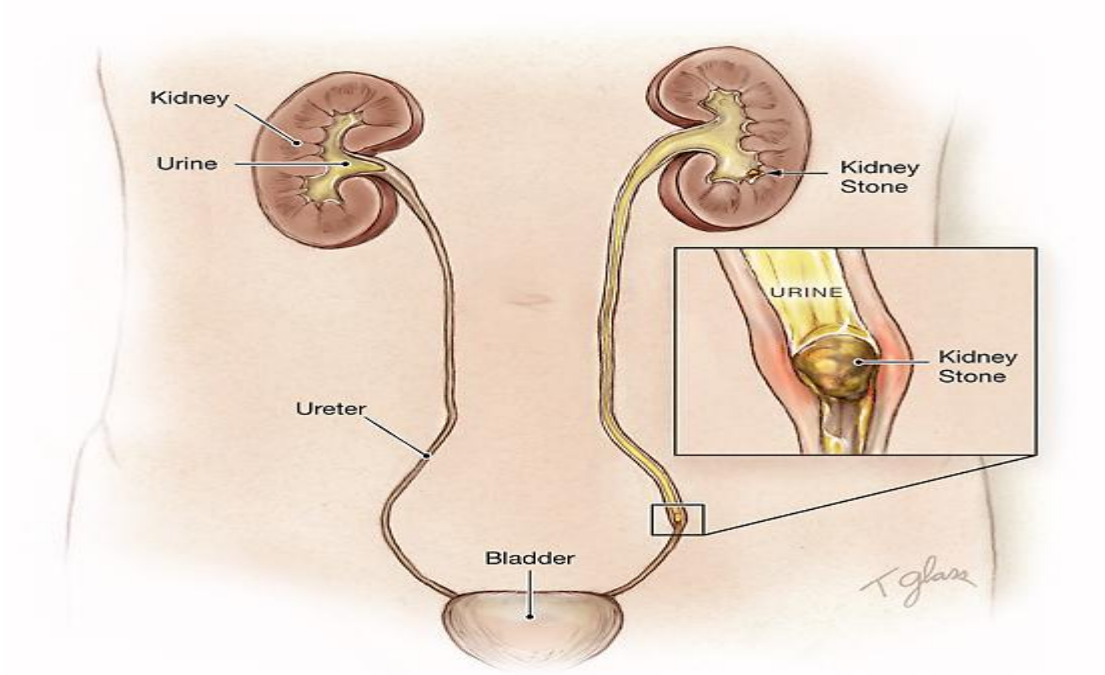
Kidney Stones

Kidney stones result from the **precipitation** (crystallization of previously dissolved particles) of certain substances within the urine. These stones form in the kidney and subsequently travel through the **ureter** (the tube that conducts urine from the kidney to the bladder) and are eliminated through the urine if they are small. In some cases, the stone may not be able to travel through the ureter, causing pain and possibly causing an obstruction, blocking the flow of urine out of the kidney.

Kidney stones can be caused by a large number of factors, such as:

1. Infection
2. Certain diets,
3. Medications,
4. Conditions that result in an increased concentration of calcium or other substances, including oxalate and uric acid, in the urine.
5. The composition of the stone depends on the cause, but the most common type of stone contains calcium.



Signs and symptoms

Many kidney stones don't move and are too small to cause any symptoms. However, if a kidney stone causes a blockage, or moves into the ureter, it may cause some of the following symptoms:

1. Severe pain or aching in the back on one or both sides.
2. Bloody, cloudy or smelly urine.
3. Feeling or being sick.
4. A frequent urge to urinate, or a burning sensation during urination.
5. Fever and chills.

Risk Factors

1. Men are more prone than women, and around half of all people who have previously had a kidney stone will develop another one within five years. The chance for incidence is 1 from 20 person.

Other risk factors include:

2. Family history.
3. Being aged between 20 and 40.
4. Taking certain medicines such as diuretics (water tablets), antacids and thyroid medications.
5. Having only one kidney, or an abnormally shaped kidney.
6. Eating a diet high in protein.
7. Being regularly dehydrated.
8. Having very poor mobility (e.g. being confined to bed).
9. Having a disease of the small intestine or a small intestinal bypass.

Treatment

- Initial treatment includes pain medication and oral or intravenous fluid to help the stone pass through the urine.
- **Extracorporeal shock wave lithotripsy** is a procedure that uses shock waves to break up the stone without the need for surgery.
- Surgery may be necessary if the stone is very large and if there is blockage of the affected kidney or infection.
- Depending on the cause of your kidney stone, your doctor may prescribe medication or suggest dietary changes to prevent a recurrence.

Complications

1- Kidney stone may lead to injury in the urinary tract.
2- It may cause infection in the urinary tract.
3- Kidney stone may lead to bleeding from the urinary tract.
4- The most complication that a kidney stone may cause is renal failure.

References

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