



COMMON INFORMATION ABOUT KIDNEY STONES



Patient Information

1. One can develop stones in either the kidney or the ureter (kidney pipe) or both
2. This can be an extremely painful experience
3. Typical symptoms: colicky type flank pain and blood in the urine
4. After assessment in the rooms or ER, you will have a CT scan to assess stone position and size
5. Small stones in the distal ureter (close to the bladder) are often given 24-48 hrs to pass spontaneously. You will receive medication to help you pass the stone and strong pain medication. The chance of spontaneous passage is less than 70% if a stone is smaller than 4mm. There is unfortunately no guarantee on how long this can take to pass. If you have had symptoms for a few days and the stone is still present on CT scan, the stone is likely to be stuck and might need surgical treatment.
6. Bigger stones and stones closer to the kidney are less likely to pass and might need early surgical treatment
7. Surgical treatment depends on stone size and position
8. Surgery is often via endoscopic, means a camera is placed through the bladder and then up the kidney pipe under general anaesthetic
9. **JJ-stent** is a small tube placed between the kidney and the bladder to relieve any obstruction and to widen the ureter for future endoscopic procedures. A JJ-stent causes a lot of discomfort. You will have a persistent urge to pass urine. When you do pass urine, you will have urine refluxing up the ureter on the side of the stent causing a sharp pain in the flank. You will also have blood in your urine intermittently. After placement of a JJ-stent, the ureter might be dilated sufficiently for a second procedure after 5-7 days. In some cases, we might wait longer – up to 2-4 weeks. You will struggle to work with a JJ-stent if you do anything more than office work. The more you move around the more discomfort you will have.
10. **ESWL** = shock waves from outside fragmenting the stones. This is the least invasive form of stone treatment. It is not particularly painful. ESWL does require JJ-stenting and endoscopic inspection to confirm clearance of all fragments in most cases.
11. **Laser Lithotripsy** = breaking larger stones with a laser so fragments can be extracted
12. **Small stone in the distal ureter** = If these stones do not pass early, we treat them surgically. If the ureter is accessible, we will go up with a rigid scope and extract the stone with a basket. If the ureter is not accessible due to swelling or a small ureteric opening, we will place a JJ-stent first and go back a week later to extract the stone
13. **Larger stones or stones closer to the kidney** = The ureter is a small, thin tube with high risk of injury if a rigid metal scope is passed in an unprepared ureter. In these cases, we place a JJ-stent first to dilate the ureter and relieve any obstruction. This makes any follow up procedure much safer. The stone will then be fragmented with a laser and extracted with a basket at a follow up procedure
14. **Stones in the kidney** = These stones can be fragmented with ESWL at the first procedure. A JJ-stent will be placed to prevent any obstruction of the ureter due to stone fragments. The ureter and kidney will be inspected with a scope a week or two later after removal of the stent and any residual fragment will then be removed. If ESWL is not done, a JJ-stent will be placed and laser lithotripsy and fragment extraction will be done at a second procedure by means of a flexible scope placed via an access sheath

15. **Very large stones (bigger than 1.5xm) in the kidney** = These need to be treated via a percutaneous procedure which more invasive and will be discussed in full
16. You can experience pain after any of the above-mentioned forms of stone surgery. The JJ-stent can cause a lot of pain and discomfort as discussed. If a rigid scope is passed up the ureter or an access sheath is placed, you can experience ureteric spasm which can be very painful – this is most common during the first 48-72 hours after surgery. The kidney can also swell due to the irrigation fluid during endoscopic procedures and will also cause pain.
17. Therefore you will often be kept overnight after your stone procedure for pain relief and to make you as comfortable as possible
18. A JJ-stent on wires is often placed after stone surgery to prevent any obstruction due to bleeding, swelling at site of stone impaction or small stone fragments. The stent can be removed by pulling on the wires that will be visible outside the urethral opening. These stents are often only left in place for 3-5 days
19. Stone fragments will be sent to the lab to analysis to evaluate the type of stone that you have
20. In cased of large or multiple stones, swelling, infection or any narrowing at any point on the ureter, **you will unfortunately always need multiple procedures to get you stone-free**

Good luck on your journey.