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Role of Tamsulosin in the management of lower ureteric stones

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Introduction: Tamsulosin dilates the lower ureteric segment which may facilitate the spontaneous passage of small stones and clearance of stone fragments following ESWL.

Purpose: To show the effect of Tamsulosin in patients with lower ureteric stones or stone fragments.

Materials and Methods: Prospective study for 3years on adult patients with lower ureteric stones or stone fragments following ESWL (196Pts.) (**GroupI**) The result was compared with similar group of patients who presented during the previous 3years (175Pts.) (**GroupII**) Both groups had the same treatment regime except using Tamsulosin in GroupI.

Each group was divided into 3 subgroups:

a- Patients with stone size less then 6mm.

b- Patients with stone size 6-12mm.

c- Patients with lower ureteric steinstrasse following ESWL to renal calculi.

Patients were assessed weekly regarding; spontaneous passage, need for ESWL, post ESWL fragmentation and clearance, pain severity and frequency, use of analgesics, hospitalization, the need for ureteroscopy, and comparison between the outcome in male and female patients.

Results: The overall results are shown in Tables 1-3.

Table 1. Comparison between the outcome in G.Ia & G.IIa

Stone size < 6mm.	GR Ia (72 Pts) With Tamsulosin	GR IIa (61 Pts)	P value
Mean age	33 years	36 years	> 0.05
Mean stone size	5.3mm.	4.9 mm.	> 0.05
Stone expulsion rate within 3 weeks	79% (57 Pts)	32% (20 Pts)	0.005
Mean Stone expulsion time	12 days	18.5 days	0.01
Need for ESWL	21% (15 Pts)	68% (41 Pts)	0.004
Stone clearance following ESWL	93% (14 Pts) 11Pts after 1 session 3Pts after 2 sessions	76% (31 Pts) 13Pts after 1 session 18Pts after 2 sessions	0.047
Need for URS	1.4% (1 Pt.)	15.6% (9 Pts)	0.03
Average number of Ureteric colic attacks/Pt	2	6	0.043
Average number of analgesic inj./ Pt	0.5	4	0.005
No. of Pts required Hospitalization	3Pts. 4%	11 Pts. 18%	0.003
Mean period of hospitalization/Pt.	1 day	2.5days	0.04

Table 2. Comparison between the outcome in G.Ib & G.IIb

Stone size 6-12mm.	GR Ib (91 Pts) With Tamsulosin	GR IIb (86 Pts)	P value
Mean age	33 years	36 years	> 0.05
Mean stone size	9.4mm.	8.9 mm.	> 0.05
Stone clearance rate after one ESWL session	66% (60 Pts)	39% (34 Pts)	0.003
Over-all Stone clearance following ESWL	92% (84 Pts) M 91.6% : F 93.4%	65% (56 Pts) M 64.7% : F 65.4%	0.001 M:F> 0.05
Need for second ESWL Rx session	34% (31 Pts)	61% (28 Pts)	0.002
Mean Stone clearance time	27 days M 28d : F 26.5d	51 days M 52d : F 49d	0.03 M:F> 0.05

Need for URS	7% (6 Pts) M 7.2% : F 6.9%	33% (28 Pts) M 33.4% : F 31.9%	0.03 M:F> 0.05
Average number of Ureteric colic attacks/Pt.	4 M 3.8 : F 4.1	11 M 11.3 : F 10.7	0.003 M:F> 0.05
Average number of analgesic inj./ Pt	1	9	0.005
No. of Pts required Hospitalization	7 Pts. 8% M 7.7% : F 8.4%	34 Pts. 39% M 37.9% : F 41.2%	0.03 M:F> 0.05
Mean period of hospitalization/Pt.	4 days M 4d : F 4d	12 days M 13d : F 11.5d	0.02 M:F> 0.05

Table 3. Comparison between the outcome in G.Ic & G.IIc

Steinstrasse following ESWL to renal stones	GR Ic (33 Pts) With Tamsulosin	GR IIc (28 Pts)	P value
Mean age	33 years	36 years	> 0.05
Mean stone size	11.7mm.	11.4mm.	> 0.05
expulsion rate within 3 weeks	73% (24 Pts)	25% (7 Pts)	0.001
Mean expulsion time	14 days	27days	0.04
Need for ESWL	27% (9 Pts)	75% (21 Pts)	0.001
Clearance following ESWL	78% (7 Pts) 5Pts after 1 session 2Pts after 2 sessions	43% (12 Pts) 3Pts after 1 session 9Pts after 2 sessions	0.04
Need for URS	6% (2 Pts.)	32% (9 Pts)	0.001
Average number of Ureteric colic attacks/Pt.	2	4	>0.05
Average number of analgesic inj./ Pt	1	3	>0.05
No. of Pts required Hospitalization	2Pts. 6%	7 Pts. 26%	0.04
Mean period of hospitalization/Pt.	2 days	6 days	0.001

Conclusions: A conservative approach using Tamsulosin should be considered as the first option for non-obstructing distal ureteric stones up to 6mm. Tamsulosin enhances the passage of small lower ureteric stones and reduces the time needed for stone expulsion and cut down intervention.

Tamsulosin can be used as an adjunctive therapy to ESWL.

Tamsulosin improves the clearance of stone fragments and steinstrasse following ESWL. It also reduces the clearance time, the need for further ESWL and the need for Ureteroscopy.

Tamsulosin reduces pain, analgesics consumption, hospitalization and hospital stay.

Tamsulosin has the same effect on both sexes.