Wednesday 25 June 14.30–15.30
Poster Session 9: BPH 1
Chairmen: M. Speakman and D. Rosario

P080

Unreliable residual volume measurement after increased water load diuresis

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OBJECTIVE

To compare the postvoid residual urine after increased water-load diuresis (PVR1) with the PVR when the bladder is filled under normal circumstances and the patient voids at his first desire (PVR2).

PATIENTS AND METHODS

Ninety-four patients with a PVR1 of > 100 mL were included in the study. All patients underwent a second PVR measurement by a urologist using a portable transabdominal bladder ultrasound scanner without having received an increased water load (PVR2). The measurements were compared and the PVR values correlated with other variables, e.g. age, IPSS, prostate volume and serum PSA values.

RESULTS

PVR1 was larger than PVR2 in every patient ($P < 0.001$). Both PVR1 and PVR2 were independent of patient age, IPSS, prostate volume and PSA value.

CONCLUSIONS

Measuring PVR in the relaxed patient who voids at first desire represents the normal voiding process and should be the appropriate way of testing.

P081

Factors influencing the outcome of a trial without catheter after acute urinary retention

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INTRODUCTION

Phase I of the ALFAUR study sought to confirm the beneficial effect of alfuzosin on the outcome of a trial without catheter (TWOC) after an episode of acute urinary retention (AUR); we also evaluated the effect of risk factors, age, retention volume, duration of previous BPH symptoms and the so-called 'precipitating' factors (constipation and fluid ingestion), on the outcome of TWOC.

PATIENTS AND METHODS

Patients presenting with AUR secondary to BPH were randomized to receive alfuzosin 10 mg once daily or placebo before TWOC. The effect of the treatment and the risk factors on the outcome of the TWOC was assessed. In all, 363 patients were randomized, the results being evaluable from 357.

RESULTS

In a multivariate analysis of risk factors, increasing age and retention volume reduced the likelihood of successful TWOC ($P < 0.001$), whilst alfuzosin almost doubled the likelihood of a successful TWOC (odds ratio 1.98, $P = 0.005$). The duration of BPH symptoms did not influence the outcome, and nor did a history of constipation or increased fluid ingestion.

CONCLUSIONS

This study showed a clear benefit to patients who received alfuzosin before a TWOC after an episode of AUR. Other factors traditionally thought to precipitate AUR and to affect the success rate of a TWOC had no apparent effect on the outcome. We conclude that giving alfuzosin before a TWOC in all men with AUR is worthwhile, irrespective of any so-called precipitating factors.

Funding: Sanofi-Synthelabo

P082

Removing the catheter at midnight vs early morning: the patients' perspective

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INTRODUCTION

We reviewed the patients' perspective on the timing of removing the urethral catheter after TURP.

PATIENTS AND METHODS

A non-consecutive prospective randomized trial was conducted to determine the effect of midnight vs early morning removal of the catheter (ROC) on the sleep deprivation and overall discomfort to the patient after TURP. In all, 84 patients (mean age 68.9 years) who underwent a TURP either for LUTS or retention of urine were randomized, with 40 patients having early morning ROC and 44 at midnight. We identified the frequency in the first 6 h after ROC and the initial voided volume, with ANOVA used to assess the statistical significance.

RESULTS

The first void was at 2–3 h after ROC in both groups. There was no difference in the mean initial voided volume in the two groups (131 vs 152 mL, early morning ROC). The mean (SD) frequency in the first 6 h after voiding was significantly higher for the early morning ROC, at 4.4 (1.8) m and 3.3 (1.3) ($P = 0.01$). There was a significantly earlier discharge with a midnight ROC ($P = 0.001$) but it was associated with more sleep disturbance ($P = 0.005$). There were no differences between the groups in voiding difficulty or anxiety related to catheter removal.

CONCLUSION

We confirmed that ROC at midnight facilitated an earlier discharge of the patient, but was associated with a higher sleep disturbance, and this must be considered in the decision.

P083

Long-term outcome after transurethral needle ablation of the prostate (TUNA)

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INTRODUCTION

TUNA of the prostate is a minimally invasive technique for treating symptomatic benign prostatic obstruction (BPO). Whilst safe and providing significant symptomatic improvement in the short-term, there is little published evidence on its long-term benefit. The aim of this study was to re-evaluate the outcome after TUNA in a cohort of men with documented BPO at the outset.

PATIENTS AND METHODS

Seventy-one men who had previously undergone TUNA were re-evaluated using the IPSS, uroflowmetry and residual urine estimation. The median (mean, range) follow-up was 35 (39, 0–82) months. Treatment failure was defined as patients requiring further intervention to control LUTS.

RESULTS

Of the original 71 patients, full follow-up data were missing in 13 (18%). During the follow-up seven (10%) patients died from unrelated causes; 35 (49%) underwent further surgery, which included TURP in 32, bladder neck incision in two or thermo-ablation in one. The median time to symptom recurrence for this group was 12 months. Nine patients continue to be satisfied with their symptoms (quality of life score 0–2), of whom seven are concomitantly on α-receptor antagonists.

CONCLUSION

Whilst TUNA provides early symptomatic relief in most patients it does not appear to provide durable long-term symptomatic improvement, and should not be recommended as a standard treatment option for symptomatic BPO.

P084

Transurethral needle ablation of the prostate (TUNA) in the treatment of BPH: a prospective randomized study and long-term results

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INTRODUCTION

Objective and subjective variables were used to study the clinical efficacy, durability and safety of TUNA in treating symptomatic BPH, and to compare with TURP.

PATIENTS AND METHODS

From April 1994 to October 1998, 152 patients were enrolled in the study with randomization of 1:1. The mean (range) volume of the prostate 43.3 (20–88) mL. The variables assessed were the IPSS, QoL score, uroflow, postvoid residual urine and TRUS assessment of the prostate.

RESULTS

	Mean (SD)		
Treatment/follow-up, years	IPSS	QoL	Uroflow, mL/s
TUNA			
Before	19.1 (5)	4.1 (1)	7.5 (2)
1	7.8 (5)*	1.6 (1)*	15.0 (5)*
3	8.9 (6)*	1.9 (1)*	13.8 (6)*
5	7.6 (6)*	1.7 (1)*	12.6 (7)*
6	9.8 (5)	1.9 (1)	12.5 (7)
7	11.9 (9)	2.1 (1)	9.6 (2)
TURP			
Before	20.5 (5)	3.81	8.3 (2)
1	5.1 (4)*	1.2 (1)*	19.6 (7)*
3	5.7 (5)	1.0 (1)	19.2 (7)

**P <0.001; no records available for TURP at >3 years.*

No ejaculatory dysfunction was reported with TUNA, compared with 57% after TURP, and no blood transfusion was required in TUNA, compared with 10.5% in TURP. In the TUNA group, 11 patients required TURP and four were started on α-blockers. In the TURP group one patient (1.3%) required re-resection in the second year.

CONCLUSION

TUNA produced minimal morbidity and was well tolerated. The cumulative failure rate after TUNA during the 7 years was 19.7%. This treatment is highly recommended where ejaculatory dysfunction is a major concern.

P085

Transurethral holmium laser enucleation of the prostate (HoLEP): intra- and perioperative outcome in 550 consecutive patients

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INTRODUCTION

With high-powered holmium (Ho):YAG lasers, obstructive prostatic tissue can be incised, resected and ablated. HoLEP has been recommended as an effective alternative to traditional TURP and open prostatectomy. In this study the efficiency, and the intra- and perioperative outcome of HoLEP were evaluated.

PATIENTS AND METHODS

In all, 550 urodynamically obstructed patient (mean age 67.2 years, range 43–94) were treated with HoLEP (2.0 J, 40–50 Hz, 80–100 W, 550 nm bare laser fibres).

RESULTS

The mean (range) prostate weight before treatment was 59 (10–260) g, the total resected tissue 39.18 (3–200) g, the operative

duration 92.7 (10–240) min, the mean haemoglobin loss 12.9 (0–65) g/L, the mean (median) catheter time 30.5 (24) h, the mean (median) hospital stay 72.5 (48) h. Incidental prostate carcinoma was detected in 28 patients (5.1 %). HoLEP resulted in a significant improvement in voiding. The mean AUA symptom score decreased from 20.9 before to 5.4 at 1 month after treatment, the mean peak urinary flow rate increased from 5.4 to 25.2 mL/s, and the mean postvoid residual urine volume decreased from 224 to 8.2 mL. After surgery, 11 patients (2%) required laser coagulation of a bleeding artery, 14 (2.5%) a secondary resection, 10 (1.8%) had stress incontinence at 1 month and one (0.2%) a urethral stricture at 1 month. None of the patients needed blood transfusions. No patients died during or after surgery.

CONCLUSIONS

Even in large prostates, HoLEP seems to be a highly effective endourological technique. It can immediately removed obstructing prostatic tissue, with a low complication rate, low blood loss, a short catheter time and short hospital stay.

P086

Holmium laser enucleation vs TURP: a randomized prospective study with 2 years of follow-up

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INTRODUCTION

A randomized prospective study comparing transurethral holmium laser enucleation of the prostate (HoLEP) with TURP gave results that strongly favoured HoLEP, which required no blood transfusions, with significantly less blood loss, a shorter catheter time and a shorter hospital stay, while the short-term improvement in voiding variables was equally good in the two groups. The rate of late complications and voiding data at 2 years are reported.

PATIENTS AND METHODS

In all, 200 urodynamically obstructed patients with prostate adenoma of <100 g were randomized equally to HoLEP or TURP; 40 patients in each group completed the 2-year follow-up evaluation. HoLEP was performed with 80–100 W, 2.0 J, at 40–50 Hz, from 550 nm bare laser fibres. The AUA symptom scores, peak urinary flow rates and postvoid residual urine volumes were compared before and at 2 years after surgery. All late complications were recorded.

RESULTS

The values after HoLEP and TURP (assessed by a Mann-Whitney *U*-test) were:

	HoLEP		TURP	
Mean variable	Before	2 years	Before	2 years
AUA score	21.3	1.9	20.9	3.3
Peak flow, mL/s	3.7	27.8	3.9	30.0
Residual urine, mL	249	8.8	216	13.8
Late complications, n				
urethral stricture		1		1
bladder neck contracture		1		0
stress incontinence		1 (G III)		1 (G II)

The urethral stricture and bladder neck contracture were successfully treated by endoscopic holmium laser incision.

CONCLUSIONS

HoLEP and TURP produce equally good results at 2 years after surgery. Late complications are rare in both procedures.

P087

Holmium laser enucleation of the prostate vs plasmakinetic enucleation of the prostate: early results

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INTRODUCTION

Endoscopic enucleation of the prostate currently uses the holmium wavelength as the energy source, because of its incisional and coagulating abilities. This randomized study was conducted to determine whether bipolar electrocautery energy using a bare probe (Gyrus™, Gyrus, Medical Ltd.) could be used for the procedure with the same success as holmium laser resection of the prostate (HoLEP).

PATIENTS AND METHODS

All 40 patients included were urodynamically obstructed, with a prostate volume (on TRUS) of < 100 mL, an IPSS of > 12 and a maximum urinary flow rate (Q_{max}) of < 15 mL/s. They were randomized equally to HoLEP or Gyrus enucleation. All relevant operative variables were measured, including operative duration, amount of tissue retrieved, catheter time, hospital time and complications. The patients were followed at 1, 3, 6 and 12 months after surgery with the Q_{max}, IPSS, QoL scores, urodynamics and TRUS repeated at 6 months.

RESULTS

The patients were initially well matched for all variables. The procedure took longer in the Gyrus arm (57.8 vs 43.6 min, $P < 0.05$) and more patients required postoperative irrigation (seven Gyrus, one HoLEP). The Gyrus patients required longer 'recovery room' time (65.6 vs 47.1 min), but there was no difference in catheter time or hospital stay, and no patient required blood transfusion. There was no difference in efficacy at 1 and 3 months but the follow-up at 6 and 12 months is ongoing. There was one urethral stricture in each group and one re-operation for symptomatic obstruction in the Gyrus arm.

CONCLUSIONS

Endoscopic enucleation of the prostate is feasible with bipolar plasmakinetic energy. Although in experienced hands the procedure takes longer than HoLEP and involves more bleeding afterward, no transfusions were required and the early efficacy appears comparable.

Funding: Gyrus Medical Ltd

P088

Interstitial laser ablation of the prostate: a randomized prospective study with a 5-year follow-up

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INTRODUCTION

A prospective, randomized study was conducted to evaluate the safety and efficacy of interstitial laser therapy (ILC, diode laser 830 nm, Indigo™) to produce coagulation necrosis of a prostatic adenoma of ≤60 g and to compare it against standard TURP for treating BPH.

PATIENTS AND METHODS

From January 1997 to August 2002 150 patients with BPH were entered into the study, with a prostate of 20–60 g (mean 35.5). Randomization was 2 : 1 ILC vs TURP. The variables assessed were the IPSS, QoL, uroflow, postvoid residual volume and a TRUS assessment of the prostate.

RESULTS

The mean (SD) values for the three main variables were:

	ILC			TURP		
Follow-up, years	IPSS	QoL	Q_{max}	IPSS	QoL	Q_{max}
Pre	20.5 (5)	4.2 (1)	8.4 (2)	20.1 (5)	3.8 (1)	8.4 (2)
1	6.7 (6)	1.6 (1)	17.2 (6)	5.1 (4)	1.0 (1)	21.0 (11)
2	7.0 (6)	1.7 (2)	17.3 (7)	5.8 (5)	1.1 (1)	19.0 (10)
3	6.5 (4)	1.6 (1)	16.8 (7)	4.8 (4)	1.0 (1)	21.1 (9)
4	7.2 (6)	1.7 (1)	18.7 (8)	4.4 (5)	0.7 (1)	16.8 (6)
5	7.5 (6)	1.4 (1)	19.6 (6)	5.5 (8)	0.7 (1)	19.3 (5)

All differences were significant at $P < 0.001$.

No blood transfusions were required during ILC, compared with 8% during TURP. Irritative symptoms lasted for 6 weeks after ILC in 11% and after TURP in 2%. In the ILC group 3% (one each at 6 months, 2 and 3 years) required TURP.

CONCLUSIONS

At 5 years of follow-up both ILC and TURP produced equal improvements in IPSS, QoL, urinary flow rate and postvoid residual.

P089

Cooled thermotherapy (TUMT) for intractable chronic abacterial prostatitis: 6 months after treatment

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INTRODUCTION

Cooled ThermoTherapy™ using the Targis 61666 system (Urologix, Inc, Minneapolis, USA) is an effective treatment option for BPH with minimal side-effects. We present the preliminary results of a prospective feasibility trial for chronic abacterial prostatitis or chronic pelvic pain syndrome, classified as NIH IIIA+B (CAP), using the Targis System.

PATIENTS AND METHODS

Forty patients with intractable CAP and symptoms for >3 of the 6 months before treatment (NIH-CPSI pain score ≥8) received TUMT, achieving peak intraprostatic temperatures of ≥55°C. The tolerability of the treatment, side-effects and treatment efficacy were measured.

RESULTS

All 40 patients successfully completed the treatment, with pain scores and catheterization times afterwards similar to those of TUMT-treated patients with BPH. The mean NIH-CPSI scores (35 men) had improved at 6 months, i.e for pain from 11.3 to 3.5, urinary 4.7 to 2.2 ; and quality of life 7.2 to 3.1 (all $P < 0.001$). Two patients deteriorated by >1 point in any NIH score (quality of life 3, urinary 2), and 57–74% had a ≥50% improvement in scores. Minimal transient complications in nine patients included UTI, urinary retention and increased LUTS soon after treatment. One case of anejaculation was reported, with other patients showing maintenance or improvement in fertility, sexual activity, libido and erectile function.

CONCLUSION

Side-effects were minor and transient, pain during treatment was manageable and sexual function maintained. This treatment appears to be tolerable and viable, with minimal side-effects for intractable CAP. A longer follow-up to evaluate durability is ongoing.

Funding: Urologix, Inc., Minneapolis, USA