La chirurgia vaginale del prolasso della cupola

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Vault prolapse

- The incidence of vault prolapse after hysterectomy varies between 1.8 and 11.6%.
  
  *Marchionni 1999*

- It occurs equally after abdominal and vaginal hysterectomy.

- Risk factors: hysterectomy, collagen diseases, ↑ intraabdominal pressure, poor surgical technique.
  
  *Beer 2005*
The Challenge
The Tent Theory

If the top of the tent caves in, the walls may follow

“ We believe the first step in any anterior or posterior vaginal repair is to ensure grade 0 support at superior segmental and cul-de-sac sites ”

Baden WF, Walker T
Surgical repair of vaginal defects, 1992
Apical support defects

To ensure durable apical support regardless of the anchoring site for the vaginal vault suspension, the surgeon should establish continuity of the anterior and posterior vaginal fascia at the vaginal apex.
Key to success

- Vaginal apex
- Maintain the vaginal axis
Surgical options
The apical segment
Management

- Sacrospinous ligament fixation
- Iliococcygeus fixation
- High uterosacral suspension
- Colpocleisis
- Mesh kits
- Infracoccygeal sacropexy (Posterior IVS)
- Colposacropexy (abdominal / laparoscopic)
Sacrosinuous suspension

- First described by Richter in 1968

- It was originally described as a *bilateral* procedure but subsequently done as a *unilateral* procedure

- 67-97% cure objective rate
Sacropinous Fixation

The technique comprises:

- Posterior midline vaginal incision.

- Dissection into the pararectal space and the ischial spine is identified.

- Using a Miya hook ligature carrier, two nonabsorbable sutures are placed through the sacrospinous ligament (2-3cm medial to the ischial spine) to avoid pudendal vessels and nerve.

- One end of each suture is attached to the under surface of the posterior vaginal wall at the apex.
Sacrospinous suspension
Sacrospinous Fixation

- Most authors believe that unilateral fixation is sufficient and prefer the right side due to anatomical difficulties with the rectum.

- Stitches may be placed with Miya hook, Dechamp ligature carrier, endostitch or bone anchor system.

- Concomitant surgeries may be performed.

- A short vagina and surgeon’s inexperience are contraindications.
Sacrospinous Fixation
Sacrosinous suspension

- **Haemorrhage** is the most common complication, due to injury of the pudendal vessels, perirectal & sacral veins (2-28%).
  
  *Colombo 1998, Sze 1997*

- De novo **constipation** occurs up to 16%, dyspareunia is due to retroversion of vaginal axis (3-10%).
  
  *Beer 2005*

- Gluteal and perineal **pain** from pudendal, sciatic and sacral small nerves entrapment
Ileococcigeus suspension

- “...to avoid an abdominal approach in the absence of uterosacral ligaments, the lateral angles of the vagina may be attached to the fascia overlying the iliococcygei just below the ischial spine”

  Inmon 1963

- Reduced risk of vascular and neural complications

- Bilateral procedure
Ileococcigeus suspension
THE ILEOCOCYGEAL MUSCLE FIXATION AND RECTO-VAGINAL SEPTUM RECONSTRUCTION

Surgical technique

- T-inverted colpotomy with bilateral dissection
- Recto-Vaginal septum identification
- Ileococcigeal muscle identification
- 3 to 4 reabsorbable sutures each side and through the upper & lateral septum edges
Ileococcigeus suspension Fixt®
Ileococcygeus suspension

91 – 96% objective cure rate (comparable to sacrospinous suspension)

Shull 1993, Maher 2001
Ileococcycgeus suspension

31 pazienti
Follow-up 18 mesi
Ospedalizzazione media 2.5 gg

87.5% soddisfatte

19.5% recidive cliniche (12.9% sintomatiche)

COMPLICANZE

- 9% disturbi minzionali (3% catetrismo per 7 giorni)
- 3% ematoma
- 6% IUS slatentizzata
Uterosacral suspension

- Most gynaecologist believe the uterosacral ligaments (USL) are compromised in the and prefer sacrospinous fixation.

- Some suggest that the USL are not weakened, but instead break at specific points.

- USL can be used, even in severe prolapse by identifying the distal portion of breakage and anchoring the vagina high above this point.

Uterosacral Suspension

- Sutures are placed through the uterosacralis at the level of the ischial spine (posterior and medial).

- One arm brought out through the rectovaginal fascia and the other through the pubocervical fascia on each side.

- These are tied anchoring the vaginal cuff to the uterosacralis.
Uterosacral suspension

Fig 1. Three sutures are placed in uterosacral ligament pedicles on each side. One arm of each suture is placed in transverse position of pubocervical and rectovaginal fascia.

Fig 2. Sagittal view of suspensory suture in left uterosacral ligament (USL) with one arm through pubocervical fascia (PCF) and one arm through rectovaginal fascia (RVF). PS, Pubic symphysis; B, bladder.

Fig 3. Sagittal view of pubocervical fascia (PCF) and rectovaginal fascia (RVF) suspended to uterosacral ligaments (USL). PS, Pubic symphysis; B, bladder; R, rectum.
Uterosacral Suspension

- The biggest risk is injury to the ureters (10.9%) due to its proximity to the anterior border of the uterosacral ligaments, especially at the level of the cervix.

- Other complications include bowel injury, bladder injury, UTI’s and blood transfusion.

- Cure rate 90% at 15 months.

*Barber 2000*
Uterosacral suspension

- 90% cure rate

  Shull, Barber 2000

- Risk of urethral damage
LeFort colpocleisis

- Specific combination of alterations in pelvic organ support (urinary and rectal symptoms)

- Desire to maintain and restore vaginal anatomy to accommodate sexual intercourse

- Medical condition of the patients
LeFort colpocleisis

- There is no Level I or II evidence to guide clinical care. Outcomes and procedures are unstandardized and poorly described.
- Success rate: 83-100%.
- Significant morbidity and mortality due to performance of surgery on the elderly (cardiac, pulmonary and cerebrovascular complications) 2%.
- Major complications due to the surgical procedure itself (transfusion and pyelonephritis) 4%
- Minor surgical complications (UTI, vaginal hematomata, cystotomy, fever, thrombophlebitis) 15%

FitzGerald 2006
SYMMONDS – PRATT  1960

- Colpotomia
- Isolamento resezione enterocele
- Doppia sutura del peritoneo (residui legamenti uterosacrali e cardinali)
- Correzione difetti altri settori
Prosthetic surgery
The placement of surgical mesh is intended to increase the longevity of POP repair
I

generation

II

generation

III

generation

Petros

Cosson

Roovers
Infracoccygeal Sling Sacropecty

- First described by Petros.

- The aim is to create artificial uterosacral ligaments using a polypropylene tape.

- It was developed for restoration of the three anatomical levels described by DeLancey.

- Rectal penetration, mesh erosion, vaginal infection, perineal pain.

Petros 2001, Farnsworth 2002
Infracoccygeal Sling Sacroplasty

- Success rate of 75%
- Recurrence of vault prolapse 5% (4 yrs).
- De novo cystocele (16%) & rectocele (4%).
- Inadequate evidence on efficacy and safety.
- The National Institute for Health and Clinical Excellence recommends that this procedure should only be used in a research setting.

Petros 2001, NICE 2009
Tension free system

- The use of synthetic mesh as treatment of vaginal prolapse has been recently advocated.

- New TFS (transobturator or infracoccygeal) techniques and devices have been described.

- The role of synthetic meshes and the long term cure of TFS is still uncertain.

- Prospective, multicenter, RCT comparing TFS vs SCPX & SSLF to evaluate the efficacy and safety in a long term follow up are mandatory prior divulging their use in the clinical practice.
COMPLICATIONS

- Erosion
- Shrinkage
- Visceral injury
- Infection
- Bleeding
Efficacy and safety of transvaginal mesh kits in the treatment of prolapse of the vaginal apex: a systematic review

Feiner B. BJOG 2009

30 studies (2653 patients)

Follow up 26-78 weeks

Objective success rate

- Apogee 95%
- Prolift 87%
- Posterior IVS 88%

Mesh erosion rate 4.6-10.7%

Reoperation rate 1.9-8.3%
Sacrocolpopexy

- Gold standard concerning cure rate
- Comparable results with laparoscopy

*Lane 1962, Brubacker 1995, Nezhat 1994, Wattiez 2001*
Surgical management of pelvic organ prolapse in women (Review)

Maher C, Feiner B, Baessler K, Glazener CMA
Sacrocolpopexy vs Sacrospinous

Abdominal sacral colpopexy:
- lower rate of recurrent vault prolapse
  (RR 0.23, 95% CI 0.07 to 0.77)
- less dyspareunia
  (RR 0.39, 95% CI 0.18 to 0.86)

Vaginal sacrospinous colpopexy:
- quicker
- cheaper to perform
- women had an earlier return to activities of daily living.
"The great question... which I have not yet been able to answer, despite my thirty years of research into the feminine soul, is "What does a woman want?"
What Women Want

“Few women care what their vaginas look like; more are concerned with restoring bowel, bladder and sexual functions”

FDA Safety Communication: UPDATE on Serious Complications Associated with Transvaginal Placement of Surgical Mesh for Pelvic Organ Prolapse

Date Issued: July 13, 2011

In addition, the FDA also recommends that health care providers:

- Recognize that in most cases, POP can be treated successfully without mesh thus avoiding the risk of mesh-related complications.
- Choose mesh surgery only after weighing the risks and benefits of surgery with mesh versus all surgical and non-surgical alternatives.
- Consider these factors before placing surgical mesh:
  - Surgical mesh is a permanent implant that may make future surgical repair more challenging.
  - A mesh procedure may put the patient at risk for requiring additional surgery or for the development of new complications.
  - Removal of mesh due to mesh complications may involve multiple surgeries and significantly impair the patient’s quality of life. Complete removal of mesh may not be possible and may not result in complete resolution of complications, including pain.
  - Mesh placed abdominally for POP repair may result in lower rates of mesh complications compared to transvaginal POP surgery with mesh.
ALGORITMO CHIRURGICO

Prolasso di Cupola

1° Intervento

≥ III Stadio
Sospensione all’Ileococcigeo

IV Stadio
Sospensione all’Ileococcigeo o agli Utero-Sacrals alti

Donna molto anziana
non idonea a chirurgia maggiore
Colpocleisi

Donna giovane

Sacrococlopessia
LPS/LPT

2° Recidiva

Kit Protesici

Sacrococlopessia
LPS/LPT
From 2008 – 2010, the most frequent complications reported to the FDA for surgical mesh devices for POP repair include **mesh erosion through the vagina** (also called exposure, extrusion or protrusion), pain, infection, bleeding, pain during sexual intercourse (dyspareunia), organ perforation, and urinary problems. There were also reports of **recurrent prolapse**, **neuro-muscular problems**, **vaginal scarring/shrinkage**, and **emotional problems**. Many of these complications require additional intervention, including medical or surgical treatment and hospitalization.