Surgical Tutorial 2:
Complicated Endometriosis

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Professional Education Information

Target Audience
This educational activity is developed to meet the needs of residents, fellows and new minimally invasive specialists in the field of gynecology.

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Surgical Tutorial 2: Complicated Endometriosis

Antonio Setubal, Chair

Faculty: Leila V. Adamyan, Horace Roman, Ja Hyun Shin, Errico Zupi

This session provides a discussion on complicated endometriosis, including recto-vaginal and rare cases of the disease. A special focus on Adenomyosis and the impact on sub-fertility will be presented. Quality of life related to the treatment of endometriosis is another important issue that will be discussed. Finally, the need for protective stoma on deep endometriosis surgery will be presented.

Learning Objectives: At the conclusion of this course, the clinician will be able to: 1) Explain the best approach to treating complicated endometriosis.

Course Outline

12:05 Welcome, Introductions and Course Overview  
A. Setubal
12:10 A Strange Disease Called Adenomyosis: Diagnosis and Management  
L.V. Adamyan
12:20 Adenomyosis: Impact on Sub-Fertility  
E. Zupi
12:30 Rare Cases of Endometriosis  
J.H. Shin
12:40 Conservative Surgery in Advanced Deep Endometriosis of Mid and Low Rectum: Feasibility and Advantages  
H. Roman
12:50 Questions & Answers  
All Faculty
1:05 Adjourn
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I have no financial relationships to disclose

• Discuss the diagnosis and management of adenomyosis

Adenomyosis is a common condition among women of reproductive age. It is defined as the presence of heterotopic endometrial glands and stroma in the myometrium with adjacent smooth muscle hyperplasia. The common presenting symptoms are: painful and heavy periods, infertility, many women are asymptomatic. The aetiology is unclear, and until recently a diagnosis was made only after invasive and destructive surgery. With the advent of improved imaging of the pelvic organs, and in particular MRI, the diagnosis of adenomyosis is being made more frequently. Unfortunately, because the disease has been infrequently diagnosed prior to hysterectomy, there are few well-designed studies of medical or surgical management. Management with hormonal treatment that aims to reduce the proliferation of endometrial cells is promising, but there is a paucity of welldesigned studies to guide treatment. Hysterectomy or use of the levonorgestrel intrauterine system (LNG-IUS) remains the mainstay of treatment.

Classification and staging-based strategies
Adenomyosis
- Stage I – endometriotic lesions are within submucous layer
- Stage II – endometriotic lesions penetrate into myometrium
- Stage III – involvement of entire myometrium up to serosa
- Stage IV – involvement of pelvic peritoneum and adjacent organs

Adenomyosis may be diffuse or focal (nodular or cystic). Crucial difference from myoma is absence of distinct borders of the lesion.

Adamyan L., 1993
**Additional methods of visualization:** US, MRI, SCT

**Diagnostics – identification of anatomo-morphologic form**
- Vaginal endometriosis
- Cervical endometriosis
- Increase of uterus size
- Thickening or deformation of uterus wall
- Adenomyosis
- marble" serosa
- "Marble" serosa
- Increase of uterus size
- Cystic forms
- Skin fold
- "Tubular" differentiation of the uterine walls layers
- Enlarged uterus with asymmetric walls
- Poor visualization of endometrial holes
- Complexed dilatation of uterus cavity

**Classification of cystic adenomyosis based on hysteroscopic findings (MUSCLE)**

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenomyosis</td>
<td>Type I</td>
<td>Complete and total eradication of adenomyosis</td>
</tr>
<tr>
<td></td>
<td>Type II</td>
<td>Partial eradication of adenomyosis</td>
</tr>
<tr>
<td></td>
<td>Type III</td>
<td>No changes in adenomyosis</td>
</tr>
</tbody>
</table>

**MR-image of adenomyosis**
- Adenomyosis II-III stage
  - Enlarged uterus with asymmetric walls
  - Poor differentiation of the uterine walls layers
  - Tubular structures in myometrium
  - Local thickening of transitional-connective zone (over half of uterine wall thickness)
- Adenomyosis IV stage
  - Endometriotic lesions involving peritoneum
  - Endometriotic lesions in myometrium (right ovary with endometriotic lesion in myometrium)
- Adenomyosis – nodular and diffuse form

**Adenomyosis treatment strategy**
- Medical treatment (danazol, a-GnRH, levonorgestrel-IUS).
  - If ineffective – surgery
  - Uterus preserving surgery in patients willing to have pregnancy is possible in nodular form of the disease – but both the doctor and the patient should be aware of high risk of recurrence
- Excision or FUS-ablation
  - Hysteroscopy is the only radical treatment
  - Laparoscopy is used for removal of nodular of cyst forms
  - Hysteroscopic resection of endometrium and myometrium for excision because of bleedings is possible with LNG-IUS insertion thereafter
  - Rehabilitation with different antirecurrency treatment
  - Spontaneous pregnancy or ART

**Operative hysteroscopy and hysteroscetoscopy in the treatment of adenomyosis**
- Introduction of compact hysteroscopes
- Uterine Cystic Adenomyosis: A Disease of Younger Women
- Elsa B. Burgos, S. Siddiqui et al. Modern Methods, 2014

**Two types of surgery for adenomyosis**
- Type I: complete and total eradication of adenomyosis
  - Laparoscopy is feasible either for excision of adenomyotic foci or for excision of adenomyomas, and laparoscopic suturing presents no more difficulty than suturing scars after myomectomy
- Type II: partial eradication of adenomyosis
  - Excision or FUS-ablation
  - Medical treatment (danazol, a-GnRH, levonorgestrel-IUS)
  - Rehabilitation with different antirecurrency treatment
  - Spontaneous pregnancy or ART
The main components of the three interconnected "H" incision are:
1. a vertical incision at a 5 cm intersection of the uterine serosa myometrium layer and two transverse incisions perpendicular to the vertical incision along the upper and lower edges of the uterus
2. relief of dense adenomyosis tissue by peripheral traction
3. performing repeated chromotopossectomy by injecting indigo-carmine solution during the operation to minimize the risk of entering the uterine cavity;
4. rinsing hemostasis to the resected tissue closing the defect to minimize the risk of hematoma;
5. preferred use of antithrombosis material

Rohan Ghadi et al Surgical procedure to conserve the uterus for future pregnancy in patients suffering from invasive adenomyosis Reproductive BioMedicine Online (2013)

The therapeutic effects of surgery

- The effectiveness of conservative uterine-sparing surgery for adenomyosis and/or adenomyoma is promising
- The main problem secondary to uterine adenomyosis is dysmenorrhea, which can be improved significantly, up to 80%.
- Menorrhagia was also improved in more than two-thirds of patients after type I uterine sparing surgery, and nearly half of the patients had improvement in their symptoms after type II uterine-sparing procedures.
- The pregnancy rate was also acceptable or good, ranging from 21.47-61%

Because of the limited amount of data available, the use of uterine-sparing surgery in the management of uterine adenomyosis and/or adenomyoma is still controversial.

Our experience

32 patients with adenomyosis were enrolled in the study. Average age was of 33.6 ± 2.6 years
- Laparoscopic excision of adenomyotic lesions with ultrasonic surgical therapy was performed in all patients. All adenomyosis of hysterectomy was without damage to the uterine cavity.
- Menstrual pain analog scale score of dysmenorrhea and menorrhagia after 3 months follow-up was measured.
- After surgery, the average analog scale score of dysmenorrhea decreased from 9.6 to 3.8, and uterine cavity uterine adenomyosis tissue was well removed.
- 76 women conceived spontaneously or after ART at 12-18 months after surgery, the pregnancies were successful, and healthy infants were delivered via Cesarean section at term.
- In 30 patients pregnancy loss occurred.
- Our data support the opinion that the beneficial role of the combination of cytoreductive surgery and drugs against treatment in managing women with adenomyosis.
- Laparoscopic cytoreductive surgery can be an alternative treatment to the use of hypogestogenics agents or hysterectomy in women with localized adenomyosis, especially for those who want to maintain their fertility and achieve successful pregnancies.

Perspectives
- Destructive surgery
- Radiofrequency
- Ultrasound ablation
- Antiadhesive drugs
- Laparoscopic surgery

Alternative methods of adenomyosis treatment

MRI-FUS ablation in the treatment of adenomyosis

Ultrasound-guided high intensity focused ultrasound

Retrospective analysis of ultrasound-guided high intensity focused ultrasound (USgHIFU) for the treatment of adenomyosis: 2549 patients sufficient relief of symptoms
- Decrease of uterine volume on 13%
Grimbizis GF, Mikos T, Tarlatzis B. Uterus-sparing operative treatment for adenomyosis. Fertil Steril 2014; 101:


Hisao Osada et al. Surgical procedure to conserve the uterus for future pregnancy in patients suffering from massive adenomyosis. Reproductive BioMedicine Online (2011)


Adenomyosis: Impact on Sub-Fertility

Errico Zupi
University of Tor Vergata Rome

Disclosure
I have no financial relationships to disclose.

Objective
Discuss adenomyosis and the impact on Sub-Fertility

Endometriosis

Endometriosis and infertility

Endometriosis represents 15-20% of causes of women infertility
- 30-35% of women with endometriosis is infertile
- 25-40% of infertile women have endometriosis

Halis G, Arici A; Ann N Y Acad Sci. 2004

Women with stage I-II
Pregnancy rates increase after ablation of endometriotic lesions
ESHRE guidelines 2007

Women with stage III-IV
The monthly probability to conceive is 2-10% vs 15-25% in “healthy” couples


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Endometrioma and infertily

Ovarian endometriomas occur in 17–44% of patients with endometriosis
Doody MC et al, Fertil Steril 1988
Haney AF et al, JCEM 1996

Anovulation may occur in 15-25% of patients with endometriosis

Endometrioma and ovarian reserve

Endometriomas as a possible cause of reduced ovarian reserve in women with endometriosis

The follicular density in cortex from ovaries with endometriomas less than 4 cm in size is significantly lower than in cortex from contralateral normal ovaries

Histologic alterations in cortical tissue, such as formation of fibrosis and concomitant loss of cortex-specific stroma, were found to significantly correlate with follicular density in cortex from ovaries with endometriomas

Surgical treatment of endometrioma-associated infertility

The problem of co-existing endometriomas in a context of infertility raises two main questions:

1. Is there a conservative laparoscopic procedure that offers better fertility outcomes?
2. Should we, or should we not, operate on endometriomas in patients scheduled for ART?

1. Is there a conservative laparoscopic procedure that offers better fertility outcomes?

The post-operative serum AMH levels significantly decreased in comparison to the preoperative levels in patients with endometriomas

Decresing AMH after surgery are influenced by:

- Surgical technique
- Age
- Bilateral/unilateral localization
- rASRM score

1. Is there a conservative laparoscopic procedure that offers better fertility outcomes?

Laparoscopic cystectomy for ovarian endometriomas is better than drainage and ablation

Cystectomy results in a lower recurrence rate (6.4%), higher cumulative pregnancy rate and greater pain relief than ablation (15.4%)

Consistent amount of ovarian tissue containing follicles is unintentionally removed during cystectomy

Bipolar coagulation at bleeding sites close to ovarian hilus leads to destruction of the ovarian blood supply

Bilateral/unilateral localization
rASRM score

Decresing AMH after surgery are influenced by:

- Surgical technique
- Age
- Bilateral/unilateral localization
- rASRM score

Decresing AMH after surgery are influenced by:

- Surgical technique
- Age
- Bilateral/unilateral localization
- rASRM score
no significant change in the mean AFC was observed after surgery

Comparison between the Stripping Technique and the Combined Excisional/Ablative Technique for the Treatment of Bilateral Ovarian Endometriomas: A Multicentric, Randomized Study

36 patients of reproductive age with pelvic pain and/or infertility affected by bilateral endometriomas larger than 3 cm complete removal by stripping on one side versus the combined technique, consisting of partial excisional cystectomy followed by ablative surgery with bipolar coagulation of the final part on the hilus, on the other side

Ovarian volume and AFC 1/3/6 months after surgery

The stripping technique and the combined technique for the treatment of endometriomas appear to be similar in terms of postoperative ovarian reserve.

The impact of ovarian endometriomas on assisted reproductive technology (ART) outcomes is controversial

The management of an asymptomatic ovarian endometrioma in a woman with infertility is controversial
Laparoscopic cystectomy for ovarian endometriosis does not offer any additional benefit in terms of fertility outcomes.

1. The quality of the oocytes retrieved in IVF cycles is not improved after surgery.
2. Patients going through an operative procedure might extend the time to pregnancy.

In vitro fertilization outcomes were similar in women undergone to cystectomy compared with women with tubal factor infertility.

Careful laparoscopic surgery in experienced hands does not impair ovarian function in women committed to ART treatment.

Outcomes from ART were not affected by the time interval between surgery and ART.

After surgery, couples must attempt to conceive naturally for at least 1 year, in women younger than 35 years.

If this attempt fails, it is recommended to go directly to ART.

Medical treatment with 3–6 months of gonadotropin-releasing hormone analogues improves the outcome of ART in women with endometriosis.

Ovarian suppression before ART augments outcome by correction of endometrial alterations encountered in endometriosis, thus, amplifying endometrial receptivity.

There are strong indications to surgical removal of the ovarian endometrioma, particularly in case of associated pain or infertility.

The best available evidence recommends complete excision of the cyst (stripping) as opposed to alternative techniques.

Good surgical technique is pivotal to reduce the damage to the healthy ovarian tissue.

The damage may be due to the disease itself, to the surgery, or to the surgeon himself: it may be the singer, not only the song...

Results from large randomized trials are needed to elucidate whether or not ovarian endometriomas should be treated before undergoing an IVF–ICSI cycle and which treatment is more suitable.
1. Risk of pelvic abscess and cyst rupture
2. Risk of occult malignancy
3. Retrieval difficulties
4. Contamination with endometrioma content
5. Endometriosis progression

1. Surgical-related damage
2. Surgical complications
3. Economic costs
4. Lack of evidence that surgery improve IVF pregnancy rates

Adenomyosis and infertility

Adenomyosis and infertility

Endometrioma and infertility

Endometrioma and infertility

Adenomyosis and infertility

Adenomyosis and infertility

Adenomyosis and infertility

Uterine adenomyosis and in vitro fertilization outcome: a systematic review and meta-analysis

Treatment for adenomyosis

1. GnRH agonist treatment
2. Progestins
3. Surgery
Surgical treatment

The treatment for severe adenomyosis has usually been hysterectomy, because there is no line of demarcation between diseased and normal tissue.

Adenomyosis is diagnosed with increasing frequency in women attending infertility clinics.

For patients who wish to preserve their fertility, conservative surgery has been proposed.

Adenomyomectomy

Adenomyotic tissues are radically excised and the uterine wall is reconstructed to prevent uterine rupture in subsequent pregnancies.

The procedure resulted in a dramatic reduction in symptoms and allowed to conceive without uterine rupture.

Conservative surgery for adenomyosis

Three case series evaluated the effect of conservative surgery alone in women with adenomyosis.

Conservative surgical techniques described involve excision of the adenomyotic tissue or adenomyoma and hysteroplasty either laparoscopically or via laparotomy.

There are no fertility-sparing treatments of proven effectiveness.

There is no indication for finding or treating adenomyosis in women who wish to conceive.

Characteristics and efficacy of modified adenomyomectomy in the treatment of uterine adenomyoma

<table>
<thead>
<tr>
<th>Variable</th>
<th>Modified (n=83)</th>
<th>Wedge resection (n=15)</th>
<th>Z values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (min)</td>
<td>81.6±45.5</td>
<td>90.3±16.8</td>
<td>-9.55</td>
</tr>
<tr>
<td>Blood loss (mL)</td>
<td>167±154</td>
<td>216±253</td>
<td>-10.86</td>
</tr>
<tr>
<td>Relief of adenomyomatal symptoms (% of n)</td>
<td>31/32 (97.1)</td>
<td>9/8 (87.5)</td>
<td>1.99</td>
</tr>
<tr>
<td>Uterine size reduction (% of n)</td>
<td>8.5±4.2</td>
<td>6.5±5.0</td>
<td>1.69</td>
</tr>
<tr>
<td>Hematocrit reduction (% of n)</td>
<td>1.5±0.6</td>
<td>0.6±0.2</td>
<td>-1.30</td>
</tr>
</tbody>
</table>

There is no uniform standard to measure the efficacy of adenomyomectomy therapy (relief of symptoms or a pregnancy rate).

Uterus-sparing operative treatment for adenomyosis

1. Complete excision of adenomyosis.
   a. Adenomyomectomy.
   b. Cystectomy

2. Cytoreductive surgery/partial adenomyomectomy

3. Nonexcisional techniques

Uterus-sparing operative treatment of adenomyosis and its variants appears to be feasible and efficacious. Control of dysmenorrhea is achieved in more than 81% and menorrhagia in 56% of patients pregnancy rates appear to be higher than 46%.
Global endometrial ablation has also proved successful in treatment of excessive bleeding in women with adenomyosis.

1.5-fold increased risk of failure requiring subsequent hysterectomy or repeat ablation.

Garcia et al. 2011

Endometrial ablation/resection

Although the level of evidence of available studies is only fair, sustained clinical and symptomatic improvements were reported.

Popovic et al. 2011

Uterine artery embolization

Although it is mandatory to search and find adenomyosis in approaching patients with a suspicion of endometriosis,

Nowadays we have to consider adenomyosis as an emergent and specific disease.

It is not only detectable in older and multiparous women.

Its diagnosis allows a more appropriate counselling with patients.

Individualization of surgical treatment.

It is not only detectable in older and multiparous women.

Its diagnosis allows a more appropriate counselling with patients.

Individualization of surgical treatment.

The present study aimed to investigate the possible presence of adenomyosis by TVS in a group of women with DIE and its impact on pre- and postoperative symptoms.

Adequate management

counselling

multicenter study 121 patients with confirmed histological diagnosis of DIE

Results

TVS features of adenomyosis were found in 59/121 patients

DIE group: n=62

DIE+ adeno group: 5

No statistically significant difference was found in clinical characteristics between the 2 groups.

The 2 groups were homogeneous for the distribution of different sites of DIE lesions confirmed at surgery.
Fertility after bowel resection for endometriosis

Simone Ferro, M.D., Florida Anzirini, M.D., Luisa Helena Abbiassoni, M.D., Nicola Roggi, M.D., Giovanni Cavenderini, M.D., and Valterino Remoraz, M.D.

Patients may require infertility treatment, particularly when aged >35 years at the time of surgery.

1. Age >35 years
2. Uterine adenomyosis
3. Longer duration of infertility before surgery

Are associated with decreased pregnancy rate.
**Surgical treatment in endometriosis-associated infertility**

**Bowel endometriosis: does surgery improve fecundity in women with endometriosis-associated infertility?**

- Seems to negatively influence the reproductive outcome
- The complete removal of endometriosis with bowel segmental resection seems to offer better results in terms of post-operative fertility

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**Conclusions**

The combined strategy of endoscopic surgery and subsequent IVF led to a higher clinical pregnancy rate (65.8%) than that obtained with surgery alone or IVF alone, especially in patients younger than 35 years.
Rare Cases of Endometriosis: Management of Extrapelvic Disease

Ja Hyun Shin, MD
Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, New York

Objective: Discuss diagnosis and management of extrapelvic endometriosis.

Design: Surgical case presentations of abdominal scar, perineal, and primary umbilical endometriosis.

Setting: Extrapelvic endometriosis is rare. The true incidence of these conditions is yet to be defined since most of the literature is based on small case reports. Diagnosis and management of extrapelvic disease can be a challenge to gynecologists as there is not a standard approach. All 3 patients presented with a palpable nodule that was exacerbated during menses. Imaging supported these findings suggestive of endometriosis. Two patients had chronic pelvic pain and also experienced symptoms suggestive of interstitial cystitis/painful bladder syndrome.

Interventions: Each of these patients underwent diagnostic laparoscopy and had an excisional procedure for their extrapelvic disease. Histopathology confirmed endometriosis in both intracavitary specimens and the excised masses for all 3 cases. Patients with painful bladder symptoms demonstrated global glomerulations during cystoscopy with hydrodistention.

Conclusion: Gynecologists should have a high index of suspicion for extrapelvic endometriosis based on a thorough physical exam and history. Imaging can aid in the diagnosis. The role of routine laparoscopy needs further investigation in this population of patients as they may also have intracavitary disease. All associated symptoms, including genitourinary complaints, should also be explored.
Rare Cases of Endometriosis

Ja Hyun Shin, MD
Director, Pelvic Pain Clinic
Division of Minimally Invasive Gynecologic Surgery

Objective

• Discuss and Present 3 cases of extrapelvic endometriosis:
  1. Abdominal wall cesarean scar
  2. Perineal
  3. Primary umbilical

• Identify management issues
  1. History and physical exam
  2. Preoperative planning
  3. Role of diagnostic laparoscopy

Abdominal Wall C/S Scar Endometriosis

• Incidence (0.03-1%)
• Iatrogenic seeding of endometrial cells
• Palpable nodular mass with cyclic or noncyclic pain in or near cesarean scar
• Reports of malignancy

Abdominal Wall C/S Scar Endometriosis

Case 1:

• 27 yo P3 with c/s x3
  - 3rd c/s complicated by retained POC and hemorrhage
  -> D&C and transfusion

• CPP, dysmenorrhea

• Pain and growth of “ball” on left aspect of c/s scar during menses

MRI
Perineal Endometriosis

- Literature based on case reports
- Most commonly reported with history of episiotomy
- Typically present with cyclic pain and nodule
- Delay in treatment with misdiagnosis
  - Abscess/infection, condyloma, Bartholin’s cyst
- Full excision may not be possible depending on location
  - anal sphincter involvement, periclitoral

Case 2:
- 34 yo P1 with hx of left mediolateral episiotomy
- Multiple ED visits for cyclic perineal “lump” pain
- CPP, Dysmenorrhea
- Urinary frequency, urgency, nocturia, pain with full bladder
Interstitial Cystitis/Painful Bladder Syndrome
- The “evil twin” of endometriosis
  - >80-90% of patients
- No gold standard for diagnosis
- Consider cystoscopy with hydrodistention at time of surgery

Primary Umbilical Endometriosis
- Literature based on case reports
- May present with cyclic pain, nodule, bleeding
- Delay in treatment with misdiagnosis
  - Melanoma
  - Keloid
  - Fistula/abscess

Primary Umbilical Endometriosis
Case 3:
- 30 yo P1 with no prior surgeries
- Cyclic umbilical pain and bleeding
- Dysmenorrhea
- Painful bladder symptoms
Summary: Recommendations for Management of Extrapelvic Endometriosis

1. Thorough physical exam and history
   - Painful cyclic palpable mass
   - Surgical/Obstetric history
   - Systems evaluation (including GU for IC/PBS in patients with endometriosis)

2. Preoperative planning
   - Imaging
     1) Aid in diagnosis
     2) Evaluate involvement of surrounding tissue
   - Consult with other surgical services

3. Consider diagnostic laparoscopy
   - Can guide future management

References

Conservative Surgery in Advanced Deep Endometriosis of Mid and Low Rectum: Feasibility and Advantages

Horace ROMAN, MD PhD
Rouen University Hospital, France

Deep infiltrating endometriosis (DIE) of mid and low rectum (M/LR)

- To discuss the role of conservative surgery (CS) in DIE of M/LR
- Avoid major functional troubles following low colorectal resection (CRR): anal incontinence, low anterior rectal resection syndrome (LARS)
- Discuss conservative procedures: disc excision or shaving

Outline

Conservative surgery in DIE of the M/L R (<10 cm height):
1. Why?
2. How?
3. In whom?
4. What results?

Background

- Historically, first articles (1991/92) reported conservative laparoscopic management of DIE of the R
- Then, progressive involvement of general surgeons in multidisciplinary teams has raised the rate of patients undergoing colorectal resection (CRR)
- 2011: 71% of patients with colorectal DIE are managed by CRR
- However, DIE of the M/LR is completely different from any other benign or malignant rectal diseases, which are usually managed by CRR

Why?

50-60% of patients with low CRR for cancer present with LARS (low anterior rectal resection syndrome)
- anal incontinence,
- frequent bowel movements (up to 10-20/day),
- bowel emptying difficulties,
- Urgency

Very few series focus on only M/LR DIE! = lack of specific information in DIE
961 patients with CRR for cancer
- mean height of CR anastomosis: 10 cm
- mean age 63 years
- 20% postoperative radiotherapy

Impact of LARS on QoL:
- 25% no impact
- 34.3% minor impact
- 40.4% some/major impact

Could we afford it in a benign disease?

Comparison of CRR to conservative surgery
- Only a couple of comparative studies + ongoing randomized trial (ENDORE)
- Attempting conservative surgery was related to better functional outcomes and improvement of gastrointestinal scores: KESS, GICQI, FICI, Wexner

CS: How? In which patients? What results?
- 2 major techniques:
  1. Rectal shaving
  2. Rectal shaving + disc excision of shaved area

Why?
CRR in DIE of M/LR may result in:
1. Rectal denervation: due to the section of the mesocolon
2. Stenosis of the colorectal anastomosis: up to 15-19%
3. Dramatic reduction of rectal reservoir
4. Risk for faecal incontinence and urgency – hence, high intracolic pressures directly impact on anal sphincter

Avoiding postoperative rectal dysfunction = challenging, because multifactorial

Patients managed by low CRR for DIE may experience daily bowel dysfunction:
Several symptoms are not solved: constipation, dyschesia, tenesmus
New symptoms may occur: LARS

How?
Shaving:
- Excision of macro/microscopic lesions is likely to be incomplete
- Good results in terms of complications (no R suture) and R function
- Long term recurrences should better be assessed
- Good technique in elderly women / postoperative long term amenorrhea

Disc excision:
- The suture may be challenging into the deep pelvis: improved by the use of transanal staplers
- Incomplete resection of microscopic focal in 27-44%
- Preservation of mesorectum and overall R wall length: no LARS

In whom?
- Feasibility: 93% of patients with DIER enrolled in ENDORE randomized trial
- In multifocal colorectal DIE: Preferring CS M/LR associated to CS / CRR on sigmoid colon, instead of long CRR with low colorectal / coloanal anastomosis
- In DIE of M/LR with stenosis: shaving + in situ ablation enable CS
- CRR: circumferential DIE + advanced stenosis
Which results?

Retrospective comparative study in 75 women with >2 yrs follow up:
- The results of gastrointestinal scores: systematically better after CS
- A prospective series of 30 patients: the Rouen technique for M/LR DIE (unpublished data):
  - no anal incontinence
  - overall improvement of rectal function
  - no patient underwent an impairment of the QoL and gastrointestinal scores

ENDORE randomized controlled trial: 60 patients with R DIE (M/LR):
- Last 2-yr follow up visit: September 2015
- Database is actually frozen
- Full report expected in March 2016

Thank you

- The statement concerns Halsted’s school impact on breast cancer surgery
- It only depends on us that deep endometriosis surgery does not follow the same path

Functional outcomes of rectal surgery


Governor Arnold Schwarzenegger signed into law **AB 1195** (eff. 7/1/06) requiring local CME providers, such as the AAGL, to assist in enhancing the cultural and linguistic competency of California’s physicians (researchers and doctors without patient contact are exempt). This mandate follows the federal Civil Rights Act of 1964, Executive Order 13166 (2000) and the Dymally-Alatorre Bilingual Services Act (1973), all of which recognize, as confirmed by the US Census Bureau, that substantial numbers of patients possess limited English proficiency (LEP).

**California Business & Professions Code §2190.1(c)(3)** requires a review and explanation of the laws identified above so as to fulfill AAGL’s obligations pursuant to California law. Additional guidance is provided by the Institute for Medical Quality at [http://www.imq.org](http://www.imq.org).

**Title VI of the Civil Rights Act of 1964** prohibits recipients of federal financial assistance from discriminating against or otherwise excluding individuals on the basis of race, color, or national origin in any of their activities. In 1974, the US Supreme Court recognized LEP individuals as potential victims of national origin discrimination. In all situations, federal agencies are required to assess the number or proportion of LEP individuals in the eligible service population, the frequency with which they come into contact with the program, the importance of the services, and the resources available to the recipient, including the mix of oral and written language services. Additional details may be found in the Department of Justice Policy Guidance Document: Enforcement of Title VI of the Civil Rights Act of 1964 [http://www.usdoj.gov/crt/cor/pubs.htm](http://www.usdoj.gov/crt/cor/pubs.htm).

**Executive Order 13166, “Improving Access to Services for Persons with Limited English Proficiency”,** signed by the President on August 11, 2000 [http://www.usdoj.gov/crt/cor/13166.htm](http://www.usdoj.gov/crt/cor/13166.htm) was the genesis of the Guidance Document mentioned above. The Executive Order requires all federal agencies, including those which provide federal financial assistance, to examine the services they provide, identify any need for services to LEP individuals, and develop and implement a system to provide those services so LEP persons can have meaningful access.

**Dymally-Alatorre Bilingual Services Act** (California Government Code §7290 et seq.) requires every California state agency which either provides information to, or has contact with, the public to provide bilingual interpreters as well as translated materials explaining those services whenever the local agency serves LEP members of a group whose numbers exceed 5% of the general population.