

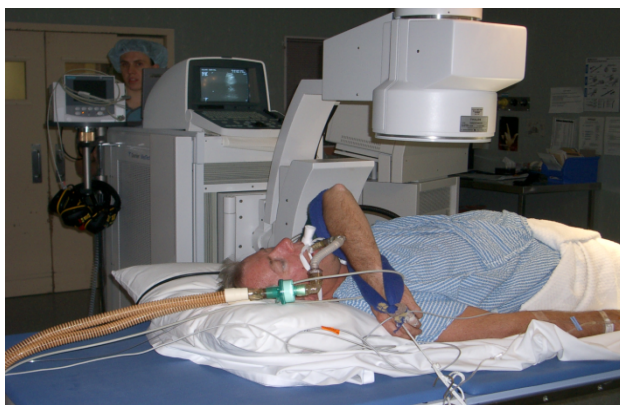
Extracorporeal shock wave lithotripsy

Extracorporeal shock wave lithotripsy (ESWL) is a minimally invasive treatment option for some stones in the kidney and upper ureter. Suitability depends on patient size, stone size, exact position and ability to localise the stone for accurate targeting by fluoroscopy or ultrasound. Localisation by fluoroscopy depends on it containing sufficient calcium and this is judged by it being visible on plain x-ray. If not visible on fluoroscopy it must be in a suitable position for it to be visible on ultrasound.

ESWL is performed under a general anaesthetic as a day surgical procedure. Up to 4000 shocks produced by the machine are focussed through the skin on to the stone, aiming to shatter it into small fragments that will pass spontaneously. Fragmentation is not always complete due to stone burden, stone density, poor localisation or stone movement but this cannot usually be accurately assessed at the time. Post-operatively there may be some mild bruising at the skin over the kidney and the urine can be lightly blood stained.

Repeat x-rays, CT scan or U/S are usually used to assess treatment several weeks later. Even complete fragmentation does not always lead to complete clearance of stone fragments. A repeat treatment may be recommended for incomplete fragmentation.

Serious complications such as major bleeding from the kidney or adjacent spleen requiring splenectomy can occur but are extremely rare. Post-operative pain from larger stone fragments getting stuck down the ureter is seen more commonly and could require ureteroscopic stone extraction.



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