



## Procedure Information

### Extracorporeal Shock Wave Lithotripsy ( ESWL)

#### Introduction

Extracorporeal shock wave lithotripsy (ESWL) is one of the treatment modalities for urinary stone disease. ESWL machine would generate shock wave and transmitted through the skin. The energy would focus at and fragment the stone. The stone fragments will pass out with urine. The success of ESWL depended on characteristics of stone (size, hardness, site, duration, degree of obstruction) and body habitus.

Shock wave lithotripsy is one of the treatment options for renal calculi and ureteric calculi. Other options include medical expulsive therapy, percutaneous nephrolithotripsy, ureteroscopic lithotripsy, and open or laparoscopic surgery. Additional procedures may be needed, including insertion and removal of ureteric stent.

#### Outcomes

Through this procedure, the shockwaves (a high-energy pressure wave) are targeted at and break the stone into sand-like particles to pass naturally.

#### Procedures

1. This procedure would be performed under intravenous sedation or monitor anaesthetic care;
2. You are required to lie prone or supine;
3. Shock wave generator will be positioned according to stone location;
4. Stone was located and target by X- ray or ultrasound;
5. During the procedure, you would be closely monitored. You may experience pain and analgesic will be given;
6. The procedure takes approximately one hour.

#### Possible Risks and Complications

1. Haematuria, renal colic (common)
2. Mild bruising over the skin
3. Urinary tract infection
4. Injury to the urinary system including rupture and hematoma of the kidney that requiring blood transfusion (<1%). In rare situation of severe bleeding, radiological or surgical intervention may be needed
5. In case of failed stone fragmentation and persistent ureteric obstruction by stone fragments, patient may need repeated procedures and additional procedures
6. Residual stones and stone recurrence
7. Injury to adjacent organs (rare)
8. Mortality (rare)

\*\* The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all procedures are carried out with utmost professionalism and care this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

## **Pre-procedure Preparations**

1. The procedures and possible complications will be explained by the doctor and a consent form must be signed prior to the procedure.
2. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia. Please inform doctor if you are taking medications that affect blood coagulation, such as Aspirin, Warfarin, Xarelto or Pradaxa and Chinese medication.
3. You are required to have physical examination, blood tests, X-ray tests and electrocardiogram if needed. If any abnormality is indicated, you will be arranged to visit the specialist(s) before the procedure.
4. If you are pregnant, please inform doctor.
5. No food or drink six hours before the procedure.
6. You may be given intravenous infusion or medications before the procedure.

## **Post-procedure Instructions**

1. There may be some bruising around the treatment site.
2. Blood stained urine, mild pain between loin and abdomen is common within one week after surgery. They will gradually subside after one or two weeks.
3. You are encouraged to drink 2 – 3 liters of water daily (if not contraindicated) over the next few days for passing stone fragments.

## **Advices on Discharge**

1. Frequency, urgency in urination or slight hematuria is common after procedure.
2. You are allowed to walk or climb stairs, but to avoid straining or heavy lifting.
3. Try to drink 2 – 3 liters of water daily (if not contraindicated).
4. Stone formation may be prevented by a well-balanced diet on high fiber, low salt, low fat and low sugar.
5. Please comply with the medication regimen as prescribed by your doctor.
6. Please consult the doctor before resuming pre-procedure medications, e.g. Aspirin or Warfarin.
7. Please attend the specialist clinic as arranged for follow-up after the procedure.
8. Immediately consult your doctor or return to hospital for professional attention in the event of high fever over 38°C or 100°F, rigor, chill, difficulty to passing urine, massive bleeding or abnormal conditions.

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

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Compiled by Union Hospital Operating Theatre (OT) Governance Committee

The above information is for reference only, please enquire your physician for details  
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