Electromagnetic DSWL
Double Shockwave Lithotripsy: Initial experience

Dr. Sandro Varea, Fernando Santomil, Alfredo Penida, Cristian Grillo, Jorge Quezada
Department of Urology. Hospital Privado de Comunidad, Mar del Plata, Argentina
Electromagnetic DSWL
Double Shockwave Lithotripsy: Initial experience

New design concept for Lithotripters: Double shockwave $^{(1-3)}$.

Electromagnetic DSWL
Double Shockwave Lithotripsy: Initial experience

Double shockwave (4).

Butterfly Focal area

Electromagnetic DSWL
Double Shockwave Lithotripsy: Initial experience

Double shockwave

- Reduce kidney damage
- Increase treatments efficacy
- Decreased treatment time

Results?
Goal

• Show our initial experience using an extracorporeal double shockwave lithotripter (Duet Magna, Direx/Initia).

• Evaluate safety and effectiveness.
Method and Materials

- Cross-sectional study.
- Period: March-May 2010.
- Patients with renal and uretral stones indicated for ESWL treatment.
- Treatments performed with intravenous sedation.
- Ambulatory procedure.
Method and Materials

VARIABLES

- Age
- Sex
- Weight
- Size
- Body mass index
- Stone sizes and location
- Double J catheter
- Treatment side
- Fragmentation
- Complications
- Retreatment
- Removal rate
Results
33 urinary stones in 30 patients

Patients distribution according to age

-average: 53.1 (31 – 76)
Results

(n= 30)

Patients distribution according to sex

- Feminine: 20%
- Masculine: 80%
Results
(n=33)
Patients distribution according to side treated

Derecho 58%
Izquierdo 42%
Results

(n=33)

Patients distribution according to stone localization

- Pelvis: 34%
- Caliz Inferior: 27%
- Caliz Medio: 12%
- Caliz Superior: 12%
- Ureter Superior: 9%
- Ureter medio: 3%
- UPU: 3%
Results

(n=33)

Patients distribution according to stone size treated:

- 6 a 10 mm: 55%
- 11 a 15 mm: 24%
- 5 mm: 9%
- > 16 mm: 12%
- **Stone fragmentation:** 100%

- **Elimination rate:** 85%

- There were no complications.
The double shockwave treatment is a safe and effective procedure.

It is necessary to perform additional prospective trials on a larger number of patients in order to confirm the results.