

Percutaneous Nephrolithotomy (PCNL)

What is Percutaneous Nephrolithotomy?

This is a procedure that is performed for the removal of large kidney stones that will not be adequately treated by other less invasive techniques. The procedure involves placing a small needle through the back into the kidney. This hole is then enlarged to about the size of a dime. A telescope is then placed through this hole into the kidney and a variety of instruments can be used to remove kidney stones.

What is the purpose of Percutaneous Nephrolithotomy?

Occasionally stones are too large to be treated with other less invasive techniques. This surgery allows for a more complete removal of larger kidney. The hope is to minimize the number of surgeries required to completely treat the stones.

What are the complications of Percutaneous Nephrolithotomy?

There is discomfort associated with the procedure that tends to be focused on the side of the surgery or in the abdomen. This pain tends to be temporary and easily controlled with IV or oral pain medications. There is a risk of a bladder or kidney infection associated with the procedure. Certain patients may also be at a higher risk of a blood infection that can be severe. While the procedure is effective at removing larger kidney stones there is a chance that small fragments maybe left in the kidney that could require other surgeries. There is about a five percent chance that patients will need a blood transfusion after the surgery. It is common to see blood in the urine for several days following the surgery.

What is the normal postoperative course?

After patients wake up from their procedure they will have a variety of tubes, usually there is a plastic tube that drains the urine from the bladder called a catheter. There may or may not be a plastic tube draining directly from the kidney called a nephrostomy tube. Patients are admitted to the hospital for pain control and close observation. A CT scan is usually done the day following surgery to determine if there are any leftover pieces of kidney stone.

Prior to the patient leaving the hospital most of the external tubes will be removed. Occasionally there will be a plastic tube inside your body that travels between the kidney and the bladder called a "stent." This stent can be comfortably removed in a clinic procedure in one to three weeks. Depending on if and how much kidney stone may be left additional surgeries may be planned that are usually shorter and less involved than the initial surgery.