



A REVIEW OF OVER 1,000 ESWL PATIENTS TREATED AT A SINGLE SURGERY CENTER OVER A 9 YEAR PERIOD WITH THE WOLF PIEZOLITH 3000 LITHOTRIPTER

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Objectives: To review our experience with the newest generation piezoelectric lithotripter, the Wolf Piezolith 3000, in adult patients undergoing extracorporeal shock wave lithotripsy for urinary calculi.

Methods: We identified over 1,000 shock wave lithotripsy procedures that had used the Wolf P 3000 from 2004-2012. All procedures were performed under intravenous sedation. Retrospective chart review was used to obtain the pertinent information. Stone-free status was defined as the absence of stone fragments >4 mm, on follow-up imaging after a single treatment.

Results: The stone-free and success rate 2 months after a single shock wave lithotripsy session was 82%. Repeat stone treatment resulted 94% respectively. Only stone size, and kidney versus ureteral stone location correlated with the overall success rate. The overall complication was 15% and included a 1% major complication rate requiring intervention or admission. The median retreatment rate for a stent was 10% and re-litho was 25%.

Conclusions: The Wolf Piezolith 3000 provides very good, single-treatment stone free and success rates, with an excellent safety profile, offers rapid and convenient lithotripsy requiring minimal intravenous sedation. Because of the rapidity of the procedure, the excellent safety and minimal anesthetic requirement, we are evaluating bringing the Wolf 3000 in the office setting.

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**Future of the WOLF
Piezolith 3000
in the USA**

- 1) Automatic stone positioning
- 2) In-image navigation
- 3) In office ESWL treatment if no anesthesia required
- 4) Absolute need to have an expert technologist localize stone

ADVANTAGES

1. Efficient – Triple Focus– Powerful therapy source with precise dosing. No prone positioning needed for pediatric patients.
2. Lack of pain.
3. Very low side effects – i.e. hematoma, smaller focal point.
4. Minimal magnetic field – no PVC's - no ECG monitoring required
5. Two imaging systems; simultaneous inline ultrasound and x-ray location; real time imaging
6. In line ultrasound reduces fluoroscopy and exposure to x-rays.
7. Low level of noise
8. Simplicity - plug and treat
9. No or minimal anesthesia required—pain free
10. Cost effective.. Modular design easy for localization. Simple installation –> no supplement installation costs. No Anesthesia.
11. Long service life – 5 million shocks
12. Penetration depth 165 mm– suitable for deep-lying stones and obese patients
13. Double-layer piezo technology produces a shockwave source of 120 MPa peak pressure at 20 adjustable energy levels. Safer for children and high risk patients. Shorter treatment time.
14. Fixed adaption of the shockwave source to the x-ray unit ensures stable and precise assignment of the therapy tour.
15. Multifunction table and accessories