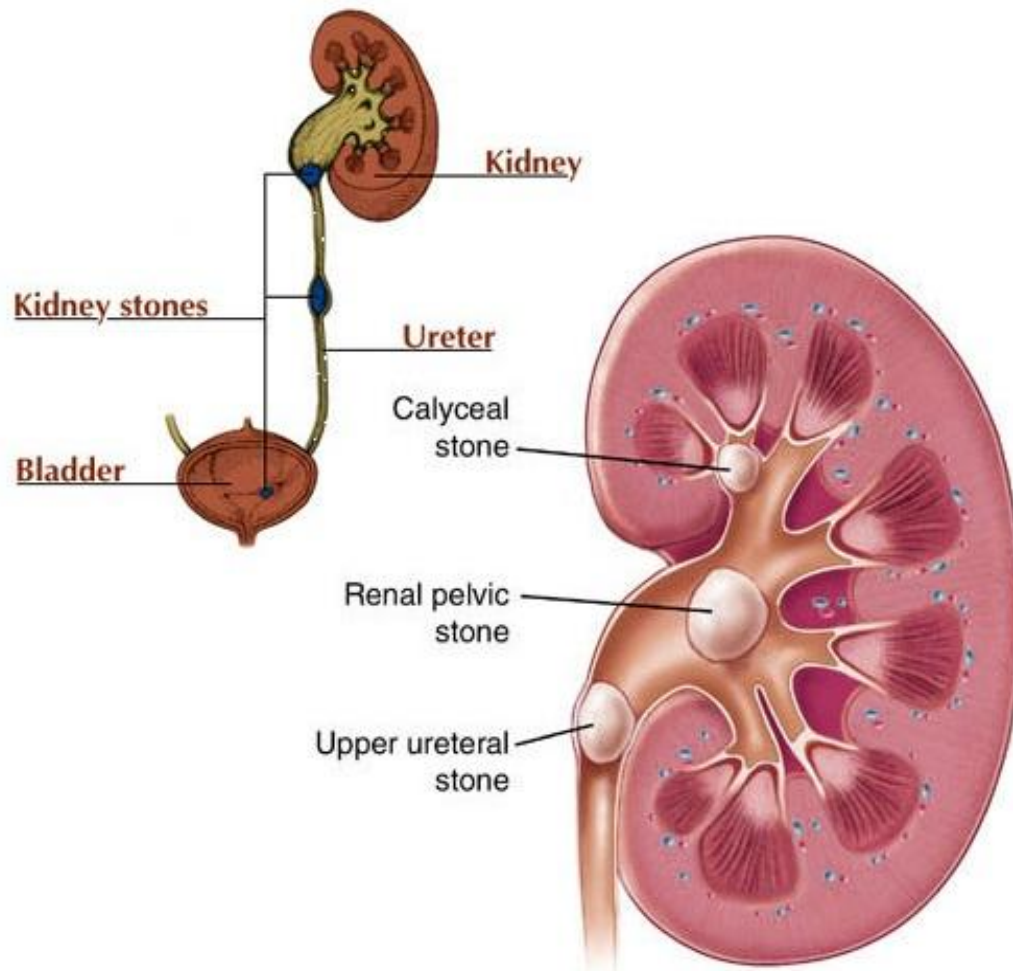


Fig 1: shows site of stones

TYPES OF STONES ACCOUNTING TO THE SIZE

There are two types of stones accounting to the size:

Big and Small Stones

TYPES OF THE STONE IN HUMANS

Uric acid stone: Uric acid stones are round or oval in shaped, heavy in weight and these stones are very hard, the colour of these stone is yellow or red, they are found more than one in the kidney and the percentage of this type of stone is around 4% in humans. Mostly these types' of stones are found in Gout patients.

Calcium oxalate Stones: Calcium oxalate Stones are very common stones found in human kidneys, they are very hard and mulberry type stones, this type of stone causes irritation in the kidney, which causes injuries to the kidney, these stone are formed around 60% in the human kidneys.

Calcium, Ammonium, magnesium phosphate: Calcium, Ammonium, magnesium phosphate, these stones is white in colour, soft, easily broken.

CAUSES OF STONES FORMATION

There are many causes of stone formation they are as under:

- Infection of urinary tract
- High oxalic diet
- Nephro calsinosis
- Pyonethrosis
- Hydro nephros
- Tramatic kidney
- Gout
- Arthritis
- Exceed use of meet
- Low Drinking conductivity of water
- Use of excessive sweets
- Use of spicy foods
- vitamin deficiency
- Para thyroid tumors
- Prolonged immobility
- Heredity

SYMPTOMS

The following symptoms have been found:

- ❖ Sudden onset of pain present in Flank radiates to back, testis associated with naiusia, vomiting and dysuria.
- ❖ The patient is paled with cold extremities the urine contains albumin blood and there maybe puss present in the urine, and the crystals of stone are also present in the urine.

INVESTIGATION

- Urine exam
- X-ray KUB
- USG
- IVP
- Urine culture

TREATMENT

If the patient feel several pain give him D5, DNS alternative hourly 30ml, and the Pain also controlled by the anti-spasmodic drug, For the bacterial infection appropriate antibiotic should be given and Nausia and violating should controlled with metochlopromide injection IV

AYURVADIC TREATMENT

- Jawa khar 5gm with water BD
- Hajralyohad 1 gm BD
- CAPSUL DISTONE 1 TID
- TABLET CULCURI 1 TID
- SYRUP NEERI 10ML BID WITH WATER
- TABLET KAKNUJE 1 TID
- MOUJAN HAJRAL YAHOOD 3 GM
- MOJUNE AKRAB 3 GM along with shrabit bozari mutadil 25 ml BID

DIET SHEET

- Drink penalty of water
- Drink at least half liter pineapple juice per day
- Drink carrot juice 10 ml twice a day.
- Avoid Milk, Meet, tomato, spinach, cheese, butter, potato, onion, cucumber.

CONCLUSION

In this study it was found it's a common disease mostly found in male patients as compare to female. The ratio between male/female is 4/3%. Mostly 50% stones are formed after the age of 30 to 40 years. Caused due to Infection of urinary tract, excessive eating of meat, alcoholism, Low Drinking conductivity of water. Medical science has achieved various goals, to cure this disease easily.

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