

Managing chronic pelvic pain in girls and women

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Women with chronic pelvic pain have often experienced pain since adolescence as well as self-doubt, which often results in difficulties in personal development, relationships and sexual confidence. The management approach outlined in this article can help to improve outcomes for these patients.

MedicineToday 2013; 14(5): 54-58

When a woman presents with a long list of pelvic pain complaints, it's easy to feel overwhelmed, especially as time is often limited. Frequently, the patient has experienced pain for years before making the decision that 'something must be done', and presents to her doctor distressed and desperate.

Women with chronic pelvic pain have often experienced

pain since adolescence accompanied by self-doubt, resulting in difficulties in personal development, relationships, sexual confidence, educational achievement and financial opportunities. Their pain is a taboo topic with embarrassing gender, fertility and sexual issues, not suitable for easy conversation with family or friends. When the pain is severe, affected women often stay home isolated and distressed.

This article outlines an approach to the management of women with chronic pelvic pain, which can lead to improved outcomes for affected patients.

AN OVERALL CONCEPT OF PELVIC PAIN

Chronic pelvic pain can be considered as having three components, as described below.

- **Pelvic causes of pain.** Although there may now be several organs involved, ask the patient how the problem started in the first place. For example, a woman may have had dysmenorrhoea as a teenager then over time developed an irritable bowel, overactive bladder or painful pelvic muscles.
- **The chronic pain condition.** This is sensitisation of the nerve pathways that transmit pain, sometimes called neuropathic pain or central sensitisation. Once a patient has pain of some kind on most days for more than six months, chronic pain is likely. This is best considered as a medical condition requiring treatment. The patient will recognise her pain is more complex than before, with a mix of pain symptoms, anxiety, low mood, poor sleep and fatigue.

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- **The brains' adaptation to chronic pain.** The brain constantly adapts to change and repeated episodes of pain change the way the brain works. Hypervigilance and withdrawal from activities are common as the patient becomes concerned with the potential pain implication of every movement or sensation.

MANAGEMENT

Making a list of each pain symptom at a patient's first presentation helps delineate the clinical picture and makes it easy to reflect on positive progress at a later date.

At the first visit:

- focus on the symptom that bothers the patient most
- address the patient's fears
- initiate treatment for the chronic pain condition
- encourage self-management and learning
- make a follow-up appointment to retain the patient's trust.

At the follow-up visit:

- reflect on the positive progress made
- review treatments for chronic pain
- support lifestyle change, including exercise
- initiate treatment for symptoms that remain, including headache
- plan regular review visits. Symptoms will vary over time and episodic flares of pain respond well to prompt management review.

Managing the pelvic causes of pain

One of the reasons that women with pelvic pain find it difficult to get comprehensive care is that so many different organs can be affected. The pelvis not only includes the uterus and ovaries, but also the bowel, bladder, pelvic muscles (pelvic floor, obturator internus, piriformis), peripheral nerves (e.g. pudendal, ilio-inguinal) and vulvovaginal skin, often with some endometriosis.

A common mix of problems might be a history of endometriosis (which may no longer be present), uterine dysmenorrhoea, pelvic muscle spasm (pain on one side, pain with movement or exercise, generalised ache or painful intercourse), an overactive bladder (frequency, nocturia, urgency) and an irritable bowel. Headaches, including menstrual headaches and a background lower grade chronic headache with a migraine style, are common. Treatment of the pelvic organ pain component involves minimising pain from each of the organs involved.

Dysmenorrhoea

If endometriosis or dysmenorrhoea is present, the aim of treatment is to minimise the number of menstrual periods, minimise the amount of bleeding and maintain a progestogenic environment. This improves symptoms and may reduce both recurrent endometriosis and worsening pain. Endometriosis is

a 'progesterone resistant' condition and oestrogen stimulates certain pain cytokines, whereas progestogen treatment reduces symptoms and may reduce episodes of recurrent endometriosis.

Suitable options for management with progestogen are outlined below.

- A levonorgestrel intrauterine device. This should be inserted just after a menstrual period. In women whose menstrual periods have been irregular, taking the oral contraceptive pill for one to two cycles prior to insertion prepares the endometrium and may reduce postinsertion bleeding. Offer women the option of insertion as a day-surgery procedure to nulliparous women or those concerned that insertion may be overly painful, and recommend the use of NSAIDs for cramps postinsertion. A levonorgestrel device provides the lowest hormone dose option and provides contraception for five years, but may only provide pain relief for three to four years.
- A progestogen-dominant monophasic oral contraceptive pill used continuously to minimise the number of periods.
- Norethisterone 5 mg/day or dienogest 2 mg/day (the latter is not available in Australia) used continuously.
- An etonogestrel implant.

Useful combinations if pain persists or bleeding is troublesome include:

- a levonorgestrel intrauterine device and either norethisterone 5 mg daily or an etonogestrel implant
- a levonorgestrel intrauterine device and a progestogen-dominant monophasic oral contraceptive pill used continuously. (A pill-free week with continuous use of the pill may still be needed every two to three months to avoid irregular bleeding.)

For severe cases of chronic pelvic pain, a gonadotrophin-releasing hormone analogue, such as a goserelin implant or nafarelin spray, together with continuous combined hormone replacement to achieve amenorrhoea may be required.

Hysterectomy treats dysmenorrhoea well when fertility is no longer required but should not be considered as a cure for chronic pelvic pain. Dysmenorrhoea is often only one part of the chronic pain picture. To doctors dysmenorrhoea indicates either endometriosis or uterine pain; however, to women, dysmenorrhoea is the entire menstrual pain experience, so may also include pelvic muscle spasm, bowel pain, menstrual migraine or premenstrual syndrome.

Bladder symptoms of frequency, nocturia and urgency

Although bladder symptoms of frequency, nocturia and urgency can be due to a range of conditions, painful bladder syndrome (including interstitial cystitis) is common in women with chronic pelvic pain. Flares resemble urinary tract infections but with a negative urine culture.

Management includes the following.

- Excluding diet triggers (e.g. citrus fruits, fizzy drinks, caffeine, artificial sweeteners).
- Using amitriptyline, oxybutynin or solifenacin. Amitriptyline, if tolerated, has the added advantage of helping with sleep, headaches, the chronic pain condition, some pelvic muscle pains and some irritable bowel symptoms. A small dose of amitriptyline with additional oxybutynin or solifenacin can be taken if higher doses of amitriptyline are not tolerated.
- Drinking enough, but not too much, water (about 1.5 to 2 L).
- Managing 'flares' by drinking 500 mL water mixed with one teaspoon of bicarbonate soda or two urinary tract alkalising powder sachets, then 250 mL water every 20 minutes for a few hours.

Antibiotics should be taken only if infection is proven. Providing the patient with a request form for urine culture to use if symptoms flare provides security that a urine infection will not be missed.

Dyspareunia

Dyspareunia can be particularly distressing for women because it affects their relationship with their partners. Management depends on which conditions are present, as described below.

- **Recurrent thrush.** Regular use of fluconazole (e.g. 200 mg once weekly until settled then monthly just before a period) is effective. A private script is cost effective.
- **Vulvar vestibulodynia.** Touching the opening of the vagina near the Bartholin's glands with a Q-tip elicits pain even if no abnormality can be seen. Use of 2% amitriptyline in a vaginal cream twice daily is often effective. Exclude thrush by taking frequent swabs.
- **Pelvic muscle spasm.** To assess for tightness and tenderness, use one finger to gently palpate the pelvic floor muscles just inside the vagina. Intercourse, insertion of tampons and smear tests are painful for affected patients, both at the time and afterwards. The patient may experience a sudden stabbing pain up the vagina or bowel, or difficulty initiating a void despite strong urge. An experienced pelvic physiotherapist who understands that these muscles require 'downtraining' and not strengthening is essential. Unfortunately, this expertise is uncommon. As a guide, pelvic physiotherapy should not aggravate the patient's

pain. Other treatments include low-dose amitriptyline, listening to a pelvic muscle relaxation CD daily, botulinum toxin injected as a day-surgery procedure, and optimisation of bladder and bowel function.

Pain on one side

Although women may have chronic pain every day, it is a severe exacerbation of this pain that often prompts urgent emergency department or general practice visits. Unfortunately, when the ultrasound (with pain on insertion and movement of the vaginal probe), blood and pregnancy test results, and sometimes laparoscopy, are normal, the patient is sent away without a diagnosis.

Although ovulation pain (in women not taking the oral contraceptive pill), appendicitis and ectopic pregnancy (positive pregnancy test) are all possible, the most common cause of pelvic pain on one side is spasm of the muscle obturator internus, which lies inside the hips on the pelvic side wall, usually in the context of a flare of background neuropathic pain. A typical history for obturator internus spasm includes pain on one side, sometimes bilateral, which has the following features: comes on suddenly; is worse with exercise or movement; may be worse on standing or sitting for a long time; may radiate into the anterior thigh; often wakes the patient at night; is worse during a menstrual period or during intercourse; is associated with an overactive bladder; and is helped by a heat pack but poorly helped by use of narcotics. The pain is often described as 'ovary pain'. Although obturator internus

spasm may improve for some weeks after surgery, possibly due to the medications used or a change in routine, it usually recurs once normal activities resume.

The diagnosis of obturator internus spasm can be confirmed with one finger vaginal examination just inside the vagina directed out laterally to the pelvic sidewall. The muscle will be tight and tender and may be hypertrophied. Palpating along the muscle with the pad of the forefinger reproduces the pain. (Use your right forefinger for the patient's right side and your left forefinger for her left side.) Management is similar to that of pelvic muscle pain with intercourse, but botulinum toxin is especially effective. Avoidance of pilates or other 'core-strength' exercises until pain improves is advisable.

Common additional features of pelvic muscle/girdle dysfunction include a tender lower back, tenderness across the

iliac crests (gluteus medius tendonitis), tenderness laterally (trochanteric bursitis), or pain down the back of the leg that may mimic sciatica (piriformis syndrome).

Irritable bowel – bloating, constipation, cramps and diarrhoea

Although most women with chronic pelvic pain have irritable bowel symptoms, only a few have endometriosis invading the bowel wall. Inflammatory bowel disease is possible, but the more common situation is food intolerance with sensitisation of the bowel as part of the chronic pain condition. Common food intolerances include:

- fructose-releasing foods (fructans), such as wheat, onions, apples, corn syrup
- lactose
- galactans, such as in beans, brussels sprouts
- polyols, such as artificial sweeteners
- fatty foods.

The patient may already have found a gluten-free diet beneficial. Although few women with pelvic pain have coeliac disease, a gluten-free diet excludes wheat (a common source of fructan) and therefore treats both coeliac disease and fructose malabsorption.¹ Bowel sensitisation, especially bloating, often improves with use of low-dose amitriptyline (5 to 10 mg taken in the early evening).

Pudendal neuralgia

Pudendal neuralgia causes pain in the 'saddle' area on sitting, anywhere from the clitoris to the anal area. It may be unilateral or bilateral, is usually a burning or sharp 'electric' feeling and may be associated with increased clitoral arousal.

Management includes:

- avoiding activities that compress the nerve, such as cycling
- using a 'u-shaped' foam cushion (with the front and centre area cut out when sitting)
- using pelvic physiotherapy downtraining techniques to relax and lengthen the pelvic muscles to take pressure off the nerve and ceasing straining of the bowels and bladder
- using botulinum toxin to relax pelvic muscles and pudendal nerve blocks.

MRI of the pelvis and lumbosacral spine should be carried out to exclude tumours, pudendal entrapment and Tarlov cysts.

The chronic pain condition – 'central sensitisation'

Although managing peripheral pains is useful, once pain of some kind is present on most days, it is essential to manage the chronic pain condition. This is as true of chronic back pain and postinjury pain as it is of pelvic pain.

Common symptoms of the chronic pain condition include:

- bloated or burning pains

- normal sensations felt as pain (allodynia); even the partner's hand on the patient's abdomen may be unpleasant
- painful sensations becoming more painful (hyperalgesia)
- pain felt over a larger area when severe (wind-up pain)
- poor sleep, fatigue, anxiety and low mood
- nausea, dizziness or sweating.

Treatment of the chronic pain component involves use of medications and lifestyle changes to manage central and peripheral nerve pathways. Treatment includes the following.

- An explanation that the nerve pathways have physically changed and become sensitised; although a cure is unlikely, substantial improvement can certainly be achieved.
- Neuropathic medications, such as:
 - low-dose amitriptyline (start at 5 mg three hours before bed and increase slowly to 5 to 25 mg daily).
 - pregabalin (start at 25 mg every night and increase slowly as tolerated)
 - duloxetine (start with 30 mg in the morning with food, then 60 mg every morning after two weeks; 15 mg [half the contents of a capsule] should be used initially in those sensitive to medications)
 - other neuropathic medications with assistance from a pain specialist.
- Regular exercise. This should be considered essential for pain management. Exercise can be considered the best nondrug treatment for pain. Even if the patient has become completely inactive, a 10-minute walk daily is not unreasonable and can be increased slowly. Too much exercise suddenly results in more pain the next day. Pilates-style core-strength exercise should be avoided until the pain improves because this can aggravate pelvic muscle pain. Exercises such as walking, dancing or gentle team sports are preferred.
- Avoid getting overtired. Tired nerves are more irritable and poor sleep frequently precedes a bad pain day.
- Activities enjoyed by the patient with strong personal motivating factors. This may include playing with her children, sport or craft. These activities are often continued even with some pain present.
- Acupuncture.

Narcotic analgesics should be avoided if possible because chronic pelvic pain is not short-term pain and dependence is common. Although narcotics can help pain in the short term, we now know that long-term use sensitises nerve pathways even further and may worsen chronic pain. Reducing the dose of narcotics later is difficult and it is common to find that within a short time frame the patient has just as much pain as before but now with an added analgesic dependence. Narcotics are often relatively ineffective in both neuropathic and pelvic muscle spasm pain. The role of the nervous system in chronic pelvic pain is explained further elsewhere.²

The brain and adaption to pain

Women with pelvic pain fear that they will not be believed or will be told 'it's all in your head'. Pelvic pain is often described as an embarrassing pain, with social, sexual, fertility, gender and employment stigma concerns. Managing pelvic pain requires sensitivity to the patient's needs, while building her self-esteem and confidence in her ability to self-manage the pain.

Medical care can make a difference in the following cases.

- There is reassurance that the patient's medical care team believe in her pain and will take her pain seriously.
- The patient's fears are addressed. Ascertain what it is that worries her most about the pain. Fear of undiagnosed cancer or a life-threatening illness can usually be allayed with a smear test and ultrasound. Fear of infertility can be addressed individually, and fear of worsening pain can be allayed by reassurance that the patient's health care team will work with her to manage the pain.
- A pain psychologist, if available, is an invaluable part of the multidisciplinary team. Frequently there are life factors contributing to the overall pain experience. This can include a history of sexual assault. Although most women with pelvic pain have not been sexually assaulted, if this is present management is more complex.
- The patient is encouraged to remain active. Even on days with pain, the patient can be reassured that she is not in danger and that there are still positive things she can achieve. Although becoming overtired is not helpful, giving up work rarely improves pain. It is best to keep active and keep moving. The physiotherapy adage of 'motion is lotion' remains true.
- There are positive cultural, personal and family attitudes towards the patient's pelvis. A negative view of the pelvis as being dirty, shameful or troublesome allows the pain to become an emotional as well as a physical event.

Role of laparoscopy

A laparoscopy is an excellent tool for removing endometriosis or the uterus in older women with dysmenorrhoea. However, repeated laparoscopies risk exacerbation of central sensitisation and surgical complications. Without specific indications for repeat laparoscopy, nonsurgical options are preferred in treating women with pelvic pain, at least in the first instance.

When considering laparoscopic findings, the following should be taken into account:

- an abnormality found at laparoscopy may or may not be the major cause of the patient's pain; there are many causes of pain that cannot be seen at laparoscopy and endometriosis is only one aspect of chronic pelvic pain
- there is no correlation between the amount of endometriosis found and the severity of pain
- there is a correlation between the amount of endometriosis

found and the likelihood of infertility

- surgery includes time off work with rest, use of anaesthetic (neuropathic) and muscle relaxant medications and a higher priority placed on the patient's wellbeing by her family; these can all provide short-term improvement without addressing the underlying cause of pain
- photographs of what is found can be used positively to show the patient that most of her pelvis is normal, or that her ovaries are normal and fertility is unlikely to be severely affected.

If there is pain on most days or different types of pain, laparoscopy alone is unlikely to be sufficient to treat the pain.

Managing pain flares

Even when pain has been well managed, episodes of increased pain (flares), whereby symptoms worsen for weeks or months, are common and should not be considered as treatment failure. Effective management of pain flares are listed below.

- A review of medications. Frequently, neuropathic medications have been ceased when the patient is well, with symptoms recurring over subsequent weeks or months. Recommencing these or trialling an alternative medication is often beneficial.
- An increase in the dose of progestogen medication, which might include early replacement of the levonorgestrel intrauterine device or adding norethisterone 5 mg daily.
- Review of activity and exercise. A recent increase in inactivity or core-strength training may aggravate pelvic muscle pain. Frequently, management of this aspect of the patient's pain has been overlooked.
- Consideration of new symptoms, such as a newly painful bladder, newly painful intercourse or an episode of vaginal candida infection.

CONCLUSION

Pelvic pain truly is a 'hidden epidemic'.³ A GP with an interest in this area is in a good position to manage most chronic pelvic pain issues.

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COMPETING INTERESTS: None.