



Extracorporeal Shockwave Lithotripsy.

This is a method of using externally generated sound waves to cause kidney stones to break up and then be passed in sand grain sized particles through the normal passages.

The shock wave is generated by a machine using a "spark plug" which is rather like that in a car only larger. When the plug is fired it causes a shock wave to develop which passes through the soft tissues of the body and is focussed on the stone. The shock wave is not an electric shock but is a high speed sound wave. It is similar in effect to the "sonic boom" of aircraft flying faster than the speed of sound.

The focussing is carried out by means of x-ray or ultrasound control and the machine is aimed at the stone rather like using a gun sight.

Procedure

Generally speaking the lithotripter is quite noisy and can be uncomfortable for the patients and make them move and as a result the shock wave may no longer be focused on the stone and so the procedure is usually carried out under either:

- Sedation
- General anaesthesia or
- Epidural or spinal anaesthesia with sedation

Because the machine is noisy ear muffs are placed over the patient although it has not been demonstrated to cause any damage to hearing.

Generally speaking the patient will have an intravenous drip inserted during the time of the procedure to enable medications and fluids to be given to the patient.

Post Procedure

Occasionally there is some discomfort and there may even be severe pain in passing the stone fragments. The patient will be supplied with a prescription for pain relieving medication which may be in tablet or suppository form (inserted up the back passage).

It is important that the recommended dose of pain relieving medications is not exceeded without first contacting the Doctor.

Generally speaking the suppositories (usually Indomethacin 100mg) are most effective in relieving pain. They usually take approximately 30 minutes to work which is about the same duration as an injection would take. They have been shown in clinical trials to be more effective than injections in relieving pain of that type.

It is important to try and catch any fragments of stone which are passed in order that they may subsequently be analysed to find out their composition. This can be done by straining the urine through panty-hose material. The Doctor may then be able to advise the patient with regard to management to reduce the likelihood of further stone formation.

The patient will be informed of the success of the procedure prior to discharge.

If the patient has had sedation or anaesthetic he or she should not drive or operate any form of machinery or make legal decisions within 48 hours of the anaesthetic.

Referring Doctor

The referring Doctor or General Practitioner will receive a report on the procedure, recommended treatment and follow-up within 24-48 hours after the procedure. A friend or relative is welcome to be present at that discussion also.

Follow up

An appointment will be given to the patient for a follow-up at the Urologist's surgery which is generally 3 or 4 weeks after the procedure.

The patient will be given a form to have an X-ray or Ultrasound taken prior to the follow-up attendance at the clinic in order to assess progress of stone passage. The films and report should be brought with the patient to the consultation.

Guidelines

URAL OR CITRAVESCENT MUST NOT BE TAKEN IF A STENT HAS BEEN INSERTED UNLESS SPECIFICALLY ORDERED BY THE DOCTOR AS THESE MEDICATIONS INCREASE THE LIKELIHOOD OF FORMING STONES ON STENTS OR OTHER FOREIGN MATERIALS WITHIN THE URINARY TRACT.

Any unrelieved post-operative pain and any evidence of a fever (temperature greater than 38°C) or any untoward effects which the patient may attribute to the procedure, should be notified immediately.