Extracorporeal Shock Wave Lithotripsy (ESWL)

Urology Treatment
Day Surgery Unit
Northern Lincolnshire & Goole Hospitals NHS Foundation Trust

This leaflet has been designed to give you important information about your condition / procedure, and to answer some common queries that you may have.
What is ESWL?
ESWL (Extracorporeal shockwave lithotripsy) is a procedure used to break down kidney stones.
It uses high-energy shockwaves to break down kidney stones into crystals small enough to be passed out into your urine.

How do I prepare for admission?
There is no preparation required except stopping medications such as warfarin, aspirin, and clopidogrel.

If you normally take any medication (e.g., blood pressure tablets) continue to take these as normal unless your doctor specifically tells you otherwise.

If you are taking clopidogrel, aspirin, or warfarin please contact the day surgery unit at least 10 days prior to the procedure.

If you are unsure about your medication, contact the hospital for advice.

Lithotripsy is routinely done as an outpatient or day case procedure, without the need for anesthesia. This means you will be awake for the procedure and can go home on the same day. You can be offered a sedative to relieve anxiety and help you to relax and painkillers in the form of tablets or suppository.

You can drink fluids as normal on the day of your procedure, however; you will need to go without food for 4 hours prior to your procedure.

What happens on admission?
At the hospital, you will have your heart rate and blood pressure checked and your urine tested.

Your doctor or radiographer will discuss with you what will happen before, during and after the procedure and any pain you may have. This will help you to be informed so that you can give your consent for the procedure to go ahead which you will be asked to do by signing a consent form.

What happens during ESWL?
Lithotripsy takes about 30 to 60 minutes. Usually only one kidney is treated per session.

You will be asked to lie down on a couch. An ultrasound is used to pinpoint the exact position of the kidney stone(s). The doctor will spread gel onto your skin to allow good contact with the lithotripter sensor. The sensor focuses the shockwaves precisely onto each stone. The intensity of the shockwaves is increased gradually. It is important that you should try not to make any movements during the treatment otherwise the kidney stone may move out of focus.

The shockwaves can cause some discomfort or pain in your kidneys and in the skin on your back during the procedure.

What happens after ESWL?
You will need pain relief to help with any discomfort. Your doctor will usually prescribe strong painkillers for the first 48 hours and he/she may also give you antibiotics to reduce the risk of infection.

You will be given a date for a follow up appointment and you will be asked to pass urine before you go home. Sedation temporarily affects your co-ordination and reasoning skills therefore you must not drive, drink alcohol, operate machinery or sign legal documents for 24 hours after.
Take the painkillers as directed by your doctor. It is sensible to take it easy for the rest of the day. Most people feel able to resume normal activities within a couple of days.

Drink plenty of clear fluids to help flush the kidney stone fragments out of your urinary system.

Contact your GP if you develop any of the following symptoms as you may have developed a urinary tract infection (UTI):

- Severe pain or pain that lasts more than 48 hours
- High temperature
- Worsening burning sensation on passing urine and / or smelly urine
- Inability to pass urine
- Worsening blood-staining in your urine

What are the benefits of ESWL?

- This is a non-invasive treatment to break down the kidney stones
- It is done as a day case procedure and usually does not require anaesthesia
- It is a well tolerated and effective treatment for many types of kidney stone
- It has minimum side effects
- The treatment can be repeated if required without additional risks

What are the risks & complications of ESWL?

ESWL are commonly performed and generally safe however, in order to make an informed decision and give your consent, you need to be aware of the possible side-effects and the risk of complications of this procedure.

The following are the unwanted but mostly temporary effects of a successful treatment:

- Pain and discomfort
- Some blood and fragments of stone in urine for two or three days
- Bruising or blistering of the skin of your tummy or groin

Your technician will be experienced at performing lithotripsy however there is a chance it may not be successfully completed and you may need to be treated again with further ESWL or with a different method.

Specific complications are uncommon, but include:

- Infection-you may need antibiotics to treat this
- Blockage of ureters-you may need surgery to unblock the tubes
- Kidney damage- this can be permanent and affect your kidney function and blood pressure (this is very rare)

Please be aware that:

- The treatment may not be effective for all types of stone
- You may need multiple treatments
- It is contradicted if you are pregnant, have aortic aneurism, have an acute uncontrolled urinary tract infection and are taking anticoagulants like warfarin (please remember if you are taking warfarin to ensure that you contact the day surgery unit at least 10 days prior to the procedure)
We would like you to consult your cardiologist if you have a cardiac pacemaker before we offer your ESWL. The exact risks are specific to you and differ for each person.

What are the alternatives?

Depending on the size density and position of the kidney stones, you may be offered an alternate treatment:

- Medical expulsive therapy (MET) your doctor may give you medicines to help the stone pass out in your urine.
- Ureteroscopy- if a stone is lodged in your ureter, your surgeon will use a long, fine, flexible instrument called an ureteroscope to remove it. This procedure is usually done under general anaesthesia and a laser may be used to break up the stone before flushing it out. Sometimes a stent is left in the ureter to stop further blockage.
- Percutaneous nephrolithotomy (PCNL) – if a stone is large or in an awkward place, your surgeon will pass a fine instrument through your back into the kidney to remove the stone. This procedure is usually done under general anaesthesia.
- Open or laparoscopic surgery for kidney stones. This is very rarely required nowadays.

References

Reference sources used in the compilation of this leaflet

Bupa - Information published by Bupa’s health information team, January 2011:

http://www.bupa.co.uk/individuals/health-information/directory/e/eswl

If you have any queries/concerns after your procedure you should contact the Day Surgery Unit:

For Diana, Princess of Wales Hospital
01472 302443 8am to 8pm Monday to Friday.

For Scunthorpe General Hospital
01724 290195 8am to 8pm Monday to Friday.

For Goole & District Hospital
01724 290040 8am to 8pm Monday to Friday.

Out of hours please contact your GP.

Concerns and Queries

If you have any concerns / queries about any of the services offered by the Trust, in the first instance, please speak to the person providing your care.

For Diana, Princess of Wales Hospital
Alternatively you can contact the Patient Advice and Liaison Service (PALS) on (01472) 875403 or at the PALS office which is situated near the main entrance.

For Scunthorpe General Hospital
Alternatively you can contact the Patient Advice and Liaison Service (PALS) on (01724) 290132 or at the PALS office which is situated on C Floor.

Alternatively you can email: nlg-tr.PALS@nhs.net
Information for Patients & Visitors

Northern Lincolnshire and Goole Hospitals NHS Foundation Trust

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