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Laser Surgery of the Prostate
Carol-Anne Lee, RN, BN

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The benefits of the laser are the precise cutting abilities (on higher settings 2 Joules x 50 pulses/sec = 100 watts), the good level of hemostasis (on lower settings 1.5 – 2.0 Joules x 30 – 40 pulses/sec = 45 – 80 watts), the virtually bloodless surgical field and the immediate relief of symptoms.

There are 3 types of laser surgery of the prostate.

Laser TUIP (transurethral incision of the prostate)
This is a "sculpturing" of the prostatic urethra to create an unobstructed urethra.

HoLRP (holmium laser resection of the prostate)
Large pieces of prostate tissue are resected and removed with a modified resectoscope and loop (crown).

HoLEP (holmium laser enucleation of the prostate)
This is a two-step procedure. The median and lateral lobes of prostate tissue are removed (enucleated) intact and a mechanical morcellator is used to facilitate removal of the prostate tissue via the bladder.

Equipment
a) 80 – 100 watt laser source
   a. ideal setting for cutting is 2 Joules at 40 – 50 Hz
   b. lower settings for coagulation/proximity to the sphincter 2 Joules at 40Hz or 1.5 Joules at 30 Hz
b) 26 French continuous flow rectoscope with modified inner sheath for laser fiber tip.
c) 550um end firing quartz laser fiber
   a. the end should be stripped before each use.
   b. 20 – 30 procedures are possible per fiber.
   c. flash sterilize between cases.
d) 7 French stabilizing laser catheter
e) Normal saline irrigation solution
f) Video monitoring system
g) Tissue morcellator system to be used with indirect nephroscope that includes an adaptor attaching it to the outer rectoscope sheath.

Advantages of Holmium Laser Surgery.
a) There is no limit to size. This type of surgery is suitable for large prostates (200gms)
b) It is suitable for patients with altered coagulation profiles, either therapeutic or pathological etiologies.

UNC Welcomes AQIIU to www.UNC.ORG
The Association Quebecoise des Infiemieres et Infirmiers en Urologie is a francophone group of urology nurses who meet once a year in conjunction with the Quebec Urologists for a one-day conference. Annie Taillefer has been president of their group over the past 11 years. They have watched the interest grow over all these years until now 160 regularly attend. The nurses come from all across Quebec. The last conference was held in November in Quebec City. A bilingual UNC member has presented at this conference for the last two years.

Last November AQIIU approached UNC to see if we couldn't come to a mutual agreement to let them use a part of our web site: www.unc.org. I am pleased to announce that work has begun to develop five pages of francophone content. It is hoped to have this up and running by January, 2004. Carol Ann Lee, one of our Quebec Provincial Reps, will be the UNC liason. This is a wonderful opportunity to share with our colleagues in Quebec.

Corporate Sponsors
Urology Nurses of Canada
Corporate Sponsors for 2003/2004
Each year Urology Nurses of Canada acknowledges and thanks our national Corporate Sponsors for their continued support.
For the year 2003/2004 they are:

Titanium Level
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“Where the Flow Begins”

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We were all deeply moved and challenged by Dr Sean Jennings’ presentation aptly entitled “Locked In, Locked Out”. Dr Jennings ended up unable to speak or move any part of his body except his eyelids following an MVA. He expressed how he felt, how he communicated and how he has come as far as he has. His wife would read the script when his voice tired. This man believes in getting his story across! His book is used as a textbook for medical students and is available to anyone interested.

Those attending were brought up to date with an overall view of Surgical Management of Stress Urinary Incontinence in Females, looked at Indwelling Catheters, and Ca Bladder, and shared about Laser TURPs. We heard about innovative programs such as the Nurse Continence Advisors, Menopause clinics, Incontinence clinics and a “Healthy Prostates for a Healthy Tomorrow” public presentation.

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Continued from page 2

e) The laser has a superior coagulative ability. It seals tissue planes as the operation progresses and this results in minimal blood loss.

d) It avoids the danger of systemic fluid absorption (uses N/S versus Glycine 1.5%) and eliminates the risk of developing TURP syndrome. A diuretic (lasix) is given Q1h to avoid fluid overload of Normal Saline.

e) There is a reduced/eliminated need for bladder irrigation

Disadvantages of Holmium Laser Surgery

a) There are high initial start-up costs
   a. Coherent Verspule Power Suite delivers up to 100watts and costs US$ 200,000.
   b. laser fibers are $1000 each, but can be flash sterilized and used for approximately 15 – 20 cases

b) Surgeons find there is a steep learning curve. There is difficulty of working on 3 planes. The previous resection techniques teach to resect toward the sphincter while enucleation teaches to resect toward the bladder neck.

c) The length of hospital stay is shorter. (discharged the following day)

d) It avoids the danger of systemic fluid absorption (uses N/S versus Glycine 1.5%)

Modified resectoscope for extraction of smaller prostate fragments from bladder.
**UNC Info**

**Urology Nurses of Canada**

The Urology Nurses of Canada extends an invitation to all nurses and allied health interested in urologic nursing to join the association. The Urology Nurses of Canada is a National Association whose mandate is to enhance the specialty of urologic nursing in Canada by promoting education, research and clinical practice.

The activities of the Urology Nurses of Canada are designed to meet the ongoing education, research and clinical practice needs of the urology nurses and allied health in Canada. The organization educates nurses and allied health on urology through continuing education programs, promotes urology research, supports the publishing of urology research, and develops standards of practice.

**UNC Representatives 2002 - 2003**

**UNC Executive**

The Urology Nurses of Canada is managed by an executive board composed of:

- President: Sue Hammond
- Past President: Laurel Emmerman
- Vice-President West: Colleen Toothill
- Vice-President East: Emmi Champion
- Vice-President Central: Susan Fried
- Membership: Angela Black
- Sponsorship: Deirdre Lewis
- Treasurer: Lisa Lynch
- Secretary: Brenda Bond

**UNC Provincial Representatives**

- British Columbia: Jill Jeffery
- Alberta: Lesley Hanson
- Ontario: Lucy Rebelo
- Quebec: Marie-Josee Tardif
- New Brunswick: Carol-Anne Lee
- Nova Scotia: Liette Conner
- Newfoundland and Labrador: Tracey Tompkins

**Local Chapter News info: www.unc.org**

**How to form a local UNC Group**

1. Contact nurses and allied health in your area interested in Urologic Nursing.
2. Pick a topic and a speaker (for the initial meeting).
3. Book meeting room.
4. Contact local sales rep for potential support of meeting.
5. Advertise meeting and distribute information about the UNC.
6. Create local executive e.g. charperson, secretary, treasurer.
7. Organize educational meetings/events.
8. Contact UNC provincial representative regarding local business meetings.
9. Encourage submissions of articles and upcoming events to "Pipeline".

**Help Wanted!**

The UNC invites you to participate with some of the UNC initiatives including:

- Authors for Pipeline articles.

**UNC Award Of Merit**

Every year Urology Nurses of Canada seeks nominations for the Award of Merit. This is an award which honors a nurse who has not only contributed to Urology Nurses of Canada but has shown leadership to her local colleagues and demonstrated a high level of nursing skills. This year's winner is Louise McIntosh from Ottawa, ON.

In 2000 at the Urological Excellence Conference held in Kingston Louise was inspired to be innovative and take initiative by Dr. Jeanette Rodgers, the CNA President. She took hold of the challenge. As a result, the Urology Nurses of Canada's Civic Clinic officially opened its doors in November, 2002. The clinic is the only of its kind in Eastern Ontario. Louise has obtained Nurse Continence Advisor certification and a grant from the Ontario government to help her endeavors. She has spoken at several UNC conferences as well as AQIU conferences in Quebec and has contributed many articles to the Pipeline. She is presently studying for her Masters. Congratulations Louise!!

**UNC Membership**

UNC Executive has decided the membership year will be from January 1st to December 31st. This means your present membership will be from September 1st, 2003 to December 31st, 2004.

**Abstracts Wanted!**

Abstracts for concurrent sessions, scientific papers and posters are wanted for the Urological Excellence Conference to be held in Calgary in September, 2004.

Watch your mail for applications or Contact Laurel McDonough

Email: lmcdonough@calgaryhealthregion.ca
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The UNC hosts an annual conference each fall and convenes for an educational meeting at the Canadian Urological Association annual meeting each June.

Membership in the UNC now entitles you to receive 6 issues of Urological Nursing Journal, 2 issues of Pipeline, Annual Urological Excellence Conference information and discount on registration, UNC Membership Directory, UNC Constitution, UNC: Standards of Urologic Nursing Practice and your personal access to UNC reports on the web.

For more information about UNC contact: Angela Black, Membership Coordinator at blacka@kgh.kari..net or visit www.unc.org.

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Alberta: Lesley Hanson
Ontario: Lucy Rebelo
Ontario: Frank Stewart
Quebec: Marie-Josée Tardif
Quebec: Carol-Anne Lee
New Brunswick: Gina Porter
Newfoundland & Labrador: Tracey Tompkins

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Southwest Info: Email: rebelo@unc.org
Saskatoon Info: Tel: 306-668-0873
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HFX Info: Tel: 902-454-1231
Miramichi Info: Tel: 506-380-3747
Newfoundland Info: Tel: 709-729-3747
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Email: tompkins@roadrunner.nf.net
New Brunswick Info: Gina Porter
Tel: 506-632-5720
Halifax Info: Emmi Champion
Tel: 514-842-1231 - 35212
Ottawa Info: Susan Freed
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Corporate Sponsor Award Winners

The winners of the UNC Awards Program were announced in Saint John, NB at the Urological Excellence Conference - 2003. These awards are made available through unrestricted educational grants given via our Corporate Sponsorship Program.

The winner of the Scholarship Award was Emmi Champion from Halifax, NS. The Corporate sponsor was Pfizer.

The winner of the Research Award was Lesley Hanson from Edmonton, AB. She will be doing research entitled "The Sexual Function of Women Before and After Surgery for Urinary Incontinence and/or Pelvic Organ Prolapse". The corporate sponsor was AstraZeneca.

The winner of the Male Sexual Dysfunction Award was Brenda Bondie of Victoria, BC. The corporate sponsor was Pfizer.

The winner of the Editorial Award was Frankie Bates from Saint John, NB

Her article was entitled "Assessment of the Female Patient with Urinary Incontinence". The corporate sponsor was Abbott.

UNC Award Of Merit

Louise Mcintosh from Ottawa, ON.

Urology Nurses of Canada Awards

At each Urological Excellence Conference awards are given by Urology Nurses of Canada for the best short paper presentation and the best poster.

The winner of the award for best Short Paper Presentation was Fran Monkman from Winnipeg, MB. Her presentation was entitled "Can We Talk".

The winner of the Poster award was Louise McIntosh from Ottawa, ON.

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c) The laser has a superior coagulative ability. It seals tissue planes as the operation progresses and this results in minimal blood loss.
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e) There is a reduced/eliminated need for bladder irrigation
f) Laser gives the ability to retrieve tissue for histological examination from morcellation technique despite the fact that 50 – 60% of resected tissue is vaporized.
g) There is a reduction in transfusion requirement (report of 1/100 by Gilling et al. 1996)
h) There is a shorter post-operative catheterization period (< 24 hours)
i) The length of hospital stay is shorter. (discharged the following day)
j) There is a hastened return to normal activity

Disadvantages of Holmium Laser Surgery

- There are high initial start-up costs
  a. A Coherent Verspulses Power Suite delivers up to 100 watts and costs $US 200,000.
  b. Laser fibers are $1000 each, but can be flash sterilized and used for approximately 15 – 20 cases
- Surgeons find there is a steep learning curve.
  b) There is difficulty of working on three planes. The previous resection techniques teach to resect toward the sphincter while enucleation teaches to resect toward the bladder neck.
- There is a longer procedure time (approximately 1 gram/minute – this includes enucleation and morcellation time)

HoLEP is a safe, effective and well tolerated surgical option for men with benign prostatic hypertrophy. It is associated with minimal morbidity and a short length of hospital stay. There is a need to ensure that surgeons/nurses have adequate experience in transurethral techniques and previous experience in endoscopic/laser surgery.

Additional high quality randomized trials would strengthen the evidence base for HoLEP.
The benefits of the laser are the precise cutting abilities (on higher settings 2 Joules x 50 pulses/sec = 100 watts), the good level of hemostasis (on lower settings 1.5 – 2.0 Joules x 30 – 40 pulses/sec = 45 – 80 watts), the virtually bloodless surgical field and the immediate relief of symptoms.

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- A 7 French stabilizing laser catheter
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- A Tissue morcellator system to be used with indirect nephroscope that includes an adaptor attaching it to the outer rectoscope sheath.

**HoLEP Technique**
- A. Initial right median lobe incision, lateral to lobe (7 o’clock position)
- B. Completed median lobe incisions (5 and 7 o’clock positions)
- C. Enucleated median lobe floating into the bladder
- D. Right lateral lobe enucleation with right inferior apical dissection completed underneath right lateral lobe.

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