



## EXTRA-CORPOREAL SHOCK WAVE [ESWL] LITHOTRIPSY

Undertaken at the Bristol Urological Institute, Southmead Hospital.

### What is ESWL?

Stones that form in your kidneys or ureters (tubes leading from kidneys to your bladder) can be broken up without the need for surgery using a technique called extracorporeal shockwave lithotripsy (ESWL). ESWL uses vibrations that are transmitted into the body and directed on to the stone to break it into small fragments.

### What are the benefits of ESWL?

- It is effective on most kidney and ureter stones and the fragments can be passed out in the urine over the following days and weeks.
- It has a high success rate.
- It is less invasive than many other ways of removing stones from the urinary system.
- It has a low complication rate and involves a short hospital stay - usually a few hours.
- It reduces the need for taking time off work.
- The risk of damage to the urinary system/body tissues may be reduced compared to surgical removal.

### What are the risks of ESWL?

- Bruising in or around the kidney.
- Haematuria (blood in urine) happens in most patients following ESWL for approximately three days. If it carries on for longer than this, please contact your GP.
- Obstruction of your ureter.
- Pain often described, as a “dull ache” is common following the procedure. You will be given painkillers to control this. If these do not control your pain, you should contact your GP or attend your local A&E department.
- Infection of your kidney can happen but is rare.

### Are there any alternative treatments available?

The alternative options would be stone removal under general anaesthesia by one of the following techniques: -

- Endoscopic extraction – through a narrow tube, with a fibre optic telescope for guidance, which is passed up the urinary tract from below and through which small instruments can be passed to disintegrate the stone before flushing out the fragments.
- By a “key hole” surgery technique.

For some patients, there may be no alternative to ESWL other than to monitor your condition with outpatient consultations and X-rays.

### What will happen if I don't have any treatment?

In some cases if you have had no ill effect from your stone and this could continue to be the case after its discovery.

More often, however, you do run the risk of pain, bleeding and/or infection and, in some cases, the urinary tract may become blocked by the stone at some point in the future.

### The treatment session

- Medication List: Please bring in the list of your current medication.

- Urinary Tract Infections: If you have had urinary tract infection; please attend your doctor's surgery approximately five days prior to the treatment date for a urine test and obtain antibiotics (if necessary).
- Gas in the bowels: It would be useful to have clear bowels to enable the easier identification of the stone. Please obtain mild laxative from your local pharmacy for two days prior to the treatment. Please ask your doctor's advice if you suffer from bowel conditions.
- Your ESWL will be carried out in the purpose built Lithotripsy Unit at Southmead Hospital, Bristol situated at Gate 36 on Level 1 in the new Brunel Building
- You will be asked to lie on a special couch with water used to enable better contact for the vibrations onto your back; and the stone will be localised using either ultrasound or x-rays so that the vibrations can be focused on it.
- Approximately 3000 vibrations are then given over a period of about 30 minutes.
- The lithotripter machine is noisy in generating the vibrations. Even so some patients listen to music and some sleep.
- The sensation felt by the patient varies widely from "just feeling it" through "discomfort" to "pain" – the vast majority being in the middle group.
- You will be offered painkillers to control pain. (anti-inflammatory suppository & tablets).
- Some patients maybe offered further treatment with stronger pain relief which maybe sedative.

Please arrange for a friend or relative to collect you from the unit.

#### Limitations

- Upper weight limit for the lithotripter machine is 220 kilograms.
- Uncontrolled high blood pressure will need to be treated by your GP before Lithotripsy can take place. Please contact us if your blood pressure is higher than 160 systolic (upper reading) or more than 100 diastolic (lower reading)
- If you are on anticoagulation therapy (e.g. Warfarin), please discuss this Mr. Philip, as this maybe a contraindication to having Lithotripsy.
- **If you take regular Warfarin, Aspirin (if taking more than 75mg), Clopidogrel, Dipyridamole, Dabigatran, Rivaroxaban or Apixaban.); or maybe/are pregnant-- shock wave lithotripsy may not be advisable.**
- If you have a pacemaker, please inform Mr. Philip. This will not prevent you having Lithotripsy but we may have to arrange to have a pacing technician present on the day.

#### After discharge

- Please make sure you drink plenty. Drink at least 5 pints (3 litres) every day. It is a good idea to take a glass of water with you when you go to bed as this helps to reduce the concentration of your urine overnight.
- Pain killers will be given in your take home medication pack to be taken as required. If these do not control your pain, you should contact your Mr. Philip through the BUA, GP or attend your local A&E department.
- Occasionally there is a small red mark or bruise on the skin.
- Be as active as your general health allows, as this helps to shift any remnants of stone gravel; swimming is a highly recommended form of exercise.
- You may see blood in your urine for a few days following the treatment. If this continues, contact your GP to rule out urinary infection.
- If you experience any high temperature, shivering or vomiting, please contact Mr. Philip through the BUA/ GP as soon as possible or attend A&E.
- Please sieve all urine passed for two weeks with a 'tea strainer' that can be bought from most super markets. Please bring any stone fragments passed with you on your clinic visit. The doctor may send the fragments to the laboratory for analysis.

#### Follow up

You will be asked to attend either for further treatment; or for a follow up x-ray or ultrasound scan to check if all the fragments have been passed.