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Laparoscopic total hysterectomy: overtreatment for misdiagnosed organic cause or undertreatment for idiopathic chronic pelvic pain?

- *Dott.ssa Leggieri Concetta*

Diapositiva 1

cl1 concetta leggieri; 06/06/2014

ARTICLES IN PRESS

Total laparoscopic hysterectomy: overtreatment for misdiagnosed organic cause or undertreatment for idiopathic chronic pelvic pain?

Salvatore **Gizzo**, Concetta **Leggieri**, Lorena **Conte**, Stefano **Luisi**, Errico **Zupi**, Carlo **Saccardi**, Pietro **Litta**

Post author correction - published online 12/05/2014 09:04:51

DOI:10.5301/je.5000183

ARTICLE TYPE: ORIGINAL ARTICLE | PDF | EPUB

CURRENT
• Vol. 6 Issue 1 (January March 2014)

FORTHCOMING
• Articles in press

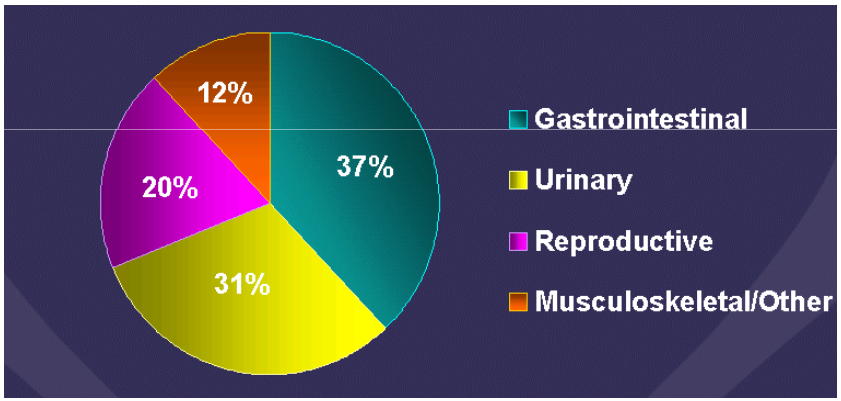
ARCHIVES

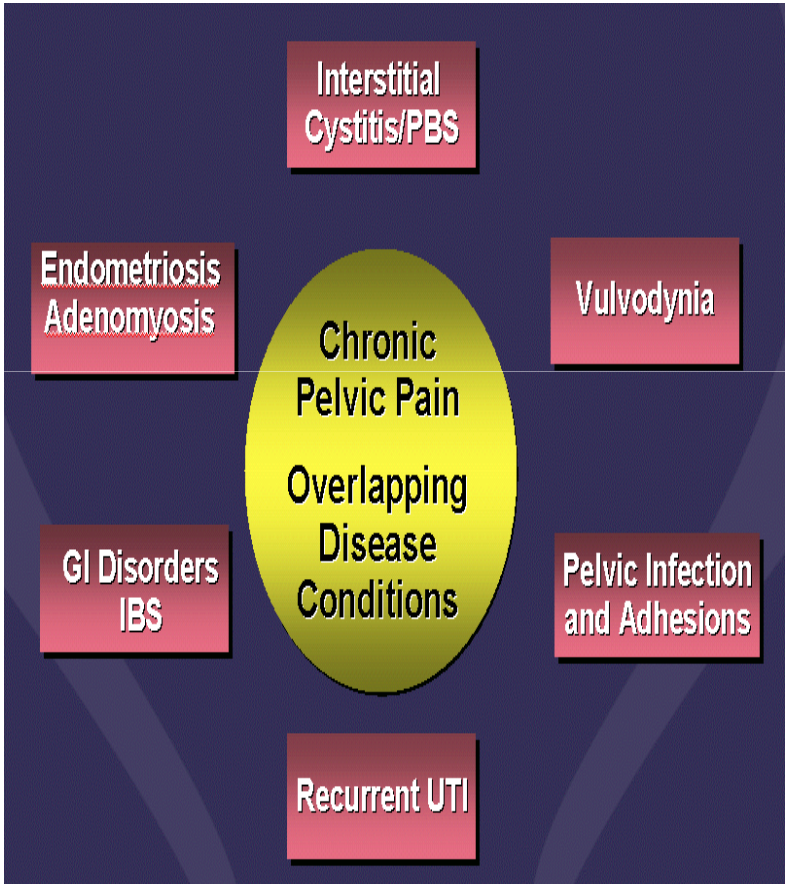
INCIDENCE

- 15% of women overworld suffer from CPP
- CPP seems attributable to 40% of diagnostic laparoscopies and to 12% of hysterectomies
- 25-50% of cases have more causes

Severity and intensity of pain increase with multisistemic symptoms

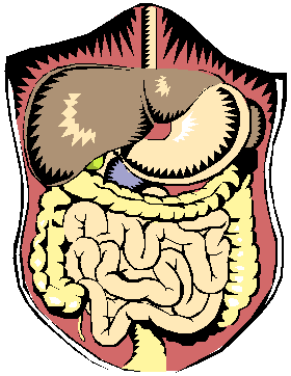
CAUSES


12%
37%
20%
31%
Gastrointestinal
Urinary
Reproductive
Musculoskeletal/Other

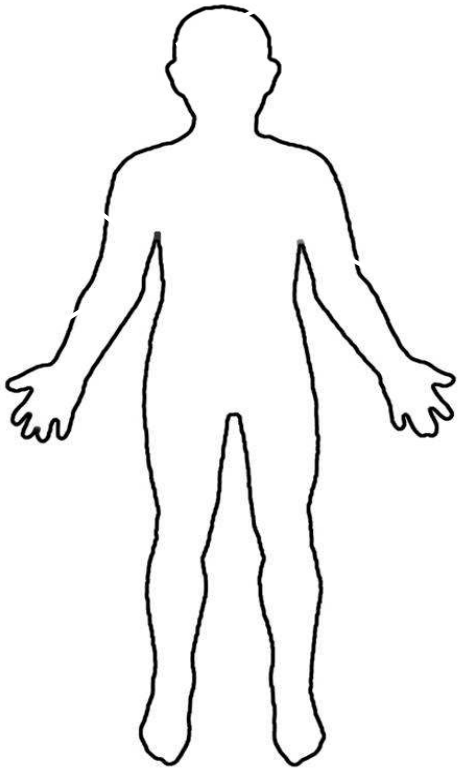

Interstitial Cystitis/PBS
Endometriosis Adenomyosis
Vulvodynia
Chronic Pelvic Pain
Overlapping Disease Conditions
GI Disorders IBS
Pelvic Infection and Adhesions
Recurrent UTI

ETIOLOGY

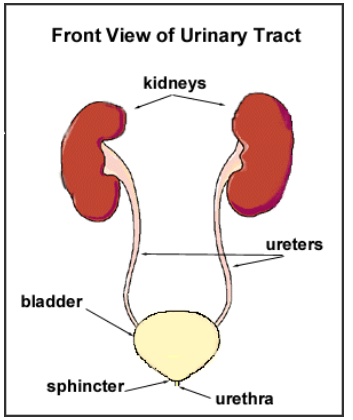
Gastrointestinal



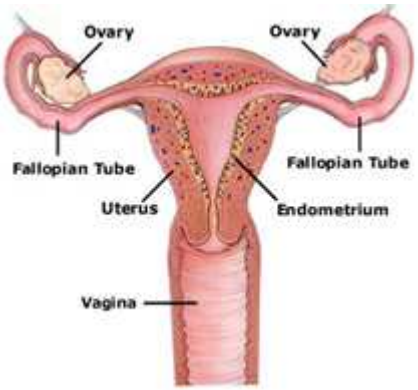
Psychological



Urological



Gynecological



Musculoskeletal

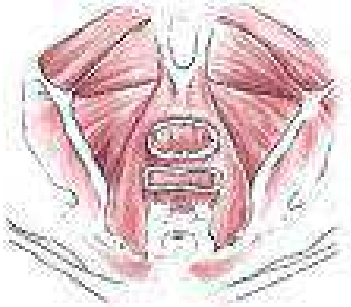


Table 1. Differential diagnoses of chronic pelvic pain[16]

Gynaecological disease including:

- Endometriosis
- Adhesions (chronic pelvic inflammatory disease)
- Leiomyoma (and other benign neoplasms[10] including ovarian dermoid cysts, cystadenomas)
- Pelvic congestion syndrome
- Adenomyosis
- Malignancy[10]

Gastrointestinal disease including:

- Constipation
- Irritable bowel syndrome
- Diverticulitis and diverticulosis
- Chronic appendicitis
- Meckel's diverticulum
- Malignancy[10]

Genitourinary disease including:

- Interstitial cystitis
- Abnormal bladder function (bladder dyssynergia)
- Chronic urethritis
- Malignancy[10]

Myofascial disease including:

- Fasciitis
- Nerve entrapment syndrome
- Herniae (inguinal, femoral, spigelian, umbilical and incisional)

Skeletal disease including:

- Scoliosis
- L1 and L2 disc disorders
- Spondylolisthesis
- Osteitis pubis

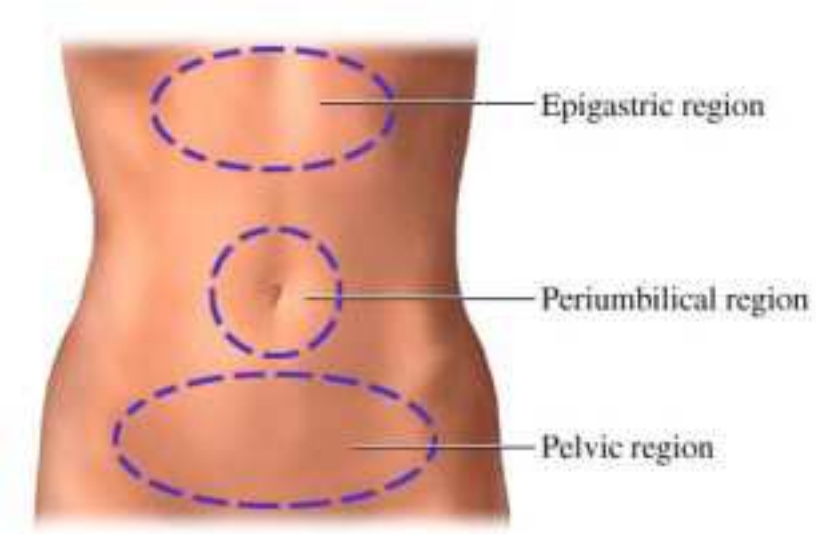
Psychological disorders including:

- Somatisation
- Psychosexual dysfunction (including a past history of sexual abuse)
- Depression

DEFINITION OF CPP

• «Symptom but also a syndrome» :

- LENGTH
  - 6 or more months
- LOCATION
- Pelvis
- Abdominal wall below the umbilicus
- Buttocks
- Lower back

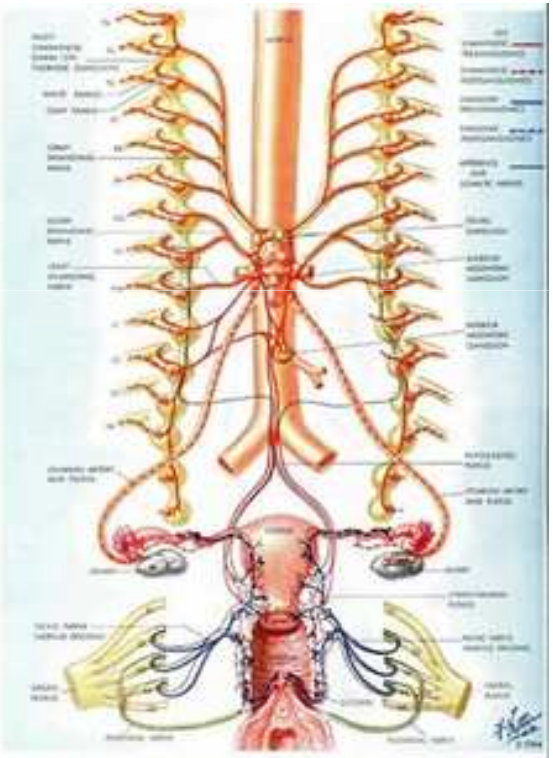


- SEVERITY
  - Medical or surgical therapy
  - Impact on QoL

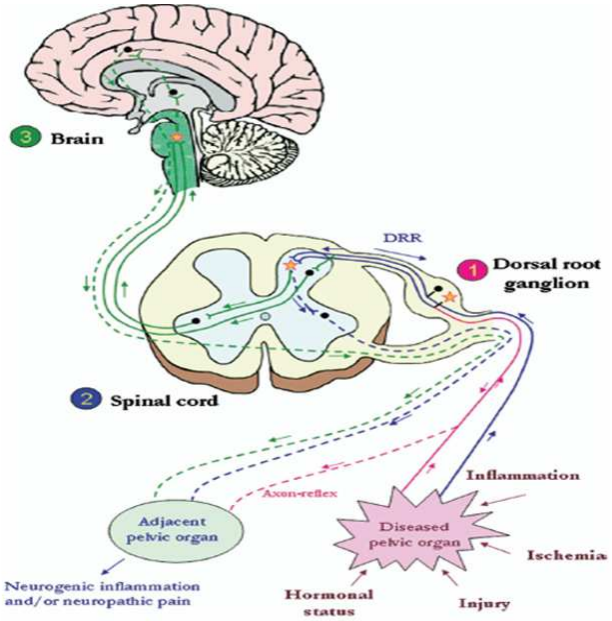
PELVIS INNERVATION

- Pelvis is innervated by the sympathetic nervous system and parasympathetic

- The pelvis also receives innervation from somatic nerve fibers from the thoracolumbar segments (T10-L2) and sacral (S2 S4)



Innervation of the Female Genital System



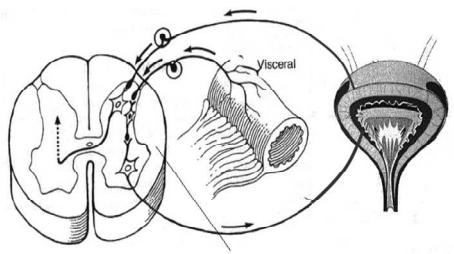
CPP COMPONENTS

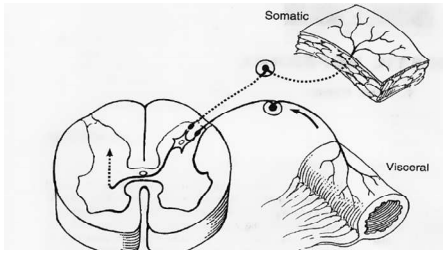
VISCERAL

SOMATIC

Visceral and somatic afferent fibers converge to the spinal (visceral-somatic convergence)

CPP NEUROPHYSIOPATHOLOGY





- Visceral HYPERALGESIA
  - sensibilizzazione viscerale: IBS, IC

- Viscero-visceral hyperalgesia
  - cross-talk
  - sensazione riferita ad altri organi:

IC with IBS, Endometriosis with IC

- Viscerosomatic hyperalgesia
  - neurogenic related inflammation
    : IC with vulvodynia

- Viscero muscle hyperalgesia
  : pelvic floor tension syndrome

- Visceral cutaneous hyperalgesia

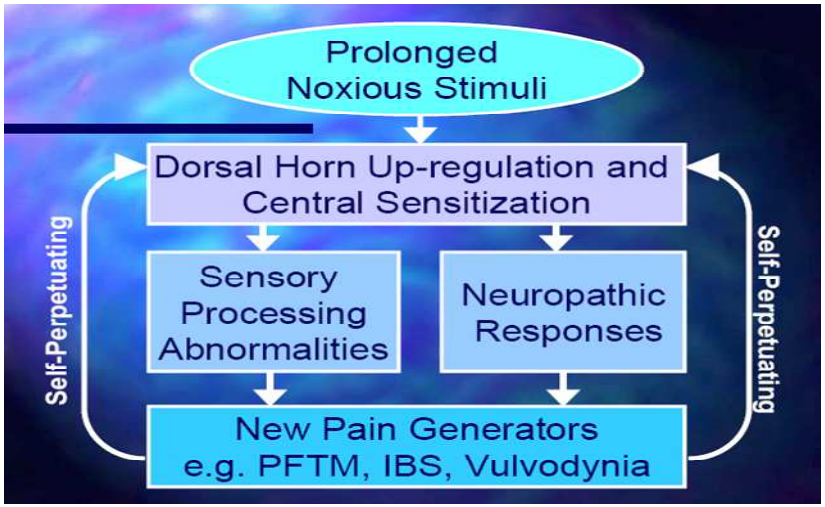
Visceral Silent Afferent

- Thinly or unmyelinated – easily damaged locally
- All can transmit pain - yet most are silent
  : 10% afferent are silent in skin
  : 30-80% visceral afferents are silent
- Silent afferent become active with prolonged stimulation
- Many more interneunical synapses

- Silent afferents play major role in tissue sensitization

Centralization

- Despite removal of original "insult" pain persists. The dorsal horn is still hyperexcitable with spontaneous activity.
- Barrage of nociceptive/painful stimuli to dorsal horn
  ; metabolic, biochemical, & electrophysiological change
- Prolonged release of glutamate and substance P in DH
- Decrease threshold or loss of inhibition = **Allodynia**
- NMDA receptor activation & increased excitability of large pool of interneurons = **Expansion of receptive fields**
- Based on duration and severity, these biochemical changes can become permanent = **Centralization**
  ; exaggerated reflex output with end organ dysfunction and spontaneous firing of DH neurons



DIAGNOSIS

Phisical examination

- standing examination
- sitting examination
- supine examination
- lithotomy examination

Laboratory exams

- blood testing
- urine testing
- stool testing
- STD testing
- hormonal assays
- tumor marker

6.4 CA125

Women reporting any of the following symptoms persistently or frequently (more than 12 times per month) – bloating, early satiety, pelvic pain or urinary urgency or frequency – should have a serum CA125 measurement taken. Particularly in women over the age of 50 years, any new IBS symptoms should prompt such action.[78]

Fertility and Sterility

Volume 95, Issue 1, January 2011, Pages 393–396

Correspondence

CA 125 serum values in surgically treated endometriosis patients and its relationships with anatomic sites of endometriosis and pregnancy rate

Tito Silvio Patrelli, M.D.[a, c], Roberto Berretta, M.D.[a], Salvatore Gizzo, M.D.[a, b], Antonio Pezzuto, M.D.[a], Laura Franchi, M.D.[a], Adolf Lukanovic, M.D., Ph.D.[c], Giovanni Battista Nardelli, M.D.[a, b], Alberto Bacchi Modena, M.D.[a]

Table 7. Some of the Diagnostic Tests That May Be Useful in the Diagnostic Evaluation of Women With Chronic Pelvic Pain

Symptom, finding, or suspected diagnosis	Potentially useful tests
Adenomyosis	Ultrasonography; hysterosalpingography; magnetic resonance imaging
Chronic urethral syndrome	Urodynamic testing
Compression or entrapment neuropathy	Nerve conducting velocities; needle electromyographic studies
Constipation	Anorectal balloon manometry; colonic transit time
Depression	Thyroid-stimulating hormone; thyroxine; triiodothyronine levels; antithyroid antibody; complete blood count; renal function tests; hepatic function tests; electrolytes; rapid plasma reagin
Diarrhea	Stool specimens for ova and parasites; stool polymorphonuclear leukocytes and red blood cells; stool cultures; stool for *Clostridium difficile* toxin; stool guiaic testing; barium enema radiography; colonoscopy; upper gastrointestinal series with fol1ow-through; computerized tomography
Diverticular disease	Barium enema radiography
Dyspareunia	Urethral and cervical gonorrhea and chlamydia cultures; chlamydial PCR testing; vaginal cultures; urine cultures; vaginal wet preparations; vaginal pH
Endometriosis	CA 125; ultrasonography; barium enema radiography; hysterosalpingography; computed tomography; magnetic resonance imaging
Hernias	Abdominal wall ultrasonography; computed tomography; herniography
Interstitial cystitis	Cystourethroscopy; KCl bladder challenge test; urine culture; urine cytologies; urodynamic testing; bladder biopsy
Ovarian remnant syndrome	Follicle-stimulating hormone; estradiol; gonadotropin-releasing hormone agonist stimulation test; ultrasonography ± clomiphene stimulation; barium enema radiography; computed tomography
Ovarian retention syndrome	Ultrasonography; computed tomography
Pelvic congestion syndrome	Pelvic venography; ultrasonography ± Doppler
Pelvic tuberculosis	Chest x-ray; PPD skin test
Porphyria	Urine porphobilinogen
Urethral diverticulum	Vaginal sonography; voiding cystourethrography; double-balloon cystourethrography; magnetic resonance imaging

PCR = polymerase chain reaction; KCl = potassium chloride; PPD =

CLINICAL GYNECOLOGIC SERIES: AN EXPERT'S VIEW

We have invited select authorities to present background information on challenging clinical problems and practical information on diagnosis and treatment for use by practitioners.

Chronic Pelvic Pain

Fred M. Howard, MS, MD

American Journal of Obstetrics and Gynecology (2006) 195, 554–61

ELSEVIER

American Journal of Obstetrics & Gynecology
www.ajog.org

Identification of diagnostic subtypes of chronic pelvic pain and how subtypes differ in health status and trauma history

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Received for publication October 4, 2005; revised February 23, 2006; accepted March 19, 2006

1) DIFFUSE ABDOMINALPELVIC PAIN (42.2%)

2) VULVOVAGINAL PAIN(20.4%)

3) CICLIC PAIN(10.0%)

4) NEUROPATHIC PAIN(9.0%)

5)NON LOCAL PAIN(6.6%)

6) TRIGGER POINT(5.9%).

7) FIBROID PAIN(5.9%)

Limits

1. Results not comparable to patients seen in the first visit. The physical and mental condition of the patient was not unknown to the physician who assigned the diagnosis
2. Insufficient statistical power to assess moderate differences between the two most common diagnosis with other subtypes
3. The study does not include IBS present in 35% of patients with CPP and that can affect the overall health status.

Table II Health status and trauma by CPP diagnosis

CPP diagnosis	Healthy physical functioning (least square mean ± SE)	Functioning without pain (least square mean ± SE)	Non-pelvic medical symptoms (least square mean ± SE)	Days in bed because of illness (least square mean ± SE)	Lifetime pelvic surgeries (least square mean ± SE)	Lifetime traumas (least square mean ± SE)
Diffuse abdominal/pelvi pain	35.7 ± 1.1^{a}	31.6 ± 1.1^{a}	5.6 ± 0.3^{a}	7.2 ± 0.5^{c}	2.7 ± 0.2^{a}	2.4 ± 0.2^{c}
Vulvovaginal pain	50.6 ± 1.6^{c}	50.1 ± 1.6^{c}	3.8 ± 0.4^{b}	0.5 ± 0.7^{a}	0.5 ± 0.3^{b}	1.1 ± 0.2^{a}
Cyclic pain	± 2.1^{bd}	40.4 ± 2.2^{b}	3.9 ± 0.6^{b}	3.2 ± 1.0^{bd}	1.1 ± 0.4^{bc}	1.5 ± 0.3^{ab}
Neuropathic pain	41.4 ± 2.3^{bd}	36.0 ± 2.3^{ab}	3.8 ± 0.6^{b}	2.2 ± 1.1^{ab}	1.5 ± 0.4^{c}	1.7 ± 0.3^{abc}
Nonlocal pain	39.6 ± 2.6^{ab}	35.5 ± 2.7^{ab}	5.1 ± 0.7^{ab}	4.5 ± 1.2^{bd}	1.2 ± 0.4^{bc}	2.0 ± 0.4^{bc}
Trigger points	41.2 ± 2.8^{abd}	36.1 ± 2.9^{ab}	5.1 ± 0.7^{ab}	5.5 ± 1.3^{cd}	2.8 ± 0.5^{a}	2.6 ± 0.4^{c}
Fibroid pain	48.1 ± 2.9^{cd}	41.1 ± 3.0^{b}	4.8 ± 0.8^{ab}	4.6 ± 1.4^{bcd}	0.6 ± 0.5^{bc}	2.2 ± 0.4^{bc}
Diagnosis *P* value	<.0001	<.0001	.006	<.0001	<.0001	.0009

Analysis of covariance results with diagnosis as a class variable; probability value from the *F*-test controlled for age, education, race, and endometriosis. Means sharing a common superscript are not significantly different from each other; means with a different letter ($^{a, b, c, d}$) show differences ($P \leq .05$) between diagnostic groups, with pairwise contrasts of least squared means.

IMAGING

6.2 Transvaginal scanning (TVS) and MRI

TVS is an appropriate investigation to identify and assess adnexal masses. B

TVS and MRI are useful tests to diagnose adenomyosis. B

The role of MRI in diagnosing small deposits of endometriosis is uncertain. ✓

A systematic review of the value of TVS in the diagnosis of endometriosis found that endometriomas may be accurately distinguished from other adnexal masses.[61] Evidence level 2++

It is also useful in identifying structural abnormalities such as hydrosalpinges or fibroids, which may be relevant even if not the cause of the pain.

TVS is of little value for the positive identification of other causes of chronic pelvic pain, including peritoneal endometriosis. However, in a study of 120 consecutive women with chronic pelvic pain undergoing TVS prior to laparoscopy, the presence of soft markers such as tenderness or poor ovarian mobility improved the prelaparoscopy probability of identifying relevant pathology at laparoscopy from 58% to 73% (likelihood ratio [LR] 1.9, 95% CI 1.2–3.1). In the absence of soft markers, the prelaparoscopy likelihood of pathology fell to 20% (LR 0.18, 95% CI 0.09–0.34). TVS may therefore have a role in identifying those women who are less likely to obtain a positive diagnosis from a diagnostic laparoscopy.[62] Evidence level 2+

The sensitivities of MRI and TVS for the diagnosis of adenomyosis are comparable in the best hands. Sensitivities of 70–78% and specificities of 86–93% for MRI, with figures of 65–68% and 65–98% for TVS, were achieved in two prospective blinded studies of consecutive patients undergoing hysterectomy and in a systematic review, using histopathology as the gold Evidence level 1++/2++

IDIOPATHIC CPP DEFINITION

PAIN OF LAST MORE THAN SIX MONTHS WITHOUT CAUSE IDENTIFIED

AND CORRECTABLE

After surgery and histological report, almost 55% of women CPP does not seem attributable to any organic cause.

Conservative treatment fail and does not improve QoL

HYSTERECTOMY REQUIRED BY WOMEN AS SURGICAL SOLUTION

- **Solving the dilemma regarding the usefulness of surgery is often demanded of the gynecologist.**

- When idiopathic CPP is suspected, women should be counseled on additional treatment options for CPP, such as analgesics, hormonal therapy, physical therapy, neural blocks and cognitive behavioral therapy before TLH

AIM OF THE STUDY:

- The aim of this study was to evaluate in a selected cohort of estimated idiopathic CPP (without preoperative known organic cause and unresponsive to the maximum daily dose of analgesics), the usefulness of total laparoscopic hysterectomy (TLH) both in modifying presurgical pain sta- tus and reducing postoperative analgesic use.
- The second aim of this study was to analyze the intraoperative and histological differences between patients who benefited from surgery and those who did not.

METHODS

- In the period 2010 to 2014, an observational cohort study of patients who underwent TLH for CPP at the Mini-Invasive Pelvic Surgery and Operative Obstetrics Unit, Department of Women's and Children's Health, University of Padua was conducted.

- 16 patients were treated byTLH for CPP resolution previously evaluated using a multidisciplinary approach (neurological, urological, gastroenterological, orthopedic) and without known organic CPP causes.

- As a last step before surgery, a psychiatric evaluation was usually performed to exclude any psychiatric disorders.

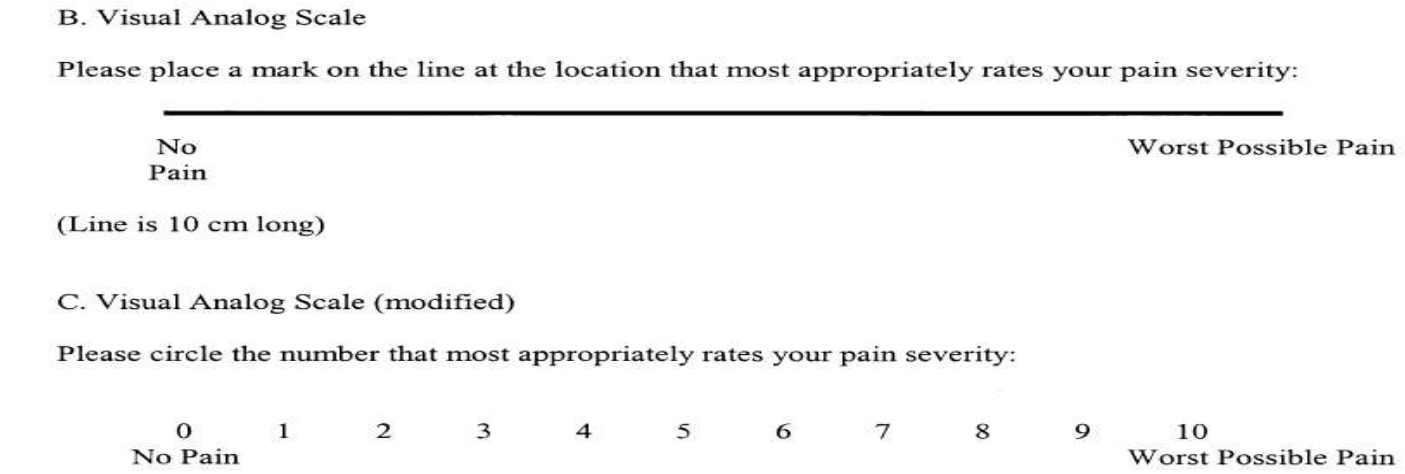
- Severity of CPP estimated by VAS

< 2 = grade 0,

2 - 4 = grade 1,

5 - 7 = grade 2

> 7 = grade 3.



B. Visual Analog Scale

Please place a mark on the line at the location that most appropriately rates your pain severity:

No Pain — Worst Possible Pain

(Line is 10 cm long)

C. Visual Analog Scale (modified)

Please circle the number that most appropriately rates your pain severity:

0 (No Pain) 1 2 3 4 5 6 7 8 9 10 (Worst Possible Pain)

Figure 2. Three of the instruments that may be used to assess pain severity.
Howard. Chronic Pelvic Pain. Obstet Gynecol 2003.

INCLUSION CRITERIA

- fertile hormonal status
- severe CPP (grade 3)
- negative history of systemic chronic inflammatory disease (connective tissue disease, autoim- mune disorders) and of previous abdominal/pelvic surgery, regular pelvic examinations (except for pain symptoms)
- no evidence or suspicion of organic disease (such as en- dometriosis, uterine myomas, inflammatory bowel disease, urological and bladder disease) at preoperative instrumental investigations (transvaginal ultrasound, magnetic resonance imaging and outpatient hysteroscopy) and preoperative serum CA125 level under a cutoff value of 35 Ku/mL

- Patients were considered eligible for the surgery only when at least 6 months of hormonal treatments (dienogest, levo- norgestrel, selective progesterone receptor modulators) and analgesic treatments (different combinations of paracetamol, nonsteroidal antiinflammatory drugs, opioids) failed to re- duce or resolve CPP.
- They received adequate preoperative counseling and were adequately informed about the possi- bility of nonconclusive invasive surgery.
- All eligible patients, properly informed, agreed to the aim of the study and to the use of their data (according to Italian Privacy Law 675/96).

- For all patients, data about age (in years), parity, body mass index (BMI), operative time (minutes), estimated blood loss (mL), postoperative recovery (days), intraoperative and postoperative complications and data regarding histology of all removed tissue were collected.

- Six months after surgery, any improvements in pelvic pre- operative symptoms (using the same multidimensional verbal scale) and reduction in analgesic therapy use were recorded by telephone interview.

Fig. 1

The first cervical landmark: the vesicouterine folder and pubocervical fascia are resected transversely for approximately 2 cm.

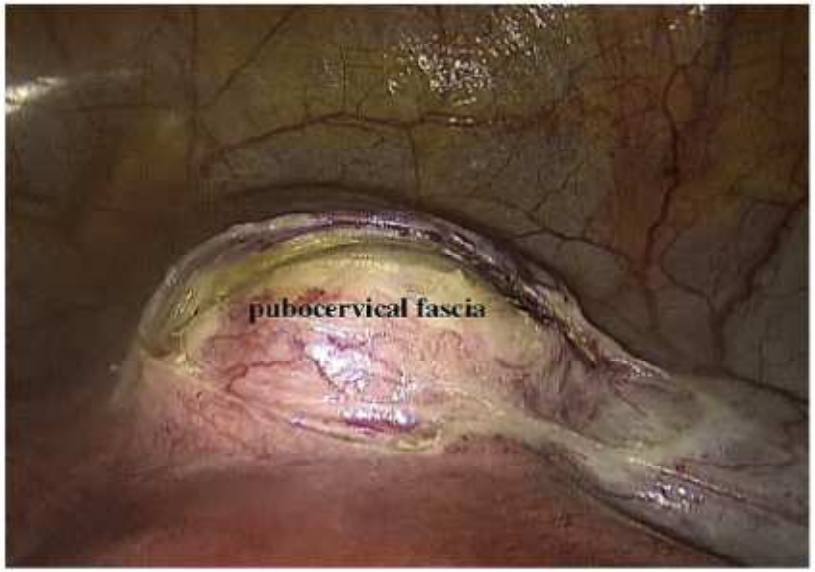


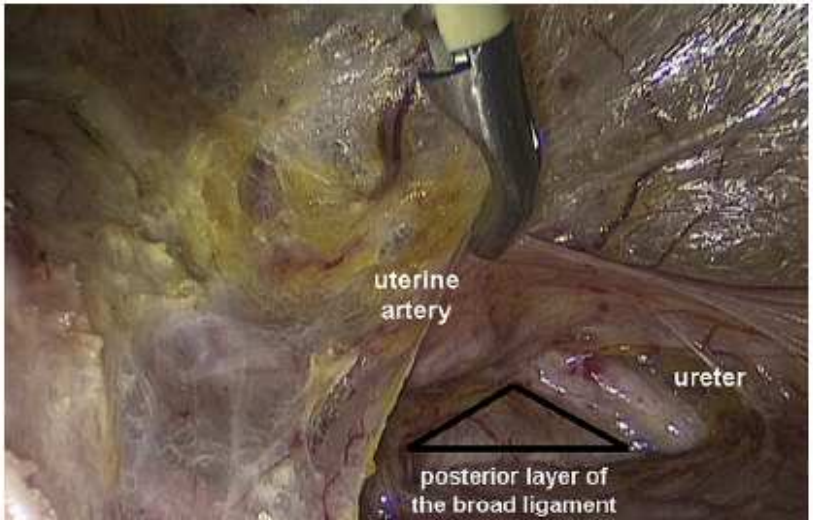
Fig. 2

Second landmark: the only anterior layer of the broad ligament is dissected starting from the round ligament. The posterior leaf of the broad ligament, in which the ureter rests, is preserved.

TLH were performed using Reverse tecnique

Fig. 3

The "safe triangle": the apex of the cross between the urethra and the uterine artery; the lateral side is represented by the ureter, and the medial side is represented by the ascending branch of the uterine vessels.



Salpingoophorectomy role in CPP

- Rocca et al: women younger than 45 years undergone to BS TLH:death risk with a twofold increase than those who didn't in 30-years-length followup
- Rivera et al: death risk increased for all causes, fatal or not CHD and lung tumor.

Rivera CM, Grossardt BR, Rhodes DJ, Brown RD Jr, Roger VL, Melton LJ III, Rocca WA. Increased cardiovascular mortality after early bilateral oophorectomy. Menopause 2009;16:15–23.
Rocca WA, Bower JH, Maraganore DM, Ahlskog JE, Grossardt BR, de Andrade M, Melton LJ. Increased risk of cognitive impairment or dementia in women who underwent oophorectomy before menopause. Neurology 2007;69:1074–1083

TABLE I - GENERAL FEATURES, INTRAOPERATIVE FINDINGS, SURGICAL INTERVENTION, HISTOLOGY, POSTOPERATIVE PAIN SCORE AND ANALGESIC USE

Age	Parity	Intraoperative findings	Surgical intervention	Histology	Pain score (6 months after surgery)	Analgesic use (6 months after surgery)
37	2	Absence of organic lesions	TLH + BS	Negative	0	Sporadic/absent (mild)
41	0	Absence of organic lesions	TLH + BS	Negative	2	2-4 times a week (strong)
39	0	Absence of organic lesions	TLH + BS	Negative	0	Sporadic/absent (mild)
41	0	Absence of organic lesions	TLH + BS	Negative	1	Once a week (mild)
42	3	Pelvic endometriosis + pelvic adhesions	TLH + BSO	Endometriosis	0	Sporadic/absent (mild)
45	0	Pelvic endometriosis (bladder and peritoneal endometriosis)	TLH + BS bladder/ peritoneal focal exeresis	Endometriosis	0	Sporadic/absent (mild)
39	0	Absence of organic lesions	TLH + BS	Negative	1	Once a week (mild)
40	0	Pelvic endometriosis + pelvic adhesions	TLH + BS + lysis of adhesions + peritoneal focal exeresis	Endometriosis + adenomyosis	0	Sporadic/absent (mild)
42	0	Absence of organic lesions	TLH + BS	Negative	3	Daily (strong)
41	0	Pelvic endometriosis + pelvic adhesions	TLH + BS lysis of adhesions + peritoneal focal exeresis	Endometriosis + adenomyosis	0	Sporadic/absent (mild)
39	0	Pelvic endometriosis (bladder and peritoneal endometriosis)	TLH + BS + bladder/peritoneal focal exeresis	Endometriosis	0	Sporadic/absent (mild)
42	2	Absence of organic lesions	TLH + BS	Negative	3	Daily (strong)
41	0	Absence of organic lesions	TLH + BS	Negative	2	2-4 times a week (strong)
44	1	Pelvic endometriosis + pelvic adhesions	TLH + BS + lysis of adhesions + peritoneal focal exeresis	Endometriosis + adenomyosis	0	Sporadic/absent (mild)
44	0	Absence of organic lesions	TLH + BS	Negative	3	Daily (strong)
45	2	Pelvic endometriosis + pelvic	TLH + BS + lysis of adhesions +	Endometriosis +	0	Sporadic/absent

Mild analgesic use = paracetamol ± NSAID;
Strong analgesic use = paracetamol ± NSAID± opioids

RESULTS

7 CASES: undetected foci of pelvic endometriosis were found

- 1 case : bilateral adnexectomy and pos- terior parametrectomy (6.2%),
- 2 cases: focal complete excision of vesical and peritoneal nodular endometriosis (12.4%),
- 3 cases: extended lysis of pelvic adherences(18.6%)
- 1 case: the removal of the appendix involved in pelvic endometriosis adher- ences was necessary (6.2%)

In agreement with intraoperative findings, histological re- ports of removed tissue confirmed endometriosis in the same cases (4 of these presenting also adenomyosis).

RESULTS

6 months after surgery

- a complete resolution of preoperative pain symptoms with spo- radic or absent mild analgesic use (score 0)→ 9 patients (56.2%)
- an occasional pelvic discomfort (score 1) with once a week mild analgesic assumption → 2 cases (12.5%).
- minimal benefit for pelvic pain after surgery (score 2) with strong analgesic intake 2-4 times/ week → 2 cases (12.5%)
- severe pain persisted (score 3) despite daily use of a strong analgesic → 3 cases

- 7/9 patients (77.7%) who had resolved CPP were affected by undetected endometriosis and/or pelvic adherence syndrome.
- 5 women who achieved minimal or no benefits from the surgery did not have any organic disease.

HIGHLIGHTS

- Despite 95% of women undergoing TLH for CPP referred long term improvement, almost 25% of them complain persisting pain one year after surgery

- 25% with after-TLH-CPP may occult somatic pathologies.

ROLE OF ENDOSCOPY IN CPP

Green-top Guideline No. 41

May 2012

The Initial Management of Chronic Pelvic Pain

Diagnostic laparoscopy is the only test capable of reliably diagnosing peritoneal endometriosis and adhesions. Gynaecologists have therefore seen it as an essential tool in the assessment of women with chronic pelvic pain. However, it carries significant risks: an estimated risk of death of approximately 1 in 10 000, and a risk of injury to bowel, bladder or blood vessel of approximately 2.4 in 1000, of whom two-thirds will require laparotomy.[68–70]

Evidence level 3/4

Clearly, conditions such as IBS and adenomyosis are not visible at laparoscopy, but there is also a risk that some forms of endometriosis will be missed. Endometriosis is a disease with a large variety of appearances and many authorities consider that it is significantly underdiagnosed at laparoscopy. Some recommend that all suspicious areas should be biopsied. It is well known that the existing scoring systems do not correlate with severity of pain and that deeply infiltrating endometriosis, which is strongly correlated with pain, may be misinterpreted as minimal disease.[71]

Evidence level 4

One-third to one-half of diagnostic laparoscopies will be negative and much of the pathology identified is not necessarily the cause of pain. There may be adverse consequences of a negative laparoscopy. Many women may feel disappointed that no diagnosis has been made.[72] This set of events may lead to disengagement with the medical process.[49]

Evidence level 4

The risks and benefits of diagnostic laparoscopy and the possibility of negative findings should be discussed before the decision is made to perform a laparoscopy. Perhaps it should be performed only when the index of suspicion of adhesive disease or endometriosis requiring surgical intervention is high, or when the patient has specific concerns which could be addressed by diagnostic laparoscopy such as the existence of endometriosis or adhesions potentially affecting her fertility.

Microlaparoscopy or 'conscious pain mapping' has been proposed as an alternative to diagnostic laparoscopy under general anaesthetic. Although the technique seems to provide an opportunity to confirm particular lesions as the source of the patient's pain, it has not been widely adopted, and questions remain as to the acceptability, reproducibility and validity of this technique.[73] In a recent study of 43 women undergoing conscious pain mapping, 39 had a successful procedure, but in only seven was a different diagnosis or treatment suggested by the awake laparoscopy compared with one performed under general anaesthetic.[74]

Evidence level 2+/3

In a postal questionnaire study of 63 women following a diagnostic laparoscopy, their subsequent pain experience and quality of life were not affected by the result of the laparoscopy.[75] Similarly, in a prospective study of 71 women undergoing laparoscopy for chronic pelvic pain, women were interviewed before and after their operation. The only factor identified through regression analysis which predicted an improvement in pain scores was a change in health beliefs as a result of having a laparoscopy. This finding applied to women with positive or negative findings at laparoscopy.[76] Simply showing women a photograph of their pelvis does not seem to affect their health beliefs or their pain outcome.[77]

Evidence level 1+ to 3

6.4 CA125

PPV 45%, NPV 99%, SENSITIVITY 97% AND SPESIFICITY 77%.

LPS ADVANTAGES

- Reassurance of the patient
- Differentiation between etiology gynecological and non-gynecological
- DD for malignant disorders or serious
- Increased accuracy of diagnosis
- The immediate surgical treatment is often possible.

LLPS LIMITATIONS

- Endometriosis may appear with atypical lesions: clear vesicles, peritoneal pockets, injury to flame or yellow brown stain may be found nel 15% -30% of women, but are often overlooked.
- DD Salpingitis, hemangioma, carcinoma, scars from previous surgery, inflammatory changes and fibrosis,splenosis and schistostomiasis.

BJOG: an International Journal of Obstetrics and Gynaecology
November 2004, Vol. 111, pp. 1204–1212
DOI: 10.1111/j.1471-0528.2004.00433.x

REVIEW

Accuracy of laparoscopy in the diagnosis of endometriosis: a systematic quantitative review

TLH in pazienti con CPP e LPS diagnostica negativa

- Metà delle donne trattate con terapia medica presentavano sintomi di CPP ad un anno di follow-up
- L'isterectomia al contrario: miglioramento marcato dei sintomi e della qualità di vita rispetto alla terapia non chirurgica (OR 10.45) in relazione al fatto che le donne che si sottopongono ad isterectomia hanno sintomi più severi e condizioni persistenti rispetto a quelle trattate

The Maine Women's Health Study: II. Outcomes of nonsurgical management of leiomyomas, abnormal bleeding, and chronic pelvic pain.
Carlson KJ, Miller BA, Fowler FJ Jr.
Obstet Gynecol. 1994 Apr;83(4):566-72

DIBATTITO:

ablazione laser , elettrocoagulazione , o escissione peritoneale sono ugualmente efficaci ?

ESCISSIONE PERITONEALE:

- l'unico metodo che permette di conferma istologica di endometriosi .
- Rimuove completamente le lesioni profondamente infiltranti

- Fino al 30% delle donne con endometriosi sono in realtà prive di dolore e nel 70% il dolore non correla con l estensione della malattia.

LIMITATION OF THE STUDY

- the small cohort of patients,
- the preoperative maximum pain score (grade 3)
- the lack of information about the usefulness of appendectomy. of any organic gynecological cause for CPP.

STRENGHT POINTS OF THE STUDY

- strictly selected patients,
- surgery performed by the same surgeons,
- investigation of analgesic use during follow-up,
- histological confirmation or exclusion of any organic cause of CPP

CONCLUSIONS

- In our case series, undetected endometriosis were found in 43.7% of cases and in those patients TLH was definitive.

We perfomed appendectomy onli in 1 case, because of its envolvment in pelvic endometriosis and pelvic adherences syndrome

CONCLUSIONS

- an investigative laparoscopy should be considered to discriminate between CPP with organic causes from idiopathic one.

- The advantages of concomitant appendectomy during TLH for idiopathic CPP need to be further defined.

OPEN QUESTION

- Maximize the effectiveness of TLH: complete evaluation of the causes urological, gastroenterological, neurological, and musculoskeletal
- Hysterectomy may not be an effective treatment: which patients can undergo TLH for the resolution of the pain?
- Role of appendectomy in idiopathic CPP

TAKE HOME MESSAGE

- When idiopathic CPP was confirmed by laparoscopy, the eventual removal of the uterus can be proposed as second-line treatment in the presence of severe not responsive pain and in highly motivated and adequately informed patients
- Hysterectomy is highly effective in improving CPP, but not solve it.

SCIENTIFIC PAPER

Laparoscopic Appendectomy in Women Without Identifiable Pathology Undergoing Laparoscopy for Chronic Pelvic Pain

Ann K. Lal, MD, Amy L. Weaver, MS, Matthew R. Hopkins, MD, Abimbola O. Famuyide, MBBS

Short-term efficacy of appendectomy in patients with CPP, in particular, located to the right abdomen and without obvious pelvic pathology

Necessary long-term randomized clinical trials.

GYNAECOLOGY

The Role of Appendectomy in Gynaecologic Surgery: A Canadian Retrospective Case Series

Jennifer A. Jocko, BScN, MD, Hassan Shenassa, MD, FRCSC, Sukhbir S. Singh, MD, FRCSC
Department of Obstetrics and Gynecology, The Ottawa Hospital, The University of Ottawa, The Ottawa Hospital Research Institute, Ottawa ON

Appendix pathologies were found with relatively high incidence during gynecological procedures.
This result supports routine appendix inspection necessity during a gynecological procedure. .

- Benefit of elective appendectomy is controversial and is still a matter of debate
- From limited data appendectomy may have a role in resolving CPP in women aged 35 years or less
- If benefit outweighs the risk for age or story, performing an appendectomy during gynecological procedure may be appropriate


ACOG

Committee on Gynecologic Practice

Reaffirmed 2012

This document reflects emerging

Committee Opinion

Number 323, November 2005 *(Replaces No. 164, December 1995)*

Elective Coincidental Appendectomy

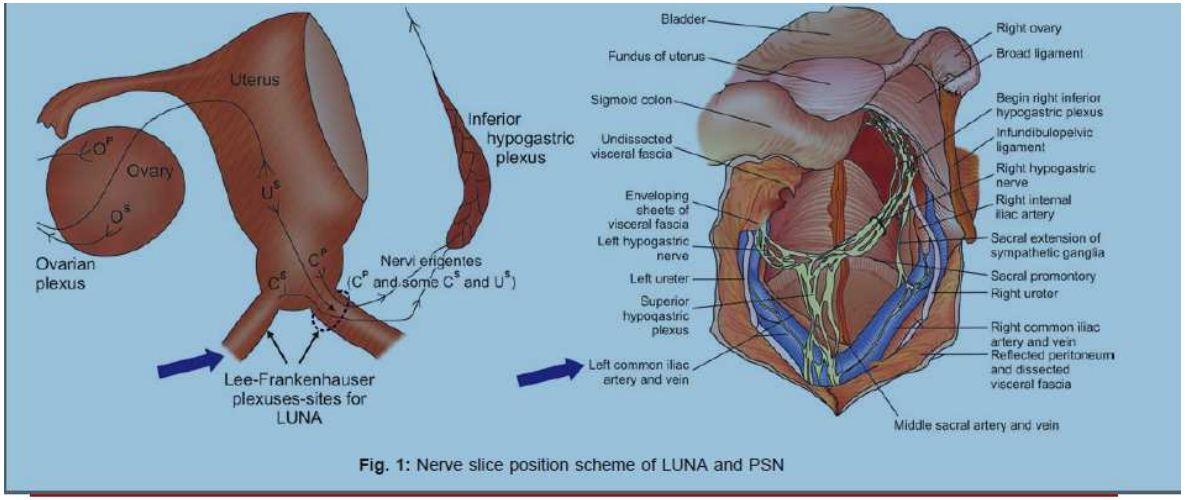


Fig. 1: Nerve slice position scheme of LUNA and PSN

NPS

- 73% efficacia nell'alleviare la dismenorrea
- 77% efficacia nell'alleviare la dispareunia,
- 63% efficacia nell' alleviare altri dolori

LUNA

- Procedura appropriate per dismenorrea e dolore centrale.
- Rischio di perforazione dei vasi uterine e di danno all'uretere.
- Meno efficace della Neurectomia presacrale