

Combined Lithotripter (Ultrasonic PLUS Pneumatic) in percutaneous lithotripsy

Remzi Sađlam*, Mut Şafak**, Zafer Tokatlı*, Sinan Kabakçı, Erhan Soysal***
*Özel Yüzüncü Yıl Hastanesi**Ankara Ü.Tıp F. Üroloji AD, ELMED A.Ş.,Ankara***

Objective: It was necessary more effective and quick lithotriptors. In this study we aimed to search the effectivity of a new Turkish made combined lithotripter and develop its using technics.

Method: Between September 2006 and July 2008 we performed PNL to the 128 patients and 131 renal unit, diagnosed as kidney or upper ureteral stones. We used “Vibrolith PLUS” ELMED AŞ., Ankara / Türkiye, as a combined ultrasonic and pneumatic lithotripter.

We started lithotripsy in all patients with ultrasonic lithotripter. In 17 patients (13%) we used combined system, because of the inefficacy of the ultrasonic system.

Findings: In 114 renal unit (87%), in which the ultrasonic lithotripsy was sufficient, we estimate that the operation time was shortened, and no residual fragment on the post op. X-ray, in 6 (5%) non-opaque Stone cases we found some very small residual fragments, by ultrasonography.

Results: The use of ultrasonic lithotripter, alone or combined with pneumatic lithotripter provide :

1. Shortened the operation time
2. Clear the coagulum and better vision
3. To be able to fragment and aspirate difficultly reachable stones
4. The usage of the pediatric PNL,
5. It is possible to fragment and cleared even very hard Stones, in a short time.

During the development work of the device , it was possible to produce the new probes heated in a longer time. We observed that the tip of the probes does not harm the tissue. We could also produce more sustainable probes.