

Procedure Information Sheet- Extracorporeal Shock Wave Lithotripsy (ESWL)

1. Introduction

- 1.1. Extracorporeal shock wave lithotripsy (ESWL) is an operation using shock wave from a stone breaker to crush stones into small fragments, in which shock wave is transmitted and focused in the stones through the contact of the stone breaker with skin. Additional procedures may be needed, including insertion and removal of a ureteric stent. Stone fragments will naturally pass with urine.

2. Indications

- 2.1. Renal calculi and ureteric calculi.

3. The procedure

- 3.1. General the procedure under Monitor Anaesthetic Care or Intravenous Sedation.
- 3.2. Patient is required to lie on the Examination bed.
- 3.3. A small shock wave generator will put on the skin of lumbar or abdominal region of patient.
- 3.4. Patient is required to have X-ray for localization of stones. IV contrast maybe need for stone location.
- 3.5. The procedure takes approximately one hour.

4. Possible risks or complications

- 4.1. Haematuria, painful and difficult urination and renal colic (common).
- 4.2. Injury to the urinary system including rupture and hematoma of the kidney(s) that requiring blood transfusion (<1%), radiological or surgical intervention and nephrectomy.
- 4.3. Failed stone fragmentation and ureteric obstruction due to stone fragments requiring repeating procedures and ancillary procedures.
- 4.4. Arrhythmia, radiation hazard, side effects of sedative and medications.
- 4.5. Injury to adjacent organs including lung, liver, pancreas, spleen and bowel, and organs of lung and pelvic cavity, skin and soft tissues.
- 4.6. Infection of urinary tract and kidney, septicemia.
- 4.7. Residual stones and stone recurrence.
- 4.8. Loss of renal function, and renal failure.
- 4.9. Mortality (rare).

This list is not exhaustive and rare complications cannot be listed.

5. Preparation before the procedure

- 5.1. Patient will be asked not to eat or drink for 6-8 hours (or instructed by Doctor) before operation.
- 5.2. Your doctor will tell you whether you should continue your regular medications during the fasting period or may give you other instructions.
- 5.3. Inform your doctor if you are pregnant.
- 5.4. Inform your doctor of any medical condition (for example diabetes, heart diseases, high blood pressure, etc.) and any medications you are currently taking.
- 5.5. Some drugs including blood thinners & aspirin may need to stop before operation.

6. After the procedure

- 6.1. Painful, haematuria and difficult urination and renal colic (common).
- 6.2. There may be some bruising around the treatment site.
- 6.3. Blood stained urine, painful urination, mild pain between lumbar region and inferior abdomen are common within one week after surgery. They will gradually subside after one or two weeks.

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6.4. Patient is encouraged to drink plenty of water over the next few days for passing stone fragments through urinary tract. In some cases, there will be mild pain or various severities of haematuria during urination.

7. **Remark**

7.1. The above mentioned procedural information is by no means exhaustive, other unforeseen complications may occur in special patient groups or different individual. Please contact your physician for further enquiry.

8. **References**

8.1. Hospital Authority(Smart Patient Website). Retrieved from:

<http://www21.ha.org.hk/smartpatient/SPW/en-US/Self-Care-Tips/OTP/List/?guid=3de5a30d-89a9-42c4-a1da-2a61d9aeb287>