



Holmium Laser Enucleation of the Prostate- Initial Experience at Vancouver Hospital

Michael K. Eng, MD
Ryan F. Paterson, MD FRCSC
Kourosh Afshar, MD FRCSC

University of British Columbia

Question

- Is outpatient Holmium Laser Enucleation of Prostate [HoLEP] safe and effective?

HoLEP: Advantages vs. TURP

- Minimal bleeding
- No prostate size limitation
- No TUR syndrome (NS irrigant)
- ↓ morbidity

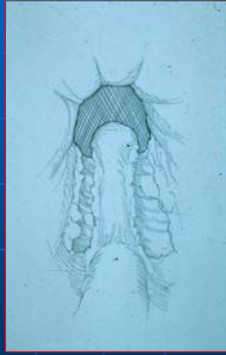
Gilling et al 2001; Toohar et al 2004; Montorsi et al 2004

HoLEP Technique

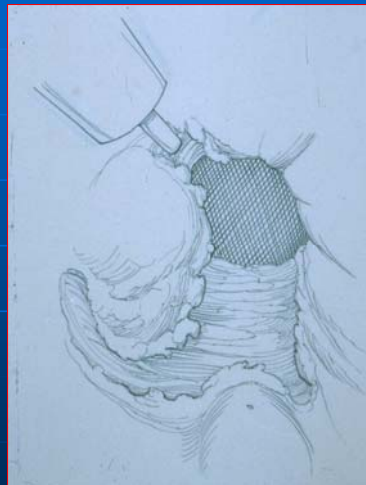
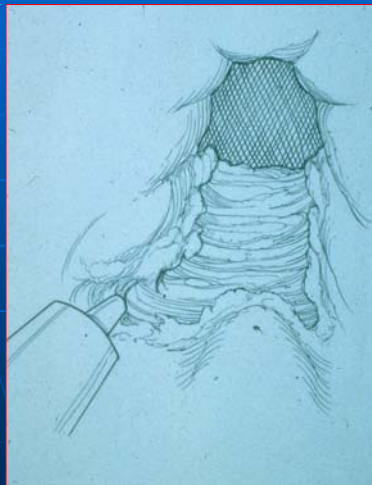


- 26 Fr sheath w/ continuous flow
- 550 μm laser fiber
- Energy level: 2.0 J @ 50 Hz
- Enucleate median, then lateral lobes
- Tissue morcellation

HoLEP: Median Lobe

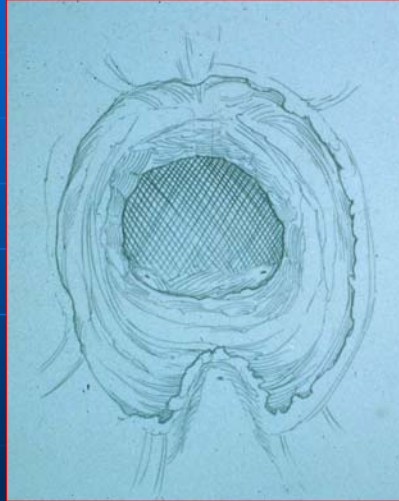


HoLEP: Lateral Lobes



Final Tissue Defect

- Large defect
- ~80% removed
- Surgical capsule remains



HoLEP @ Vancouver Hospital

- Single surgeon
- Surgical Daycare Center
- Oct 2003- Nov 2004
- n=43 pts
- ASA 2-3
- Mostly high risk M7
 - 12 pts preoperatively anticoagulated
 - Large prostate size

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M7 12 pts on coumadin[6] /ASA[6]

4 prior TURPs

23 in retention > 1mo

31 w/ >60 g prostate size

Mikey, 5/17/2005

Preoperative Parameters

- Age: 70 yo (56-88)
- AUA SS: 20 (6-34)
- QoL Index: 4 (2-6)

- Qmax: 9.2 ml/s (4.6-15.6)
- PVR: 156 ml (9-1300)

- PSA: 3.1 ng/ml (0.36-24)
- TRUS volume: 74 g (10-194)

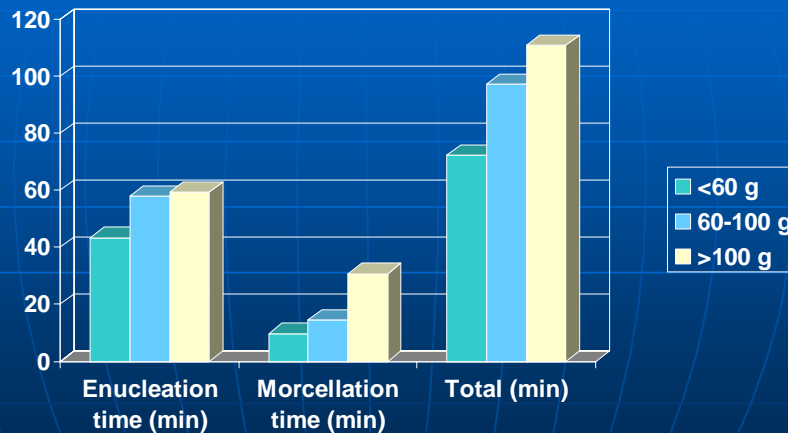
Operative Results

- Enucleation time: 50 min (10-80)
- Morcellation time: 10 min (4-90)
- Total operative time: 80 min (30-180)
- Specimen weight: 71 g (15-226)

- All procedures successfully performed

Operative Results & Weight Resected

M25



Outpatient HoLEP?

- 32/43 pts performed as outpatient
 - Avg postop length of stay: 4 hrs
- Factors requiring overnight stay (n=11)
 - Planned inpatient admission pre-op (n=1)
 - Reduced mobility (n=2)
 - Bleeding (n=8)
 - due to recent use of aspirin (n=2)
 - *No assoc b/w prostate size & hospital admission (p=0.49)*
- No readmissions/ER visits after discharge

M24

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M25 Statistically significant differences using mean times with ANOVA

Clinically the significant difference is b/w <60 g and >60 g in terms of enucleation time.

Mikey, 5/17/2005

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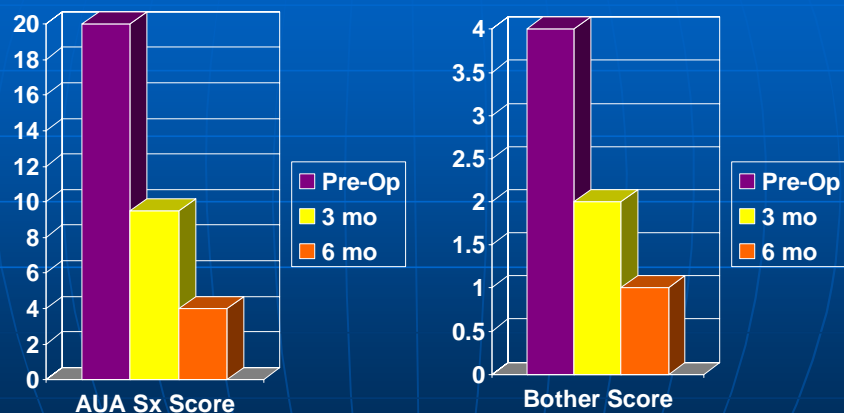
M24 using Wilcoxon rank sum test

Mikey, 5/16/2005

Postop Course

- Catheter removed POD 1 in >70% M17
- 1 pt required blood transfusion M20
- Anticoagulated patients resumed treatment within 1st week M18
- All pts voiding spontaneously M19

Results @ 3 and 6 months



M23

Slide 13

M17 31 of 43; max 7 days

Mikey, 5/14/2005

M18 coumadin at usual dose POD 1

Mikey, 5/14/2005

M19 transient incontinence post-op, no persistent incontinence @ 3 months except 1 pt
[functional]

Mikey, 5/14/2005

M20 4 u pRBC transfused, admitted x 3/7, foley x 3/7

large prostate (104 g resected), CBI inadvertently D/C in transport to pacemaker clinic

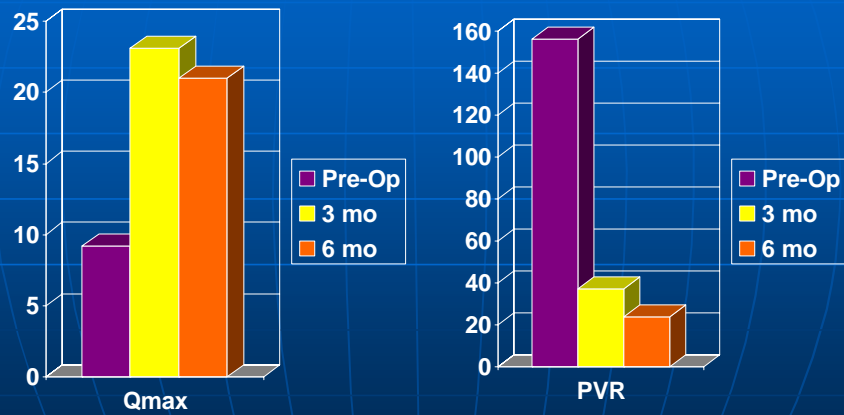
Mikey, 5/14/2005

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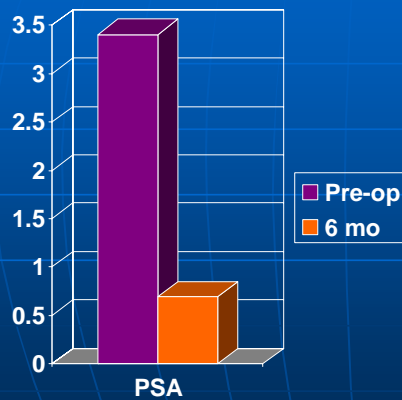
M23 AUA SS: mild (0-7), mod (8-19), severe (20-35)

Mikey, 5/14/2005

Results @ 3 and 6 months



PSA change



- 80% decrease
- Marker of volume resected

Conclusion

- Outpatient HoLEP feasible and safe in high risk patients
 - Large prostates
 - Anti-coagulated patients

Future Directions

- Long-term follow-up
- Efficacy:
 - AUA SS
 - Uroflowmetry [Qmax]
- Long term Cx:
 - strictures, incontinence, ED

