REVIEW OF MANAGEMENT OF CHRONIC PELVIC PAIN

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INTRODUCTION

Chronic pelvic pain (CPP) is pain of the lower abdomen or pelvis, of at least six months' duration, occurring continuously or intermittently, which is not associated exclusively with menstruation or sexual intercourse.⁽¹⁾

Prevalence of CPP

CPP is a common condition in the United Kingdom (UK), with a prevalence in primary care comparable to migraine, back pain, and asthma. Its prevalence in the general population is likely to be considerably higher.⁽²⁾

Causes of CPP

Gynaecological

- pelvic inflammatory disease (PID)
- pelvic congestion syndrome
- endometriosis
- peritoneal adhesions
- ovarian remnant syndrome (after hysterectomy)
- ovarian cyst
- retroverted uterus

Gastrointestinal

- chronic appendicitis
- diverticulitis
- irritable bowel syndrome

Urological

- interstitial cystitis
- urethral syndrome

Neurological and musculoskeletal

- ilioinguinal and iliohypogastric nerve entrapment after transverse suprapubic or laparoscopic skin incision
- myofascial pain
- low back pain

Miscellaneous

- depression
- somatisation
- physical or sexual abuse⁽³⁾

Risk factors

Drug or alcohol abuse, miscarriage, heavy menstrual flow, pelvic inflammatory disease, previous caesarean section, pelvic pathology, abuse and psychological co-morbidity are all associated with increased risk of non-cyclical pelvic pain.⁽⁴⁾

DIAGNOSIS

History	Onset, location, quality, radiation, aggravating and alleviating factors Association with menses, movement, micturition, defecation, sexual activity, sleep or eating Past history of abdominal surgeries and pelvic inflammatory disease
Examination	Abdominal palpation for masses and tenderness Triple swabs for chlamydia and neisseria gonorrhoeae Bimanual palpation: interstitial cystitis is elicited when the anterior vaginal wall is palpated. Levator spasm is present if pain is felt when the levator muscles behind the posterior vaginal wall are palpated Assessment of cervical motion tenderness, vaginal fornix pain and adnexal tenderness can help differentiate pelvic inflammatory disease or endometriosis from adhesions Uterine size, mobility and tenderness should be evaluated. A mildly enlarged, tender, boggy uterus indicates towards adenomyosis
Laboratory tests	Urine analysis and midstream urine specimen for culture and sensitivity

Ultrasonography

This may help if a physical examination is difficult (for example, if the patient has pain) or if an adnexal mass is suspected.⁽⁵⁾ Ultrasound can play a major part in diagnosing pathology as well as offering psychological reassurance to many patients without disease.

Ultrasonic features of PID such as peritoneal free fluid, dilated fallopian tubes and tuboovarian abscess are well recognised. Other gynaecological pathology such as ovarian cyst and fibroid can also easily be detected by this non-invasive imaging.

Diagnostic laparoscopy

This is appropriate if a patient has severe pain and the diagnosis is unclear, if pathology is suspected on the basis of the history and physical examination or if a patient does not respond or responds poorly to medical therapy (for example, oral contraceptives and non-steroidal anti-inflammatory drugs (NSAID)). Laparoscopy can confirm the diagnosis and provide histologic documentation. It can also confirm that there is no anatomic abnormality of the pelvic or abdominal organs.⁽³⁾

No diagnosis will be made in 40–60% of laparoscopies done for pelvic pain. Laparoscopy should not be part of the initial workup, and can be delayed while non-invasive treatments are tried. It is in the patient's best interest to keep her surgeries to a minimum.⁽⁶⁾

Conscious pain mapping

This is a useful additional investigation in the management of women with CPP. It can be employed in women with a negative laparoscopy or with visible pathology where the conventional treatment has failed. It involves a laparoscopy under local anaesthetic, which is an interactive approach with the woman in order to elicit the cause of her pain. Conscious pain mapping aims to localise areas within the pelvis responsible for CPP in order to provide specific treatment options.⁽⁷⁾

TREATMENT

Because there are many different causes of chronic pelvic pain, treatment will depend on the cause.

Endometriosis

Endometriosis is the presence of endometrial glands or stroma in sites other than the uterine cavity. It can lead to painful symptoms and infertility. The diagnosis of pelvic endometriosis in patients with chronic pelvic pain should be supported by excision biopsy and histological assessment, as the laparoscopic diagnosis is not always accurate. This would direct the clinician to the possible aetiology of the chronic pelvic pain and is of great value in counselling and planning future management for the patients.⁽⁸⁾

Medical treatment of endometriosis

There is inconclusive evidence to show whether NSAIDs (naproxen) are effective in managing pain caused by endometriosis. Oral contraceptive pills are effective but have adverse effects and are not suitable for women wishing to become pregnant. Use of progesterone in the form of tablets, implants or intrauterine device (IUD), danazol and gonadotropin-releasing hormone (GnRH) analogues are all found in the literature.

Laparoscopic resection of endometriosis

The combined surgical approach of laparoscopic laser ablation, adhesiolysis and uterine nerve ablation is likely to be a beneficial treatment for pelvic pain associated with minimal, mild and moderate endometriosis.⁽⁹⁾

Laparoscopic excision of endometriosis significantly reduces pain and improves quality of life for up to five years. The probability of requiring further surgery is 36%. Return of pain following laparoscopic excision is not always associated with clinical evidence of recurrence.⁽¹⁰⁾

There is insufficient evidence to determine whether hormonal suppression, either before or after surgery, for endometriosis is associated with a benefit.⁽¹¹⁾ Use of GnRH, however, has been shown to prolong symptom free interval after conservative laparoscopic surgery.

Laser laparoscopy

The carbon-dioxide laser used laparoscopically provides a precise and virtually bloodless technique for the vaporisation of endometriotic implants in the pelvis. The main advantage of laser laparoscopy in endometriosis is that patients may be treated at the time of diagnosis with less need for medication and no delay before conception is attempted.⁽¹²⁾

Adhesiolysis

A randomised clinical trial has shown that adhesiolysis for the treatment of pelvic pain is not indicated in women with

light or moderate degree pelvic adhesions. It may be beneficial in those with dense vascular adhesions involving the bowel.⁽¹³⁾

Pelvic adhesions assessed at laparoscopy

Pelvic venous congestion (PVC)

PVC is caused by incompetence of valves in the pelvic veins which lead to pooling of blood, pelvic congestion and pain. Abnormal ovarian endocrine function contributes to abnormal reflex vasoconstriction which, in turn, causes pelvic congestion. Suppression of ovarian function by GnRH analogues has been shown to improve pain due to PVC.⁽¹⁴⁾

Incompetence of valves of the pelvic veins leads to venous congestion, which can be assessed laparoscopically or, as in this illustration, radiologically

Therapy with medroxyprogesterone acetate is a useful first line therapy for women with pain associated with demonstrable pelvic congestion. In a clinical trial, ovarian function was suppressed with 30mg of medroxy-progesterone acetate, daily for six months, in 22 women with lower abdominal pain due to pelvic congestion. There was reduction in pelvic congestion demonstrated by venography in 17 of the 22 women.⁽¹⁵⁾

Laparoscopic sclerotherapy with ethanolamine oleate has also been successfully used.⁽¹⁶⁾

Embolisation

This is a minimally invasive procedure performed by interventional radiologists using imaging for guidance. During the outpatient procedure, the interventional radiologist inserts a thin catheter into the femoral vein and guides it to the affected vein using X-ray guidance. To seal the faulty, enlarged vein and relieve painful pressure, an interventional radiologist inserts tiny coils, often with a sclerosing agent (the same type of material used to treat varicose veins), to close the vein. After treatment, patients can return to normal activities immediately.⁽¹⁷⁾

Idiopathic CPP

Medical therapy

In a proportion of patients, no obvious factors can be found to be responsible for the pain and a diagnosis of idiopathic CPP is made. In these cases, further evidence of gynaecological pathology, such as endometriosis or adenomyosis, can be deduced from a positive response to GnRH analogues for three to six months. Otherwise, cyclical pain can be empirically treated with 'monophasic oral contraceptives, medroxyprogesterone acetate or levonorgestrel releasing IUDs'.⁽⁶⁾ Idiopathic CPP may respond to NSAID and a trial of up to two weeks may be helpful. Opioids may be appropriate, subject to the normal practice of supervising patients on opioids for non-malignant pain.⁽⁶⁾

Surgery

- Laparoscopic resection of uterosacral ligaments. In patients with normal laparoscopic appearances, microscopic endometriosis, endosalpingiosis, and inflammatory changes were found in uterosacral ligaments in 63% women with chronic pain. Laparoscopic resection of uterosacral ligaments improved dysmenorrhea, dyspareunia and pain.⁽¹⁸⁾ This procedure represents a promising alternative treatment for patients with chronic pelvic pain.⁽¹⁹⁾
- Laparoscopic uterine nerve ablation. This technique has been tried without success to improve the outcome of laparoscopic surgery.⁽²⁰⁾
- Hysterectomy. Bilateral oophorectomy combined with hysterectomy and hormone replacement therapy is an effective treatment for CPP due to venous congestion, which has failed to respond to medical treatment and leads to restoration of normal coital function and daily life.⁽²¹⁾
- Laparoscopy following hysterectomy and salpingo-oophorectomy. Following major surgery, laparoscopic treatment of pathological entities such as endometriosis and adhesions may improve pain.⁽²²⁾

Spasm of levator ani

Pelvic physiotherapy is the current treatment of choice. There is evidence from a pilot study suggesting that women with pelvic floor muscles hypertonicity and pelvic pain may respond to botulinum toxin injections into the pelvic floor muscles. Further research into this novel treatment of CPP is strongly recommended.⁽²³⁾

Interstitial cystitis

Interstitial cystitis remains a challenging disease to treat, but increased awareness, better diagnostic tools and effective pharmacologic agents can help non-urologists successfully manage this condition. Intravesical pentosanpolysulphate is found to be a safe and effective treatment.⁽²⁴⁾

Neuromodulation

Neuromodulatory strategies such as stimulation of afferent pathways using high-frequency stimulation of sacral roots and low-frequency stimulation of motor fibres innervating pelvic floor muscles via sacral roots or the posterior tibial nerve, hold promise for the effective treatment of CPP syndromes.

Caudal electrostimulation

CPP without evidence of organic or psychological cause is likely neuropathic pain and may be treated with caudal electrostimulation. Under fluoroscopic guidance, an epidural needle is inserted through the L2-L3 interlaminar space and a stimulating catheter is advanced in a caudal direction in the epidural space, until paresthesia is observed in the painful territory. An implantable electrostimulator may be inserted in a subcutaneous pouch.⁽²⁵⁾

THE MULTIDISCIPLINARY APPROACH

Women present to gynaecological surgeons with a multitude of symptoms which may represent significant pathology in the reproductive system, or in other systems, or may actually not be a symptom of a disease process at all. The gynaecologist's role in the management of these challenging patients is to identify treatable disease or physiological conditions that can be influenced to reduce the level of pain. For women who have undergone several unsuccessful interventions and who are now experiencing neuropathic or post-surgical pain, the gynaecologist's continued interest can provide reassurance and legitimise and reinforce the view that some form of re-conceptualisation is necessary. It is outside the scope of this article to comment on the specific features of a pain management approach, save to say that cognitive behavioural therapy, psychotherapy, physiotherapy and nursing support may have a large role to play in the management of this very difficult group of patients, who have elusive and sometimes no pathology.⁽²⁶⁾

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