



Condition Spotlight

Kidney and Ureteral Stones

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Kidney stones are hard, rock like substances that form in the kidneys. The most common types of kidney stones are calcium oxalate, calcium phosphate and uric acid stones. These stones form by the precipitation of concentrated amounts of minerals/

elements (calcium, oxalate, phosphate, uric acid, etc.) found in the urine. The key to preventing kidney stones is drinking lots of water to keep the urine dilute and not allow the minerals and elements to precipitate.

The majority of kidney stones found inside of the kidneys do not cause pain or symptoms. However, once the stones “fall out of the kidney” and enter the ureter, severe pain and blood in the urine may develop. The risk of a kidney stone “falling” out of a kidney and entering the ureter is about 50 percent over a five year period. The pain from a stone in the ureter (now a ureteral stone) occurs from the stone blocking the drainage of urine from the kidney to the bladder. This pain can be incredibly severe and is often associated with nausea and vomiting.

A variety of imaging techniques can be used to diagnosis kidney stones, but a non-contrast CT scan is the single best test available today. It is generally believed that it takes at least three months for a patient to form a kidney stone.

Once a kidney stone falls into the ureter and becomes a ureteral stone there are a variety of treatment options available. First, hopefully the patient can pass the stone on his/her own. There are some alpha-blocker medications available that have been shown to increase a patient’s chances of passing a ureteral stone. The two most common surgical procedures that may be needed to break up a stone that fails to pass are shockwave lithotripsy and ureteroscopy with laser lithotripsy. Shockwave lithotripsy (ESWL) is the administration of focused energy waves through the body onto the stone in order to break it up.

Ureteroscopy with laser lithotripsy involves a urologist inserting a scope up the urinary system to the level of the stone and then using a laser to break it. Both surgeries are most commonly performed in an outpatient setting with quick recovery times. These surgeries, as well as other types of procedures, can also be used to treat kidney stones that are still in the organ, before they have a chance to fall into the ureter and cause greater problems.

Frequently with surgery to treat kidney/ureteral stones, a ureteral stent may be placed. This is a soft plastic tube that runs from the kidney, down the ureter and into the bladder. The purpose of the stent is to keep the flow of urine draining from the kidney to the bladder. Ureteral stents are only temporary and need to be removed or exchanged after a certain amount of time.

Learn more about the identification and treatment of kidney and ureteral stones at www.tucc.com.