

Rather, we encourage exercise to speed up the passage of crushed stones, except when treating small children.

Q) Is there any pain during the treatment?

A) Some sensitive patients have to be administered analgesic injections prior to treatment. However, most patients do not require any analgesia or sedation. The treatment itself causes very little pain. No anesthesia is generally required during Lithotripsy with most modern machines.

Q) Does the patient remember anything about the procedure or know what is going on during the treatment?

A) The patient is fully conscious and is able to see and hear everything during the treatment.

Q) What happens to the stone after the treatment?

A) Stone fragments usually begin to pass within 24 hours of treatment. However, some patients may not pass fragments until 4006 weeks after treatment. For larger stones, the procedure might have to be repeated after 10 to 15 days. The stone particles passed out are then sent to the lab for analysis to find out the composition of the stone. This information can be use to help plan a diet programme for the patient to prevent any recurrence of stones.

Q) What do you advise for the long-term prevention of kidney stones?

A) The patient is advised to collect the stone particles passed out in urine after Lithotripsy and to get chemical analysis done for the composition of the stones. Advice regarding the dietary regimen to prevent recurrence is given to the patient.

Q) If I have any questions about my ESWL treatment whom can I call?

A) We at The Kidney Centre Karachi would be happy to answer any of your questions. You can call at (21) 5661000 or email: mail@kidneycentre.com



LITHOTRIPSY

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LITHOTRIPSY

Lithotripsy or ESWL (Extra Corporeal Shock Wave Lithotripsy) is the process of breaking stones inside the patient's body through the use of shock waves. Shock waves are produced by a sophisticated machine called a Lithotripter and used for the treatment of kidney stones. The shock waves thus produced are focused on the kidney stone inside the patient's body, with the help of ultrasound. The shock waves break the stone into fine sand-like particles, which are then passed out in urine. These shock waves are harmless to the human body.

DIAGNOSIS

Generally patients report experiencing severe pain (Renal Colic) in their back that leads a doctor to suspect a kidney stone. X-ray and/or Ultrasonographic examination confirms the presence and the location of the stone. The (VP (Intro Venous Pyelography), or a new modality called CT Pyelogram, gives valuable and important information about the anatomy and the function of the kidney. The urologist will suggest lithotripsy as treatment for the kidney stone only after examining the patient and reviewing all the medical reports. Before the treatment is scheduled, tell your doctor about any medicines you have been taking. You may be asked to stop taking aspirin, ibuprofen, coumadin, and any other drugs that could interfere with blood clotting several days before.

PROCEDURE

You will usually be asked have a light meal or drink water as per need every couple of hours before the treatment. You should again inform the doctor about any medicine you are taking regularly. Females should tell their doctor if they are pregnant, as lithotripsy must not be performed during pregnancy. You will be asked to wear a medical gown and lie down on a treatment bed. Since lithotripsy can cause mild discomfort, you will be given a mild sedative or painkiller before the procedure starts. The doctor will use ultrasound images to locate the stones. High-energy shock waves, also called sound waves, pass through your body on to the kidney stones. You may feel a tapping sensation when this starts. The waves break the stones into tiny pieces. Patients are advised to collect the stone particles passed out by filtering the urine in a strainer and report for a follow-up after 7 to 10 days with a fresh X-ray film. Larger or harder stones may require more than one session of treatment.

COMPLICATIONS

- **Haematuria** (blood in urine): This is only minor in nature and improves within 1 to 2 days and generally does not require any special treatment.
- **Steinstrasse**: The broken stone particles line up in the lower ureter and cause obstruction and colic. To avoid this, a 'Double J' or 'Pigtail' stent may be used for patients having slightly larger sized stones.
- **Peri renal hematoma**: This is a rare, but nevertheless, known complication of ESWL. The patient has severe pain and Haemoglobin levels may fall rapidly. Generally, conservative management is required, but sometimes blood transfusion and rarely more aggressive treatments may be indicated.

PRECAUTIONS FOR ESWL TREATMENT:

- **Pregnant Women**: ESWL should be absolutely avoided by females coming for the treatment of kidney stones while they are pregnant, as not enough data is available in order to foresee the effects of shock waves on the fetus and ovaries. However it does not affect fertility or future pregnancies at all. Lactating mothers can also get ESWL therapy without any effect on the child.
- **Bleeding Disorders**: This needs to be adequately treated before ESWL.
- **Urinary Tract Infection**: In case of infection, it is vigorously treated with suitable antibiotics before ESWL.
- **Obstruction Distal To The Stone**: Obstruction in the urinary tract needs to be treated before ESWL.
- **Children**: Children can be safely treated with ESWL but should have their lungs shielded by styrofoam padding for protection.
- **Severe Orthopedic Deformities**: Orthopedic abnormalities limiting this condition cannot be treated due to difficulty in positioning of the patient.

ADVANTAGES

- **Not Invasive Procedure**: Since the shock waves are applied to the body from the outside, it is preferable to operative procedures and also acceptable from a cosmetic point of view, as surgery leaves scars whereas ESWL does not.
- **Safe. No Adverse Effects Reported Worldwide**: Many studies have been conducted to monitor patients for long time side effects, but no significant side effects have been proven as yet.

- **Outdoor Procedure. No Hospital Stay Required**: The patient can go home after 4-5 hours and no admission is generally required. However in some cases the patient may be kept under observation.
- **No Pain**: Pain varies from patient to patient. When using modern machines, there is a very slight amount of pain that can easily be controlled with oral painkillers.
- **No Convalescence Period**: The patient does not have to stay away from work for any bed rest.
- **No Bloodloss, Hence No Transfusions**.

DISADVANTAGES

- **Clearance Of Crushed Stone Particles**: The excretion of the crushed stone particles is dependent upon the urine pressure. Hence, the time taken for complete stone clearance varies from person to person depending upon the fluid intake and the kidney functions.
- **Multiple Treatments May Be Required**: Some harder or larger stones will require multiple treatment sessions.

FAQ

Q) Can all kidney stones be treated with ESWL?

No. Depending upon the medical report, it is your urologist who will be able to decide and recommend the need for ESWL treatment. In general, ESWL is the 'Treatment of Choice' for small to medium (less than 2.0 cms diameter) renal stones of any shape and composition.

Q) How long does each treatment take?

A) The actual treatment takes around 45 to 60 minutes.

Q) How long do I have to stay at the hospital and when can I go back to work?

A) Most patients are discharged after 4-5 hours and can return to work the very next day. It is an outdoor procedure and no admission or prolonged rest is required.