O-149 インポテンスにおけるアルプロスタジル 経尿道投与の使用経験

藤田保健衛生大学泌尿器科・知多市民病院泌尿器科・
長久保クリニック・
堀場優樹・泉谷正伸・窪田裕輔・市野学・深見直彦・三島淳二
・森紳太郎・伊藤徹・丸山高広・樋口徹・月岡靖彦・白木良一・
星長清隆・名出頼男・花井俊典・永裕彰・長久保一朗・桜井孝
彦・竹内昭雄

【目的】インポテンス治療に米国では、すでにプロスタグ
ランジンの経尿道投与を行い良好な成績を得ている。今回
我々はアルプロスタジル (PGE₁) を使用する機会を得
たため本剤の有効性につき検討した。【対象および方法】
対象は、基礎疾患および既往症を持つインポテンス患者9
症例に対し、アルプロスタジル (125 μg~1000 μg) を経
尿道投与し、その有効性及び副作用につき検討を加えた。

【結果】症例は骨盤臓器術後3例、DM3例、神経疾患2
例、会陰部外傷1例の9症例、平均年齢は、51.6歳、血中
テストステロン値 (平均384.0 ng/dl)、プロラクチン値
(平均12.1 ng/ml)、治療までの平均罹患期間は40.2ヶ月
であった。本剤以外の前治療効果判定では、不良6例 (66.
7%)、中等度1例 (11.1%)、良好2例 (22.2%) であり、
性交可能例は、1例であった。本剤に対する効果は、膨張
のみ1例 (11.1%)、不十分な勃起6例 (66.7%)、完全
勃起2例 (22.2%) であった。性交可能4例、不可能5例
であった。副作用は、1例に強度の尿道会陰部痛を、2例
に尿道違和感を認めるのみであった。【結語】本剤は、短
時間で作用し、副作用も少なく、使用方法も容易であり、
インポテンスの新しい治療薬として画期的な薬剤となるで
あらうと考えられた。

O-150 TRANSURETHRAL RESECTION OF THE PROSTATE (TURP), VERSUS HIGH ENERGY THERMOTHERAPY (HE-TUMT) OF THE PROSTATE IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA (BPH): LONG-TERM RESULTS.

University Hospital Nijmegen and Reiner de Graaf Hospital Delft, The Netherlands

Jean de la Rosette, Frank d'Ancona, Elmer Francisca, Bert Welling, Frans Debruyne.

INTRODUCTION & METHODS: We evaluated the outcome and durability of High Energy transurethral microwave thermotherapy (HE-TUMT PROSTATRON 2.5) in comparison with transurethral resection of the prostate (TURP).

MATERIAL & METHODS: 52 patients with BPH and lower urinary tract symptoms were randomized and treated either by TURP (21 patients; mean prostate volume 45 ± 15 cc) or HE-TUMT (31 patients, 43 ± 12 cc). Long-term results were obtained at a mean follow-up time of 2.5 ± 0.5 years.

RESULTS: Significant improvement was observed in both groups (see clinical outcome chart below). Six patients (19%) underwent TURP after TUMT (4 patients after 1 year). However, three of these patients were still not satisfied with the outcome following additional TURP. 1 patient underwent a bladder neck incision following TURP due to bladder neck sclerosis.

		Screening	3 M	2.5 years
TUMT N = 31	Madsen	13.3 ± 4.2	5.2 ± 4.1	5.8 ± 3.8
	Qmax (ml/s)	10.0 ± 6.0	15.1 ± 8.1	15.1 ± 9.6
	Residual (ml)	57.6 ± 77.6	24.4 ± 57.0	27.4 ± 49.1
TURP N = 21	Madsen	13.8 ± 4.3	3.6 ± 3.2	3.6 ± 3.1
	Qmax (ml/s)	9.3 ± 3.4	19.1 ± 11.0	19.1 ± 8.2
	Residual (ml)	91.1 ± 104.7	9.6 ± 23.6	9.3 ± 14.6

CONCLUSIONS: Both treatment modalities show good and durable symptomatic and objective results at 2.5 year follow-up with a low re-treatment rate in both cases. Retreatments after TUMT are few and performed 1 or more years post-treatment.

O-151 LOW AND HIGH ENERGY TUMT - A RETROSPECTIVE COMPARISON BY THE EUROPEAN BPH STUDY GROUP.

Hannover University Germany, L'Aquila University Italy, Charing Cross Hospital London UK, University Hospital Nijmegen The Netherlands
Klaus Höfner, Andrea Tubaro, Simon Carter, Jean de la Rosette.

INTRODUCTION & OBJECTIVE: The efficacy of Low Energy (LE) TUMT Prostaton 2.0 has been well documented in long term follow up. Data are now available from High Energy (HE) TUMT Prostaton 2.5 from 4 centers of the European BPH Study Group, using the PROSTATRON (EDAP Technomed).

MATERIAL & METHODS: A total of 97 BPH patients were treated by LE-TUMT and 85 patients by HE-TUMT. We have performed a retrospective comparison of the subjective and objective outcome 6 months after treatment.

RESULTS

	Follow-up	TUMT 2.0	TUMT 2.5	2.0 vs. 2.5 (p=)
Madsen	pre	13.9	13.9	.894
	6 months	5.3	5.9	.374
	p=	.000	.000	
	Difference	-8.7	-7.7	.256
Qmax (ml/s)	pre	8.6	9.6	
	6 months	11.8	14.7	0.040
	p=	.000	.000	.001
	Difference	3.2	5.1	.034
Residual Urine (cc)	pre	105.3	83.4	.029
	6 months	71.7	29.3	.001
	p=	.000	.000	
	Difference	-33.8	-39.7	.792
pdetqma (cmH ₂ O)	pre	74.2	62.7	.015
	6 months	72.7	38.9	.000
	p=	.713	.000	
	Difference	1.5	-23.8	.000
linPURR	pre	4.3	2.9	.000
	6 months	4.1	1.3	.000
	p=	.404	.000	
	Difference	-.1	-1.2	.000

CONCLUSIONS: The results show a comparable effect on symptoms whereas the effect on obstruction is far greater with TUMT 2.5. However, there is a higher rate of morbidity in terms of treatment pain, retrograde ejaculation and post-treatment retention with 2.5. Therefore, 2.0 should remain the treatment of choice for symptomatic BPH patients with moderate obstruction, whereas 2.5 is better indicated for the treatment of severe obstruction.

O-152 ANTENNA DESIGN AND MICROWAVE FREQUENCY FOR TUMT.

Charing Cross Hospital, London, England. L'Aquila University, L'Aquila, Italy.

Simon Carter, Andrea Tubaro.

INTRODUCTION & OBJECTIVES: Microwave thermotherapy is established as one of the main options for the treatment of BPH. It is mandatory to ensure that if the treatment energy is increased, the field of irradiation should not exceed the volume of the prostate and compromise either the urethral sphincter or the rectum. However it is also important that the **bladder neck** can be treated if significant effects on **obstruction** are desired. We have examined the irradiation patterns from a variety of antennae operating at different frequencies.

MATERIAL & METHODS: An LCD device detecting temperature changes at 45 °C was used to indicate the heating field from antennae designed for each commonly used frequency (915, 1296 and 2450 MHz).

RESULTS: The energy delivered to the prostate depends on the frequency, antenna design and length. The length of a monopolar antenna required for 915 MHz is too long to be practical and the heating field is such that distal heating of the urethral sphincter can be encountered. The heating from the 1296 MHz **monopolar** antenna is a better length and shape to suit the enlarged human prostate and also allows positioning within the applicator such that the **bladder-neck** can be treated if required to relieve severe obstruction. The bipolar antenna at 915 MHz treats a smaller volume and shorter length of prostate, equivalent to the 2450 MHz monopolar antenna. However, the bipolar 915 MHz antenna cannot be used to treat the bladder neck without losing a great deal of energy in the self-retaining balloon.

CONCLUSIONS: Both frequency and antenna design influence the pattern of microwave heating. The results emphasize the importance in understanding the heating pattern in each device. The monopolar antenna design seems optimal when emitting microwaves at 1,296 MHz, ensuring maximum delivery of energy, yet in total safety.