SELECTION OF PATIENTS FOR SHOCK WAVES LITHOTRIPSY UNDER ANALGESIA

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INTRODUCTION

Shock waves are usulally produced from a single source at a mean frequency of 120 waves/min. We utilized a device (Direx Duet) with two reflectors working at 120 waves/min each, focusing 240 waves/min against the stone.

MATERIALS AND METHODS

From September 2005 to March 2006, 50 patients affected with ureteric and/or renal stones were treated in our unit. On the whole, 58 urinary stones were treated. All patients were submitted to ESWL under analgesia i.v. (Ketorolac 30 mg + Tramadolo 100mg + Butilscopolamine 40 mg).
Pain intensity was evaluated by the Visual Analogue Scale (VAS). After the treatment, patients were asked to complete a questionnaire to select tolerable from no-tolerable group. The intensity increase was 1 HV/100 shock waves, till maximum of 10 HV after 1000 shock waves.

Visual analogue scale

No Pain _____ Worst pain imaginable

The patient is shown a 10 cm line marked as above. They are asked to put a mark across the line that indicates the severity of their pain. The doctor or nurse then measures the distance from "No pain" to the mark in cm.

Stone Size			
5-10 mm	11-15 mm	> 16 mm	Average size
36	20	2	8,64

Stone Location						
UC	MC	LC	RP	UPJ	UU	MU
5	13	16	19	0	3	2

RESULTS

All patients (31 male and 19 female, mean age of 50 years) completed the treatment. Only 1 patient did not reach the maximum intensity. The mean pain severity was 3,3 (range 0-9).
After the first treatment, 19 of 50 patients declare oneself able to undergo the next one without analgesia. Fifteen of them completed the second treatment but 10 (8 with stone in superior calyces, 2 in renal pelvis) complained of a more intense pain. The other 4 required analgesia for the completion. No relation was found between pain and stone's size, stone's side, age and sex of the patients.
Complications occurred in 3 patients (1 renal haematoma and 2 renal colic).

Results			
Stone Treated	Success	Partial fragments (>4mm)	No fragmentation
58	85%	8%	7%

CONCLUSION

Our results suggest that ESWL under analgesia is safe, simple and shows a good compliance and tolerance. In order to select the patients a careful clinical examination is mandatory.

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