

INITIAL EXPERIENCES WITH A NEW 120W GREENLIGHT™ HPS - PHOTOSELECTIVE VAPORIZATION OF PROSTATE(HPS-PVP) FOR THE TREATMENT OF BENIGN PROSTATIC HYPERPLASIA(BPH) IN KOREA: THE FIRST ASIAN REPORT

Hypothesis / aims of study

After successful launches of the 120W HPS-PVP, several studies in the United States and Europe reported good short-term data. However, there was no Asian study about the efficacy or safety of HPS-PVP. We report the initial efficacy and side effects of the 120W HPS-PVP in Korea.

Study design, materials and methods

Between January 2008 and July 2008, a retrospective clinical analysis was performed with 69 Benign Prostatic Hyperplasia(BPH) patients treated by HPS-PVP. The efficacy and safety of HPS-PVP was evaluated by the International Prostate Symptom Score questionnaires(IPSS), quality of life score(QoL), peak urinary flow rate(Qmax), postvoid residual(PVR) volume and complications at 1, 3, 6 months following treatment.

Results

The mean age at surgery was 68.4 ± 8.0 (44-86). The mean prostate size was 43.3 ± 20.2 ml (14-102). The mean follow-up duration was 3.0 ± 2.0 months (1-6). The mean operation time was 50.5 ± 33.7 minutes (range 11-170), and the mean total applied energy was $112,585 \pm 78,912$ J (range 18,816-328,106). The mean duration of admission and catheterization was 6.0 ± 4.3 days and 22.8 ± 12.2 hr. The blood loss was minimal and there was no transfusion. Baseline mean Qmax was 9.7 ± 5.1 ml per second, PVR 87 ± 108.5 ml, IPSS 20.6 ± 9.0 , and QoL score 4.2 ± 1.2 . At 6th month Qmax was 19.1 ± 10.4 ml/s (increased by 97%), PVR was 52.0 ± 35.0 ml (decreased by 67%), IPSS was 10.0 ± 6.2 (decreased by 106%) and QoL score was 2.4 ± 1.7 (decrease by 75%). (Table 1) Intraoperative fiber damage was reported in 3(4.2%). During the 1st postoperative month irritative symptoms were reported in 15(21.7%), incontinence in 7(10.7%), gross hematuria in 5(7.2%), urinary track infection in 1(1.4%), and temporary recatheterization in 12(17.4%). After 1 month postoperatively, there was urgency in 1(1.4%), temporary gross hematuria in 2(2.8%), retrograde ejaculation in 1(1.4%) and no de-novo erectile dysfunction. There were no significantly different surgical outcomes between age, risk factor numbers, American Society of Anesthesiologists score, prostate volume and bladder contractility of pressure flow study.

Interpretation of results

New 120W Greenlight™ HPS-PVP showed the improvement in almost every clinical parameters including IPSS, QoL, Qmax and PVR, and showed acceptable percents in side effects.

Concluding message

The new 120W HPS-PVP showed good short-term safety and efficacy for the treatment of Asian BPH patients.

Table 1. Postoperative efficacy parameters

	Pre-operative	Postoperative		
		1 month	3 months	6 months
Qmax	9.7 ± 5.1	$19.8 \pm 9.3^*$	$15.4 \pm 8.7^*$	$19.1 \pm 10.4^*$
PVR	87.0 ± 108.5	$26.8 \pm 31.3^*$	$44.0 \pm 41.0^*$	52.0 ± 35.0
IPSS	20.6 ± 9.0	$12.8 \pm 8.2^*$	$10.0 \pm 9.0^*$	$10.0 \pm 6.2^*$
QOL	4.2 ± 1.2	$2.6 \pm 1.8^*$	$2.3 \pm 1.9^*$	$2.4 \pm 1.7^*$

Specify source of funding or grant	none
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	IRB of Boramae hospital
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No