



LAPAROSCOPIC SUPRACERVICAL HYSTERECTOMY

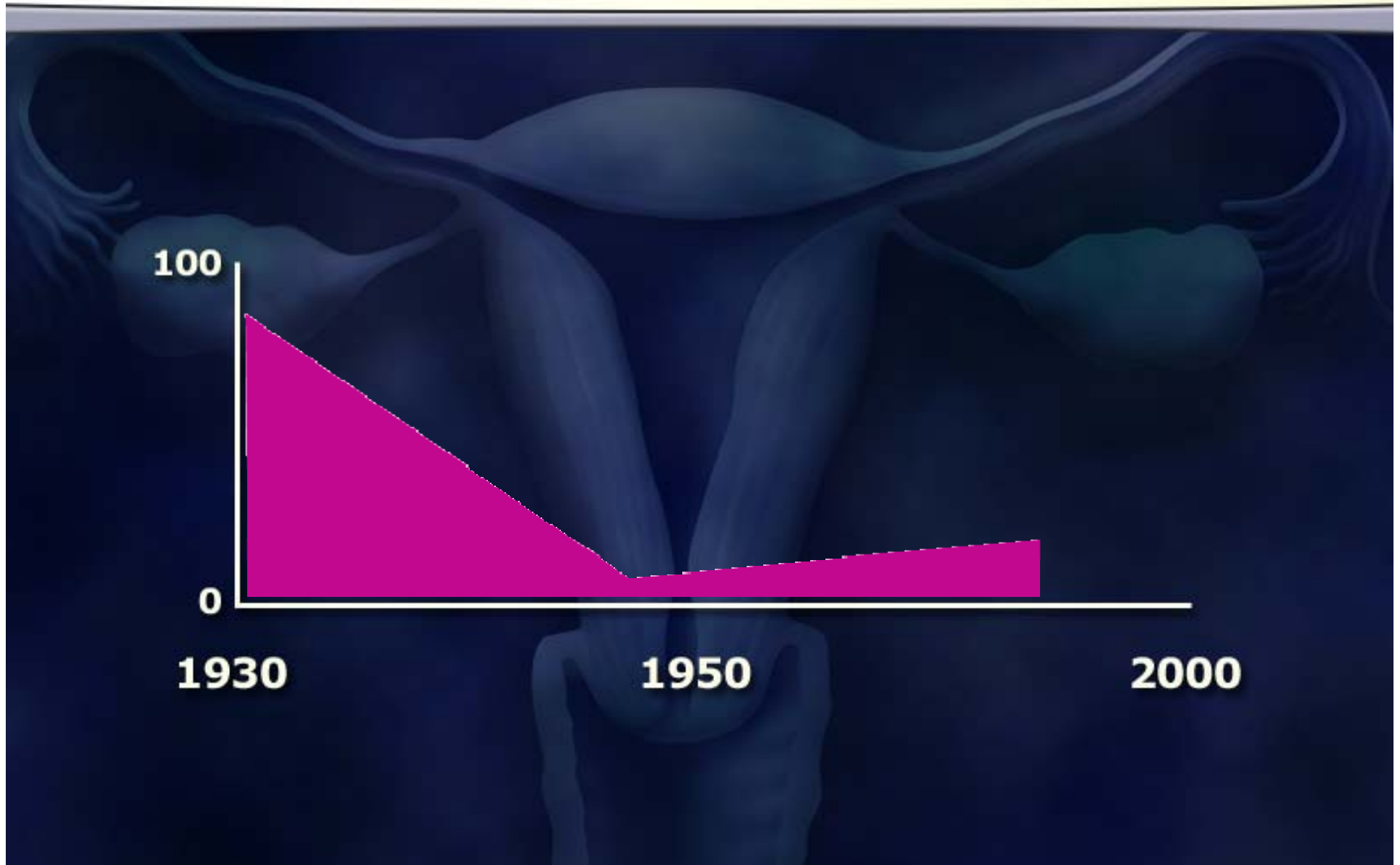
*Examining the
Justification*

*Reviewing the
Course*

Objectives

- Examine the justification for supracervical hysterectomy
- Review potential advantages of laparoscopic supracervical hysterectomy (LSH)
- Identify the indications and contraindications for LSH
- Describe the methodology for performing LSH

Supracervical Hysterectomy Historical Perspective



Supracervical Hysterectomy

Justification

- Most popular method through mid 20th century
- Justified by morbidity associated with total hysterectomy due to:
 - & Suboptimal anesthesia and surgical techniques
 - & Lack of antibiotics and blood banking technology
 - & Complications related to cervicectomy
- 50% reduction in mortality compared with total hysterectomy

Supracervical Hysterectomy

Challenging Its Worthiness

- Total hysterectomy regained favor in the in the 1940s due to:
 - & Refinement of surgical techniques
 - & Safer anesthesia
 - & Introduction of antibiotics
 - & Availability of blood transfusions
- Routine cervicectomy advocated to prevent cervical cancer

Supracervical Hysterectomy

Reexamining Its Value

- New science to detect and treat cervical disease
 - & Papanicolaou smear screening/colposcopic diagnosis
 - & Outpatient therapy of preinvasive disease
- Menorrhagia and fibroids are treatable by removing corpus alone
- Supracervical approach potentially reduces morbidity
 - & Operative (injury to the ureter, bladder, and rectum; hemorrhage)
 - & Postoperative (pain, visceral dysfunction, disability)
 - & Sexual dysfunction
- Introduction of laparoscopic supracervical hysterectomy

Total Hysterectomy

Impact on Bladder Function

- Potential for disruption of innervation to bladder
 - & No conclusive evidence that cervicectomy invariably results in bladder dysfunction (Munro, 1997)
- Impact of hysterectomy technique on bladder sensitivity and compliance
 - & Less urinary frequency and incontinence reported with supracervical vs total hysterectomy (Kilcku et al, 1981; Kilcku et al, 1985)
- Impact of hysterectomy technique on urethral function
 - & No significant changes in urodynamic parameters reported with either supracervical or total hysterectomy (Kujansuu E et al, 1989; Lalos and Bjerle, 1986)

Total Hysterectomy

Impact on Sexual Function

- Role of the cervix in orgasm
 - & Results of a 2-year prospective study after total hysterectomy were significant for overall improvement in sexual function (Rhodes et al, 1999)
- Impact of hysterectomy technique on dyspareunia and frequency of orgasm
 - & Laparotomic subtotal hysterectomy was associated with a greater reduction in dyspareunia 1 year after surgery compared with total hysterectomy (Kilkku, 1983)
 - & Orgasm was reduced after total hysterectomy but not after supracervical hysterectomy (Kilkku P et al, 1983)

Total Hysterectomy

Impact on Sexual Function

- Importance of preoperative sexual function and patient expectations
- Anatomic issues and enjoyment of sexual activity
 - & Uterine contractions
 - & Vaginal tone and length
 - & Presence of the cervix
- Potential for changes in sexual function remains a fundamental preoperative concern
 - & No data to confirm that one procedure is superior

Supracervical Hysterectomy Impact on Cervical Neoplasia

- Routine cervicectomy justified before the advent of cytologic screening
 - & Current adjusted lifetime risk of cervical cancer is 0.5% after three normal Pap smears
 - & Electrocoagulation of the cervical stump reduces cancer risk
 - & Risk of vaginal cancer is as high as 0.17%
- No evidence of increased risk of cervical cancer after supracervical hysterectomy
 - & Cancer risk equal to intact uterus
 - & Cervical cancer prognosis is unaffected by stump
- Periodic cytologic screening is mandatory

Comparative Studies

TLH vs LSH

Study	Procedure	n	OR Time (min)	P Value	EBL (cc)	P Value	Hospital Stay (Hours)	P Value
1 (Lyons, 1993)	TLH LSH	50 50	145 118	*	250 50	*	37 18	*
2 (Richards and Simpkins, 1995)	TLH LSH	21 20	117 127	NS	210 179	NS	46 34	NS
3 (Lalonde and Daniell, 1996)	TLH LSH	20 20	124 106	NS	254 200	NS	41 26	*

TLH = Total laparoscopic hysterectomy; LSH = Laparoscopic supracervical hysterectomy; OR = operating room, EBL = estimated blood loss; NS = not significant

* Difference between study groups is statistically significant

Adapted from Munro MG, Obstet Gynecol, 1997

Comparative Studies

LAVH vs LSH—A Prospective Case-Control Analysis

Procedure	n	LOS (median Days)	Morbidity	OR Time (min)
LAVH	105	2	13%*	220
LSH	27	1*	0	181*

LOS = length of stay, OR = operating room; LAVH = laparoscopically assisted vaginal hysterectomy; LSH = laparoscopic supracervical hysterectomy

* $P < 0.05$

Source: Sokol et al, *Obstet Gynecol*, 2000

Laparoscopic Supracervical Hysterectomy

Tides of Resistance

- Concerns relating to retention of the cervix
 - & Risk of preinvasive and invasive cervical disease
 - & Ongoing need for annual Pap smears
 - & Risk of cyclic spotting from residual endometrium
- Challenge to traditional teaching
- Need to perform hysterectomy via laparoscopy and to morcellate and remove the uterine fundus

Laparoscopic Supracervical Hysterectomy

Reasonable Suppositions

- No evidence cervix must be removed in low-risk patients
- Cervicectomy is associated with major morbidities
- LSH offers realizable benefits:
 - & Shortened operative procedure
 - & Hysterectomy in an outpatient setting
 - & Decreased postoperative pelvic pain
 - & Rapid return to normal sexual activity
- Potential for retention of the cervix can be pivotal in the patient's decision-making process

Laparoscopic Supracervical Hysterectomy

Market Forces

- Total hysterectomy often exceeds pathology
- “Hysterectomy backlash”
- Growing public awareness of minimally invasive surgical techniques
- Physician advocacy
- Desire of patients to preserve native anatomy
- Patient concerns regarding adverse psychological and sexual effects

Case Study History

- 44-year-old AA G2P2 in good health
- History of progressive menorrhagia and pelvic pressure
- Diagnosis of leiomyomata, 16-week size
- Patient is opposed to long-term hormone challenge and is tacitly opposed to hysterectomy
- Previously advised by two “well-known” physicians to undergo TAH-BSO; neither physician offered any alternatives

Case Study

Course of Action

- Review options
 - & Uterine artery embolization
 - & Laparoscopically assisted vaginal hysterectomy
 - & Laparoscopic supracervical hysterectomy
 - & Laparoscopic total hysterectomy
 - & Conservation of adnexa
 - & Abdominal hysterectomy
- Provide educational materials and refer to Web sites
- After 1 month, the patient undergoes LSH
- Two months after surgery, the patient appears on a Web site as an advocate of LSH

Case Study

Key Points

- Potential to retain cervix and ovaries has redefined concept of hysterectomy
- Participation in the decision-making process empowers patients

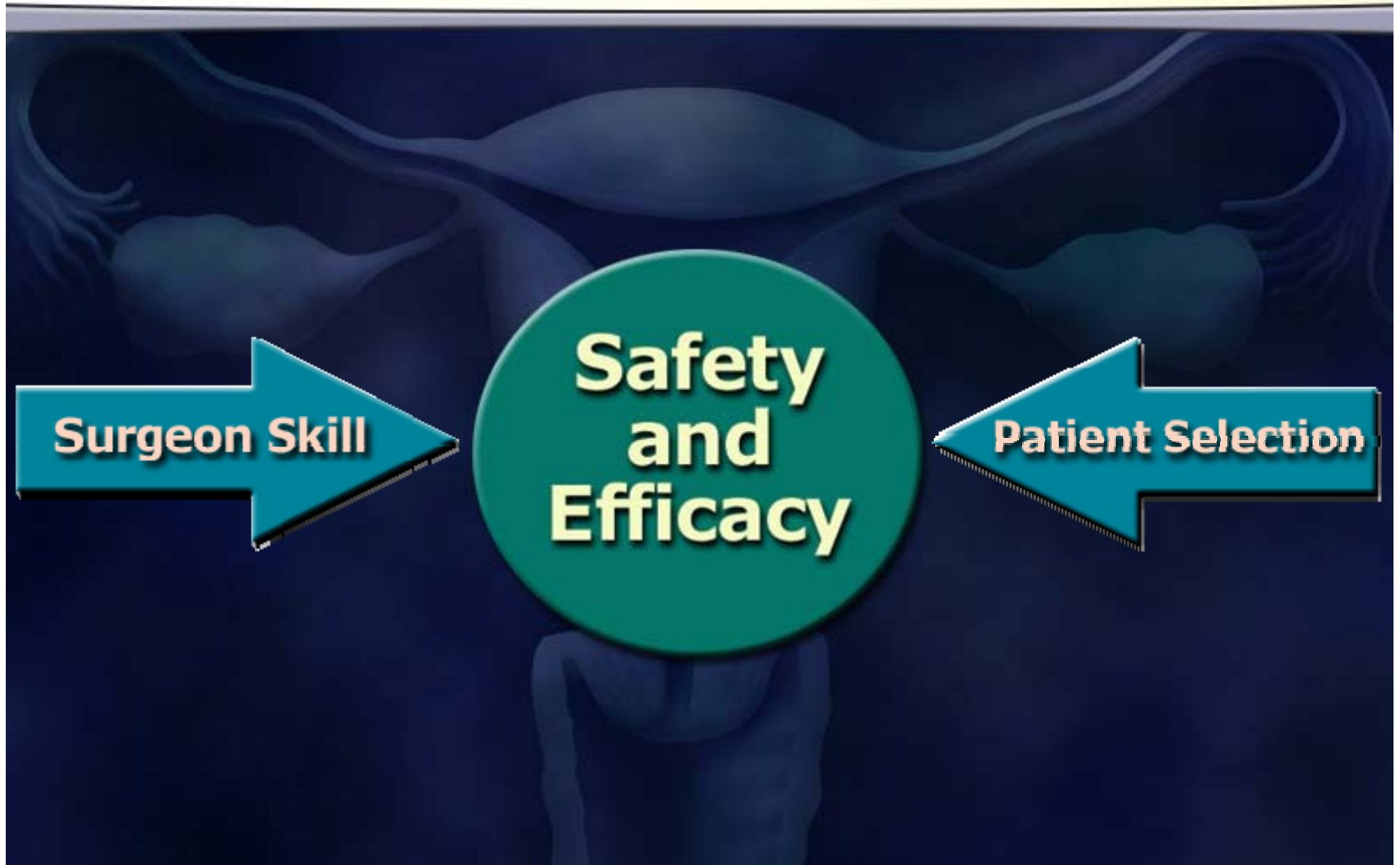
Supracervical Hysterectomy

Contraindications

- Uterine prolapse
- Pelvic relaxation
- High-risk sexual behavior
- History of high-grade cervical lesion
- Fear of cancer
- Large, primarily calcific leiomyomata
- Paravaginal and pararectal endometriosis

Laparoscopic Supracervical Hysterectomy

Sine Qua Non



Laparoscopic Supracervical Hysterectomy

Patient Selection

- Explicitly desires to conserve cervix
- Willing to comply with regular Pap smear screening
- Willing to accept cyclic spotting
- Able to tolerate lengthy laparoscopy
- Committed to a minimally invasive procedure

Laparoscopic Supracervical Hysterectomy

Essential Elements

- Skilled laparoscopic physician
- Experience with techniques for tissue morcellation and removal
- Accessible peritoneal cavity
- Anatomic clarity of posterior and lateral uterine segments
- Uterine mobility
- Access to uterine vasculature

Laparoscopic Supracervical Hysterectomy

Essential Informed Consent

- Risk of injury to the bowel, bladder, ureters, and vasculature
- Possible conversion to laparotomy
- Need for regular Pap smear screening
- Potential for cyclic spotting
- Risk of cervical prolapse

Laparoscopic Supracervical Hysterectomy

Looking at the Stages

- Anatomic assessment
- Dissection to uterine vasculature
- Securing the uterine vasculature
- Amputation of uterine corpus
- Extirpation and removal of the corpus
- Completion of the cervical stump

Laparoscopic Supracervical Hysterectomy Anatomic Assessment



Laparoscopic Supracervical Hysterectomy Left-Side Dissection to Uterine Vasculature



Laparoscopic Supracervical Hysterectomy Amputation of the Uterine Corpus



Laparoscopic Supracervical Hysterectomy

Potential Technical Challenges

- Obstruction of operative instruments by uterus
- Cornual and proximal pedicle bleeding
- Asymmetrical amputation
- Accidental entry into the vagina
- Intrusion into the uterosacral complex

Completion of the Cervical Stump

- Control bleeding
- Desiccate remaining endocervical tissue to reduce postoperative cyclical spotting/risk of endocervical neoplasia
- No data to support or refute value of suturing of the open cervical defect
- Assess hemostasis with and without pneumoperitoneal pressure
- Consider placement of an absorbable adhesion barrier

Laparoscopic Supracervical Hysterectomy

Summary

- Supracervical hysterectomy may reduce surgical and postoperative morbidity as well as bladder and sexual dysfunction
- Laparoscopic supracervical hysterectomy provides an efficient method of uterine extirpation in appropriately selected patients
- Laparoscopic supracervical hysterectomy requires competence in laparoscopic hysterectomy and techniques for removal and morcellation of the uterine corpus