



**Support Information Advocacy Education Research**

The Pelvic Pain Support Network would be pleased to hear from clinicians and researchers with an interest in this field.

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**CHRONIC PELVIC PAIN**

The purpose of this leaflet is to give an introduction to chronic pelvic pain (CPP), and to some of the more common causes, investigations and diagnostic tests that may help clinicians with an interest in this challenging field of medicine.

**What is chronic pelvic pain ?**

According to the International Pelvic Pain Society, chronic pain is defined as "pain of six months or longer duration that is localized to the pelvis and is not cyclical" (Howard F 2003).

A simple, practical definition of "pain in the lower abdomen or pelvis that is experienced either intermittently or constantly for at least six months," has been proposed (RCOG). This is a symptom-based rather than a disease-based definition.

In either event the CPP patient may experience constant pain, causing musculoskeletal dysfunction and disability, preventing them from performing the most fundamental of body movements such as sitting and standing.

## Epidemiology

Population surveys in the USA have shown that 15% of women of reproductive age have CPP and that 10% of gynecological outpatient consultations are for CPP. In the UK CPP is estimated to have an annual incidence of 3.8% in women aged 15-73 years.

This is higher than that of migraine 2.1% and comparable to that of asthma 3.7% and back pain 4.1% (Zondervan K 1999). CPP can also affect men but the reported prevalence is considerably lower than that in women.

## Interventions, Occurrence, Cost and Benefit

In the UK, 50% of laparoscopies are carried out for CPP, whilst in the USA the figure is 40% (Campbell F 1994), at a 1990 cost of some two billion dollars (Mathias S 1996). These direct and indirect costs are undoubtedly much higher today.

The total annual cost in the UK was estimated at £158 million which represents approximately 0.6% of total NHS expenditure for 1990/91 (Davies L 1992). Only around 50% undergoing a laparoscopy for CPP receive a definitive diagnosis or therapeutic benefit.

## Origin and Causes of Chronic Pelvic Pain

CPP may be gynecological, urological, gastrointestinal, musculoskeletal or neurological in origin. Musculoskeletal and neurological causes have received little attention. Patients with pelvic pain generally consult gynecologists who may have a limited view of the possible causes of pain.

The pain may be due to one or more causes with several factors requiring assessment and treatment. For example, nodular endometriotic disease in the rectovaginal area may infiltrate or constrict nerves or develop new pain nerves (Anaf V 2000, Moore J 2000, Berkley Rapkin 2005, Science). Peritoneal adhesions can lead to intestinal obstruction, chronic pelvic pain and infertility. Established adhesions are highly cellular, vascularized and innervated (Herrick S 2000, Sulaiman 2001).

A negative laparoscopy does not mean there is no physical basis for pain or no pathology. If pain is suspected to originate from the bladder, a cystoscopy with hydrodistention under general anaesthesia should be carried out.

Doctors can and should challenge stereotypes of patients "unexplained" pain by admitting the shortcomings of medical knowledge (Werner A 2005). It is the duty of health care providers to recognize the suffering of women patients and their strength and to prevent further disempowerment (Malterud K 2000). Patients often need time to talk and not necessarily always to doctors (Selfe S 1998 Pain). Patients are generally not directed to sources of support. Emotional support may be beneficial for both patients and carers.

## Management

The 2006 Pelvic Pain Support Network survey of patients in several countries indicates that patients with long term pelvic pain are poorly served, that an inter-disciplinary approach is helpful and that patients are increasingly willing to cross borders to access such expertise. The 2004 Pain in Europe survey also established that a high proportion of patients with chronic pain would go anywhere to gain help.

The management of visceral pain is frequently unsatisfactory (Cervero 1999, Lancet). It is also known that hormones are associated with differences in pain perception between males and females (Sanoja R 2005, Pain). A multi-disciplinary team approach to assessment and treatment of chronic pain has been shown to be effective (Flor H 1992). One randomized controlled trial (Peters AA 1991) and one controlled cohort study have shown effectiveness of this approach in chronic pelvic pain (Kames, Rapkin 1990). The best approach may be for a gynecologist with a special interest in pain management to carry out investigations and referral to the pain team consisting of a pain physician, specialist pain nurse, physiotherapist and counselor or psychologist trained in cognitive behavioural therapy.

Comprehensive pain programmes modeled on the biopsychosocial model of pain and focusing on functional improvement/restoration as opposed to "cure" have been found to be more effective for pain reduction, improved quality of life, and overall reduction of health care costs and utilization (Gatchel and Okifuji 2006, Journal of Pain).

A tender uterus could be due to Adenomyosis or infection. A rectal or rectovaginal exam should be carried out last. Pain on rectal exam may indicate chronic constipation, Haemorrhoids or Irritable Bowel Syndrome.

### Diagnostic tests

The decision as to which tests to carry out will be based on the history and physical exam. Transvaginal ultrasound is often used to investigate women with chronic pelvic pain. Sonohysterography can be used to investigate the endometrial cavity for polyps, endometrial cancer and submucosal fibroids. Hysterosalpingography can detect uterine-tubal patency and irregularities of the uterine cavity. Rectovaginal Endometriosis may spread laterally and cause fibrosis of tissue around the ureters. An intravenous urogram is useful to identify ureteral involvement. Pelvic ultrasound or MRI are useful for investigating adnexal masses such as endometrioma and uterine abnormalities. MRI is increasingly being used to diagnose rectovaginal septum endometriosis (as is transrectal ultrasonography) and to assess involvement of the bowel and urinary tract. MRI is the best technique for diagnosing adenomyosis and telling it apart from fibroids. Rectal carcinoma is a possible finding in cases of suspected rectovaginal endometriosis and a preoperative sigmoidoscopy is essential.

Laparoscopy has been the gold standard for the diagnosis of chronic pelvic pain. The incidence of abnormal findings at laparoscopy ranges between 35-83% (Gunter J 2003). Endometriosis and adhesions are the most common findings accounting for at least 85% of all laparoscopic diagnoses (Howard F 2003). Laparoscopy is justified where there is a high suspicion of endometriosis with severe dysmenorrhea, nodularity in the pouch of Douglas and or dyspareunia. Doctors have a duty of care which includes giving careful advice and sufficient information upon which the patient can base a decision. Patients should be informed of risks of surgery that are greater than 1%.

This includes information about the risk of adhesion formation/re-formation. In the case of rectovaginal Endometriosis a biopsy should be obtained if conservative treatment or a delay in surgical treatment is necessary. These patients should be managed by gynaecologists with special skills in rectovaginal endometriosis or with the assistance of a bowel surgeon.

### Some common conditions that can cause CPP are:

#### Gynecological:

- Adenomyosis
- Adhesions
- Adnexal mass
- Endometriosis
- Endosalpingiosis
- Fibroids
- Herpes
- Malignancy
- Ovarian Remnant Syndrome
- Pelvic Congestion Syndrome
- Pelvic Inflammatory Disease
- Vulvodinia

#### Urological:

- Chronic urinary tract infection
- Painful Bladder Syndrome/Interstitial Cystitis
- Malignancy
- Radiation Cystitis

#### Gastrointestinal:

- Chronic constipation
- Colitis
- Diverticulitis
- Inflammatory Bowel Disease
- Irritable Bowel Syndrome
- Malignancy

#### Musculoskeletal:

- Chronic Coccygeal pain
- Fibromyalgia
- Hernia
- Myofascial pain
- Piriformis Syndrome
- Referred pain eg. Thoracic Lumbar Syndrome (Maigne Syndrome)
- Sacroiliac joint dysfunction

#### Neurological:

- Nerve compression/entrapment, Neuralgia
- Nerve damage (Sciatic, Pudendal, Ilio-inguinal, Genito-femoral)

#### Psychological, Environmental and Genetic factors:

Depression is more prevalent in women with CPP. Studies have shown that depression is more likely to be a consequence of pain than a cause of symptoms (McGowan L 1998).

There has been discussion about the possible implication of physical or sexual abuse as a predisposing factor in the development of pelvic pain.

In some studies any association is hardly higher than in the general non- pain population. In other studies experience of physical violence/abuse is higher in women with CPP. (Walling MK 1994, Rapkin, Kames 1990, Pain ). In a 2006 survey by the Pelvic Pain Support Network 14% of women with CPP felt that being forced to take part in intimate activity had a bearing on their pain. This figure varied between conditions.

There is increasing evidence that the onset of idiopathic pain disorders is linked to both physical and psychological triggers but the probability that an individual will develop such a condition is determined by a complex interaction between the individual's genetic background and the extent of exposure to specific environmental events. Subclassification of these conditions are needed based on genetic variations which will allow better and more individually based treatments (Diatchenko 2006, Pain).

In a study of post-surgical pain, researchers discovered that people with no copies of a protective gene variant, GCH1 had a higher risk of developing chronic post-surgical pain than those with two copies of the gene. This work might enable doctors to screen for gene variants prior to surgery and reduce the risk of chronic pain by providing more aggressive pain relief and/or by choosing less aggressive surgical procedures (Tegeer I 2006). It has been shown that chronic pain following surgery can be a risk especially for certain types of surgery and that pain management interventions prior to and during surgery, as well as post-operatively, can be helpful in reducing this risk (Visser 2006).

## Investigation

A detailed patient history is crucial and sufficient time should be allowed for this. Disability can be disguised by the CPP patient. These patients generally look well which may lead to important factors being overlooked by the clinician. The International Pelvic Pain Society has an assessment form available on their website ([www.pelvicpain.org](http://www.pelvicpain.org)) for clinicians to use.

A patient-centred assessment and communication tool may be more motivating for patients.

In every case it is important to establish the following during the consultation:

- ~ The location of the pain. The patient should be asked to mark the location of the pain on a map which shows the front, back and the genital region.
- ~ The type/description of pain (adjectives from Brief Pain Inventory)
- ~ The severity of pain (quality of life questionnaires more useful for chronic pain, communication tool useful for patient and clinician)
- ~ The duration of the pain
- ~ Whether the pain is cyclic or non-cyclic
- ~ How the pain has changed over time
- ~ What aggravates and what eases the pain (positions eg sitting, standing, activities etc)
- ~ The patient's obstetric history – difficulty and method of delivery
- ~ The patient's surgical history
- ~ What other symptoms are present - bowel, urinary ,musculoskeletal etc
- ~ The family history – endometriosis, cancer, inflammatory bowel disease etc
- ~ The social history- whether the patient has a support network

An abdominal and pelvic exam are essential parts of the investigation. Scars from previous surgeries, delivery or trauma as well as any masses should be given particular attention. Trigger points and sites of nerve entrapment (ilioinguinal, iliohypogastric) can sometimes be elicited using an abdominal tensing or straight leg raise test (Thompson 1977, Lancet). Pain in the vulva or perineum may indicate pudendal nerve involvement. A speculum exam should enable a full visual inspection and swab to be taken for analysis. The appearance of the skin in the genital area and any discharge should be noted. Sometimes there is painful pelvic floor muscle spasm or trigger points or evidence of pudendal nerve entrapment.

This may be a primary problem or it may be secondary to bladder pain or Endometriosis. A fixed and immobile uterus may be due to Endometriosis or adhesion. The cervix, paracervical areas and vaginal fornices should be palpated for signs of pelvic infection, Endometriosis, urethral pain, nerve entrapment and trigger points. In order to detect this form of Endometriosis, the examination should be carried out during menstruation.