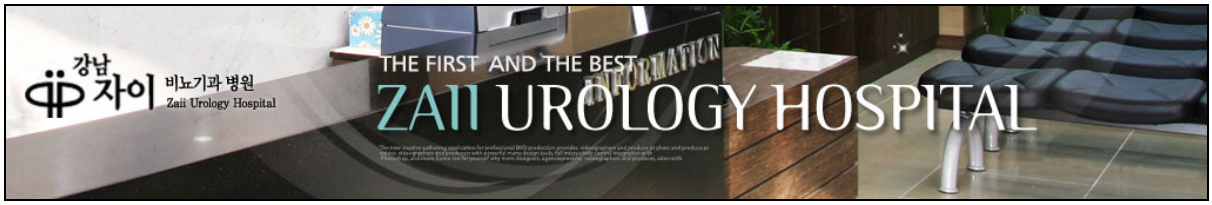

Clinical Experience of Extracorporeal Shock Wave Lithotripsy (ESWL) with Integra

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Introduction :

The Integra Lithotripter (Initia, Ltd.) integrates a novel SWL (Shock Wave Lithotripsy) technology. The electromagnetic SWL unit is compact, highly portable and is suitable for hospitals as well as for an office setting. We analyzed the efficacy and safety of extracorporeal shock wave lithotripsy (ESWL) for treating patient with urinary tract calculi with using a Integra lithotripter.

Materials and Methods:

We retrospectively reviewed the records of all the patients who had urinary calculi and who were treated by ESWL between January 1st, 2008 and November, 20th, 2008. The location and sizes of the stones, the number of sessions, the success rate, the causes of failure and the complications of ESWL were analyzed. The definition of successful treatment was no calcification on the X-ray (plain film, KUB) or residual fragments ≤2mm in size.

Results:

Of the 159 cases, there were 24 (15.1%) and 135 (84.9%) cases of renal stones and ureteral stones, respectively (Table 1). The Mean stone size was 6.02 ± 2.64 mm(3~15mm) and the mean numbers of SWL session were 1.32 ± 0.63 sessions (1-4 sessions). The overall success rate was 94.3% (150/159). There were no serious remarkable complications during the SWL sessions and follow-up period.

Conclusions:

The results showed that ESWL is a highly effective and minimally invasive treatment modality as the 1st therapeutic option for urinary stones. The Integra is an efficient and safe lithotripter that's capable of treating stones in the urinary tract.

Table 1. The patients characteristics

Sex	
Male	153 (96.2%)
Female	6 (3.8%)
Mean age ± SD (years)	37.6 ± 10.8
Laterality of the stones	
Left side	81 (50.9%)
Right side	78 (49.1%)
Stone locations	
Renal stone (including UPJ* stones)	21 (13.2%)
Upper ureter stone	66 (41.5%)
Mid ureter stone	6 (3.8%)
Lower ureter stone (including UVJ** stones)	66 (41.5%)
Mean stone size ± SD (mm)	6.02 ± 2.64
≤ 5mm	87 (54.8%)
6 ~ 10mm	63 (39.6%)
> 10mm	9 (5.6%)

SD : standard deviation, *UPJ : ureteropelvic junction, **UVJ : ureterovesical junction