

Abstracts

21st WORLD CONGRESS on ENDOUROLOGY and SWL 19th Basic Research Symposium, September 21-24, 2003 Montréal, Canada

Moderated Poster Session 31 / Shock Wave Lithotripsy

MP31.27

EXTRACORPOREAL SHOCK WAVE THERAPY FOR PEYRONIE'S DISEASE: AN EFFECTIVE LONG-TERM STRATEGY?

S.J. Srirangam, J. Husain, R. Manikandan, S.C.W. Brown, G.N. Collins, P.H.O'Reilly

South Manchester University Hospitals, Manchester, UK

Objective Extracorporeal shock wave therapy (ESWT) has been used for Peyronie's disease with encouraging results. Our aim was to analyse whether initial benefits are maintained in the long-term.

Patients and methods In total, 38 patients with Peyronie's disease underwent ESWT (3000 shock waves; Storz Minilith SL lithotripter). Degree of angulation, before and following treatment, was measured by artificial vacuum induction of erection. Pain during erection was measured using a visual analogue scale (VAS 0-5). Mean (range) duration of disease was 19.4 (4 - 60) months. Average number of ESWT sessions was 3.4 (2 - 9). Initial mean post-treatment follow-up was 7.5 (5-11) months. The same cohort of patients was recalled for long-term data collection with a mean follow-up period of 44.1 (12 - 50) months.

Results At initial post-treatment follow-up 47% of patients reported an improvement in angulation, with a mean reduction of 29.3° (10-60°) (P<0.001). Additionally, 60% of patients with painful erections reported immediate relief with a mean reduction of 2.3 (1-4) on the VAS (P<0.001). At long-term follow-up, 10 patients (26%) had subsequently undergone corrective surgery for failed ESWT. Of the remaining 28 patients, 18 (47% of total) had a statistically significant improvement in angulation, with a mean reduction of 33.2° (10-75°) (P<0.001). Nine patients had no benefit and one had an increase in angulation of 10°. Sixteen of 18 (88.9%) patients with pain reported relief following ESWT, the mean reduction being 2.5 (0.5-5) on the VAS (P<0.001). Patient satisfaction was high with 70% choosing to undergo ESWT if offered again. The only long-term adverse event noted was minimal penile shortening in one patient.

Conclusion Although a quarter of ESWT patients eventually resorted to surgery, ESWT is an effective, safe, conservative treatment option with benefits being maintained long-term.

EXTRACORPOREAL SHOCK WAVE THERAPY FOR PEYRONIE'S DISEASE: AN EFFECTIVE LONG-TERM STRATEGY

Srirangam SJ, Husain J, Manikandan R, Brown SCW, GN Collins, O'Reilly PH
Department of Urology, Stepping Hill Hospital, Stockport, UK

Session: P31

Poster No: 15711633

Objectives

Peyronie's disease is a distressing, and often sexually disabling, disease affecting patient quality of life.

Extracorporeal shock wave therapy (ESWT) has been used for Peyronie's disease with encouraging results. However, previous studies have been criticised for lack of long-term data and little is known about the potential long-term complications of ESWT in Peyronie's disease.

Our aim was to analyse whether initial benefits are maintained in the long term.

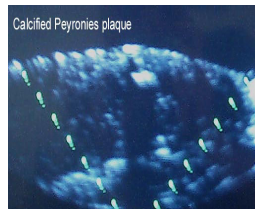
Patients and Methods

Patients who had had ESWT for Peyronie's disease at this centre for a previously published study^[1] were recalled for further long-term evaluation. All patients had undergone ESWT between October 1998 and November 1999 using a Storz Minilith SL 1 lithotripter (Storz Medical AG, Switzerland) with delivery of 3000 shock waves (energy density 0.11 – 0.17 mJ/mm²) per treatment session. Precision delivery of the shock waves was achieved using a 7.5 MHz inline linear ultrasound transducer to target the plaque.

The degree of angulation, both before and following treatment, was measured using a goniometer after artificial induction of erection using a vacuum device. Presence of pain on erection was noted and recorded on a visual analogue scale (VAS) (range 0 – 5). The efficacy of the treatment was assessed both objectively (penile angulation, VAS) and subjectively (patient questionnaires). The Wilcoxon signed-rank test was used to analyse the results.

Table 1

VARIABLE	Before treatment	Initial Mean (range) n=34	Long-term Mean (range) n=38
Age (years)	56.1 (24.0-9.0)		
Duration of disease (months)	19.4 (4.0-60.0)		
Duration of follow-up (months)		7.5 (5.0-11.0)	44.1 (42.0-48.0)
Pain (VAS score)	2.5 (1.0-4.0)	0.6 (0-3.0)	0.5 (0-2.0)
Angulation (°)	50.0 (20-90)	37.7 (10-80)	33.3 (0-80)
Mean reduction in angulation (°)		29.3 (10-60)	33.2 (10-75)
Mean reduction in pain (VAS score)		2.3 (1.0-4.0)	2.5 (0.5-4.0)



Results

Of 44 eligible patients who had received ESWT for Peyronie's disease, only 38 (86.4%) were contactable for evaluation. Demography and results are summarised in Table 1. The average number of ESWT sessions was 3.4 (2-9). Initial mean post-treatment follow-up was 7.5 (5-11) months while mean long-term follow-up post-treatment was 44.1 (42-48) months.

At initial post-treatment follow-up 47% of patients reported an improvement in angulation, with a mean reduction of 29.3° (10-60°) (P<0.001). Additionally, 60% of patients with painful erections reported immediate relief with a mean reduction of 2.3 (1-4) on the VAS (P<0.001).

Of the 38 long-term patients, 10 (26%) subsequently underwent corrective surgery for persistent angulation and deformity. Surgical correction included nine corporaplication procedures while one patient opted for a penile implant. Of the remaining 28 patients, 18 (47% of total) had a statistically significant improvement in angulation, with a mean reduction of 33.2° (10 – 75°) (P<0.001). Nine patients had no improvement and one had an increase in angulation of 10°. 16 of 24 patients (67%) with pain reported relief following ESWT, the mean reduction being 2.5 (0.5-4.0) on the VAS (P<0.001).

Of the above group of 28 patients, 65% reported erections suitable for intercourse while the rest stated that satisfactory intercourse was not possible. When asked would they undergo ESWT if offered again, 70% said they were prepared to have another go at it.

One patient subjectively noted minimal penile shortening (1.5 cm) which did not affect sexual function. No other long-term adverse events were noted.

Conclusion

In conclusion, this study is the first to report on long-term results following ESWT for Peyronie's disease with mean follow-up approaching four years. Although ESWT is not suitable for all patients, with a quarter eventually resorting to surgery, results suggest that ESWT is a safe and effective non-invasive treatment modality, with initial benefits being maintained long term in nearly all patients. It therefore represents an important alternative to surgery and should be offered to patients.

References

- Husain J, Lynn NNK, Jones DK, Collins GN, O'Reilly PH. Extracorporeal shock wave therapy in the management of Peyronie's disease: initial experience. *BJUI* 2000; **86**: 466-468