UNIT NO. 5

PAIN MANAGEMENT IN GYNAECOLOGICAL DISORDERS

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ABSTRACT

Acute pelvic pain needs to be differentiated from chronic pelvic pain. The treatment is different. Chronic pelvic pain (CPP) in a woman can cause functional disability and distress. There are many factors which contribute to it. Effective treatment depends on establishing correct diagnos(es) which may include gynaecological as well as non-gynaecological causes. Managing CPP demands a full understanding of the patient's biopsychosocial situation for which a multidisciplinary model is promising.

SCOPE OF THE PROBLEM

It is useful to divide pain from gynaecological problems into two broad categories – acute pelvic pain and chronic pelvic pain. Acute pain resulting from gynaecological problems is a separate topic on its own and its management is different from that of chronic pelvic pain.

ACUTE PELVIC PAIN

Acute lower abdominal pain in women is common and does not always indicate the presence of serious illness. However, there is a need to keep in mind several serious conditions, namely acute pelvic inflammatory disease (PID), acute appendicitis, ectopic pregnancy and other complications of pregnancy may present initially with this symptom. Therefore, in managing women with lower abdominal pain care should be taken to exclude any serious condition before dismissing the patient.

Acute PID

Infection of the reproductive tract of women above the internal os of the cervix results in acute pelvic inflammatory disease. This is often a result of an ascending cervical infection caused by Neisseria gonorrhoeae, Chlamydia trachomatis and anaerobic bacteria. The immediate and long term effects of PID include salpingitis, pelvic abscess, peritonitis, infertility and predisposition to tubal ectopic pregnancy.

Women with lower abdominal pain should be assessed carefully and if PID is the cause they should be adequately treated for gonococcal, chlamydial and anaerobic bacterial infection. Untreated, PID is associated with significant morbidity and mortality.

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Primary Dysmenorrhoea

Primary dysmenorrhea is characterised by cramping pain in the lower abdomen occurring just before or during the first day of menstruation, and by definition occurs in the absence of secondary causes such as endometriosis. Women with primary dysmenorrhea have increased production of endometrial prostaglandin, resulting in increased uterine tone and stronger, more frequent uterine contractions. Prevalence rates are as high as 90 percent. Initial presentation of primary dysmenorrhea typically occurs in adolescence. A diagnostic evaluation is unnecessary in patients with typical symptoms and no risk factors for secondary causes. Nonsteroidal anti-inflammatory medications are the mainstay of treatment, with the addition of oral contraceptive pills when necessary. In a patient who does not respond, a secondary cause needs to be considered.

DYSPAREUNIA

Dyspareunia is genital pain associated with sexual intercourse. Identification of the initiating and promulgating factors is essential to reaching a successful diagnosis. The location of the pain may be described as entry or deep. Vulvodynia, atrophy, inadequate lubrication and vaginismus are associated with painful entry. Endometrosis, urethral disorders, cystitis and interstitial cystitis, prolapsed uterus, bladder, adhesions, ovarian cyst, and large uterine fibroids are associated with deep dyspareunia. The physical examination may reproduce the pain, such as localized pain with vulvar vestibulitis, when the vagina is touched with a cotton swab. The involuntary spasm of vaginismus may be noted with insertion of an examining finger or speculum. Palpation of the lateral vaginal walls, uterus, adnexa and urethral structures helps identify the cause of the deep dyspareunia. An understanding of the present organic etiology must be integrated with an appreciation of the ongoing psychologic factors and negative expectations and attitudes that perpetuate the pain cycle. Laparoscopy would be required to determine the presence of an organic cause.

CHRONIC PELVIC PAIN

Chronic pelvic pain is defined as non-menstrual pelvic pain of more than 6 months duration and severe enough to cause functional disability or require medical or surgical treatment[1]. It is a common and significant disorder of women. In primary care practices, 39% of women complain of pelvic pain[2]. Chronic pelvic pain(CPP) accounts for 10% of referrals to gynaecological services[1]. It is estimated that 12-18% of hysterectomies and 20-40% of laparoscopies are performed for chronic pelvic pain[1,3,4]. Chronic pelvic pain has a prevalence of 3.8% in women aged 15-73, which is

higher than the prevalence of migraine(2.1%) and is roughly similar to that of asthma(3.7%) and back pain(4.1%)[5]. Direct costs of health care for CPP in the US are estimated at $800 million per year, and direct and indirect costs may total more than 2 billion dollars per year[6].

CPP can be a crippling disorder, eluding diagnosis and treatment and adversely affects a broad spectrum of the patient's life including employment and marriage.

Causes

Table 1 shows the multiple possible causes of CPP in women. Some patients may have more than one cause contributing to their CPP. Obviously, treatment outcome is heavily dependent on making the right diagnoses. Treatment may sometimes need to be multidisciplinary.

Table I. Causes of Chronic Pelvic Pain in Women

Gynaecological. Endometriosis, fibroids, adenomyosis, chronic pelvic inflammatory disease, adhesions, ovarian cysts, residual ovarian syndrome, pelvic congestion syndrome, pelvic tuberculousis, genital prolapse, intrauterine contraceptive device

Urological. Interstitial cystitis, bladder tumour, recurrent cystitis, radiation cystitis, bladder or ureteric calculi, urethral diverticulum, urethral syndrome

Gastrointestinal. Irritable bowel syndrome, colonic cancer, diverticulitis, Crohn's or Ulcerative colitis, constipation, hernias, chronic subacute intestinal obstruction

Orthopaedic. Degenerative joint disease, prolapsed intervertebral disc, fibromyositis, low back pain, poor posture, spondylosis, abdominal wall myofascial pain (trigger points), muscular strains.

Others. Depression, somatic referral, sexual abuse

History

The following is a list of items that may be relevant in the history:

- Age
- Duration of pain with reference to age of onset
- Site and severity of the pain. A pain score of 0-10 is helpful in establishing baseline severity and treatment progress
- Extent to which the pain has caused functional disability
- Alleviating and aggravating factors including menstruation
- Previous treatment for CPP
- Nature of the pain whether cyclical, colicky or constant or intermittent
- Any dysmenorrhoea, dyspaurenia, menorrhagia - suggestive of endometriosis
- Number of pregnancies and caesarean deliveries. A recent study[7] found that caesarean section was associated with CPP in a statistically significant manner
- Contraceptive practice
- Presence of mucopurulent per vagina discharge. History of STD/PID
- Previous surgeries
- Drug abuse
- Depression or anxiety
- History of sexual or physical abuse.

Physical examination

The following are items to note in the physical examination:

- General condition of the woman
- Abdominal examination: site of tenderness, masses
- Speculum: PV discharge
- Vaginal examination: A retroverted uterus with limited mobility and nodularity in the cul-de-sac or uterosacral ligaments is suggestive of endometriosis; Adnexal mass; Cervical motion tenderness may indicate pelvic inflammation
- Rectal examination

Investigations

The following may be considered:

- Full blood count with differentials and erythrocyte sedimentation rate
- Urinanalysis
- Pelvic ultrasound to confirm or exclude fibroids, ovarian cysts, pyohydrosalpinx
- Laparoscopy: 20-40% of gynaecological laparoscopies are done for CPP. Endometriosis is diagnosed in 70-90% of laparoscopies for CPP[8,9,10]. About 35% of women with CPP will have no apparent pathology at laparoscopy[11]. A negative laparoscopy does not necessarily mean the absence of disease or physical basis for the pain. A negative finding may be therapeutic to some women who with assurance may experience improvement in their CPP.

THERAPY

Treatment of a treatable underlying cause will help in the removal of pain. Relief of the pain itself is important too, particularly if the underlying cause cannot be removed.

Endometriosis as cause of CPP

In cases which do not respond to first line therapy, second line therapy which may be medical or surgical need to be considered.

First line therapy[12]

This consists of non-hormonal or hormonal treatment or a combination of both. For the initial management of dysmenorrhoea or CPP due to endometriosis, NSAIDS are recommended based on robust evidence from several RCTs. Mefenamic acid 500 mg every 8 hours or Naprosyn EC 375 mg bid or the specific Cox 2 inhibitors like celecoxib 200mg bid have proven efficacy in alleviating dysmenorrhoea or CPP from endometriosis. Combined oral contraceptives may also be used either alone or in combination with NSAIDs.

Second line therapy of pain

If first line medical therapy fails, second line therapy consists of either medical or surgical modalities.[12]

Medical therapy: Several options are available

- 2 month trial of danazol which is a 17-ethinyl-testosterone derivative. Its efficacy has been evaluated in a randomized, placebo-controlled double-blind trial. OR
- GnRH analogue OR
- Medroxyprogesterone acetate which can be given either as a 150mg depot every 90 days or 50mg orally daily.

If any of these are effective they can be continued for 6 months as maintenance.

Surgical therapy: Diagnostic laparoscopy is offered and if endometriosis is identified and though to contribute to the pain, conservative treatment with laparoscopic directed excision, ablation should be done by an experienced operator.

Zullo et al[13] in a randomized study compared conservative intervention consisting of electrocautery ablation or excision of visible pelvic endometriotic lesions, enucleation of endometriomas and lysis of adhesions to presacral neurectomy and found that both interventions significantly reduced the frequency and severity of dysmenorrhoea, dyspaurenia and CPP but presacral neurectomy offered significantly better results compared to conservative surgery.

In the presence of an endometrioma, there are two surgical options: cystectomy or fenestration(incision and drainage) with electrocoagulation to the cyst wall lining. Beretta et al[14] found that cystectomy resulted in significantly better outcomes in terms of CPP, dysmenorrhea and dyspaurenia. Complication rates were no different in either approach.

Current available evidence does not support the role of laparoscopic uterosacral nerve ablation (LUNA) for CPP due to endometriosis[15].

Twenty five percent of women with CPP have adhesions. However, its role as a cause is not established. The only randomized trial of adhesiolysis failed to show any significant improvement in pain symptoms after laparoscopic adhesiolysis relative to a control group that did not have adhesiolysis[16].

Adjunctive medical therapy should be provided to women after conservative surgical treatment for endometriosis and may consist of danazol, GnRH-analogue or progestins. There is no published data supporting the use of OCs as an adjunctive medical therapy, although a trial and continuation when effective is reasonable[12].

For women who have no desire for further fertility and who are willing to deal with the risks of surgical menopause, THBSO has been shown to relieve symptoms, provided that endometriosis is the cause of the CPP. A number of investigators have evaluated the incidence of symptom recurrence after hysterectomy with ovarian conservation. One group[17] demonstrated that 31% underwent reoperation after hysterectomy with ovarian retention compared to patients who had bilateral gonadectomy, Odds Ratio 8.1 (95% CI 2.1-31.3).

If treatment fails to address the CPP or no obvious gynaecological cause is found then one needs to revise the initial impression and consider the other myriad causes such as irritable bowel syndrome or interstitial cystitis.

Interstitial cystitis

Excessive urgency and frequency of urination, suprapubic pain, dyspareunia, chronic pelvic pain and negative urine cultures are characteristic of this chronic disease. The course of the disease is usually marked by flare-ups and remissions. Other conditions that should be ruled out include bacterial cystitis, urethritis, neoplasia, vaginitis and vulvar vestibulitis. Interstitial cystitis is diagnosed by cystoscopy and hydrodistention of the bladder. Glomerulations or Hunner's ulcers found at cystoscopy are diagnostic. Oral treatments of interstitial cystitis include pentosan polysulfate, tricyclic antidepressants and antihistamines. Intravesicular therapies include hydrodistention, dimethyl sulfoxide and heparin, or a combination of agents. If a support group is available, referral to a support group should be offered to all patients with interstitial cystitis.

PITFALLS IN MANAGEMENT

Managing CPP can be challenging. It can also be frustrating to the physician in the group of women for whom no diagnosis is apparent despite referrals to all medical and surgical disciplines and for whom all interventions aimed at symptomatic relief are of no avail. It is only too tempting to label the pain as psychogenic. The separation of pain into psychogenic and somatic may sometimes be an excuse to say that the former type of pain is not amenable to therapy and to wash one's hand off the patient. Pyschogenic pain is no less real than pain from an organic cause. If not managed properly it can give rise to chronic depression which will further worsen the pain. A vicious cycle is thus established. If the pain cannot be eradicated, then one must find ways to minimize the effects of the pain so that the patient remains functional at work and the relationships with family and friends is not unduly strained.

MULTIDISCIPLINARY PAIN CENTRES

Peters et al[18] have found that a multidisciplinary approach is better than the tradition one with the gynaecologist alone, especially in women with negative findings at laparoscopy. This team should consist of a psychologist, psychiatrist, physiotherapist, anesthetist and nurse working in tandem.

LEARNING POINTS

- Acute pelvic pain needs to be differentiated from chronic pelvic pain. The treatment is different.
- Chronic pelvic pain (CPP) in a woman can cause functional disability and distress. There are many factors which contribute to it.
- Effective treatment depends on establishing correct diagnos(es) which may include gynaecological as well as non-gynaecological causes.
- Managing CPP demands a full understanding of the patient's biopsychosocial situation for which a multidisciplinary model is promising.

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