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Consensus Guidelines for the Management of Chronic Pelvic Pain

This guideline was developed by the Chronic Pelvic Pain Working Group and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

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Abstract

Objective: To improve the understanding of chronic pelvic pain (CPP) and to provide evidence-based guidelines of value to primary care health professionals, general obstetricians and gynaecologists, and those who specialize in chronic pain.

Burden of Suffering: CPP is a common, debilitating condition affecting women. It accounts for substantial personal suffering and health care expenditure for interventions, including multiple consultations and medical and surgical therapies. Because the underlying pathophysiology of this complex condition is poorly understood, these treatments have met with variable success rates.

Outcomes: Effectiveness of diagnostic and therapeutic options, including assessment of myofascial dysfunction, multidisciplinary care, a rehabilitation model that emphasizes achieving higher function with some pain rather than a cure, and appropriate use of opiates for the chronic pain state.

Evidence: Medline and the Cochrane Database from 1982 to 2004 were searched for articles in English on subjects related to CPP, including acute care management, myofascial dysfunction, and medical and surgical therapeutic options. The committee reviewed the literature and available data from a needs assessment of subjects with CPP, using a consensus approach to develop recommendations.

Values: The quality of the evidence was rated using the criteria described in the Report of the Canadian Task Force on the Periodic Health Examination. Recommendations for practice were ranked according to the method described in that report (Table 1).

Recommendations: The recommendations are directed to the following areas: (a) an understanding of the needs of women with CPP; (b) general clinical assessment; (c) practical assessment of pain levels; (d) myofascial pain; (e) medications and surgical procedures; (f) principles of opiate management; (g) increased use of magnetic resonance imaging (MRI); (h) documentation of the surgically observed extent of disease; (i) alternative therapies; (j) access to multidisciplinary care models that have components of physical therapy (such as exercise and posture) and psychology (such as cognitive-behavioural therapy), along with other medical disciplines, such as gynaecology and anesthesia; (k) increased attention to CPP in the training of health care professionals; and (l) increased attention to CPP in formal, high-calibre research. The committee recommends that provincial ministries of health pursue the creation of multidisciplinary teams to manage the condition.

Chapter 7: Myofascial Dysfunction

1. Health care providers should become more aware of myofascial dysfunction as a cause of chronic pelvic pain (CPP) and the available treatment options (IB).
2. Patients should participate in the management of CPP due to myofascial dysfunction by actively using a home stretching and exercise program (II-2B).

Chapter 8: Medical Therapy—Evidence on Effectiveness

1. Opioid therapy can be considered for pain control under adequate supervision (II-3B).
2. Hormonal treatment of chronic pelvic pain of gynaecologic origin, including oral contraceptives, progestins, danazol, and gonadotropin-releasing hormone agonists, has been studied

Key Words: Pelvic pain, myofascial pain syndromes, endometriosis, endosalpingiosis, adenomyosis, pelvic peritoneal defects, pelvic inflammatory disease, adhesions, ovarian cysts, residual ovary syndrome, ovarian remnant syndrome, pelvic congestion syndrome, hysterectomy, uterine fibroids, adnexal torsion, diagnostic imaging, laparoscopy, hormonal treatment, complementary therapies

extensively and should be considered as the first line for many women, especially those with endometriosis (I and II-1A).

3. Adjuvant medications, such as antidepressants and antibiotics, can be of supporting help in specific situations (II-3B).

Chapter 9: Surgery—Evidence on Effectiveness

1. The lack of robust clinical trials of the surgical management of chronic pelvic pain should be addressed. The use of alternative epidemiologic models, including case-controlled and cohort-controlled trials, should be considered (III-A).
2. Further delineation of the role of appendectomy and of presacral neurectomy appears warranted in the management of endometriosis-related pain (III-A).

Chapter 11: Multidisciplinary Chronic Pain Management

1. Multidisciplinary chronic pain management should be available for women with chronic pelvic pain within the publicly funded health care system in each province and territory of Canada (III-B).

Chapter 14: Future Directions

1. The curriculum for professional development should be expanded to include theory and techniques in the management of myofascial dysfunction (A).
2. Research into CPP should be encouraged, particularly in the areas of the impact of CPP on the use of health services, the pathophysiology of myofascial dysfunction, and gene therapy. Because randomized trials for qualitative outcomes are exceedingly difficult, alternative robust models, such as case-controlled or cohort-controlled trials, should be pursued (A).
3. Methods of improving interaction with patients should be explored. They might include formal contractual approaches to managing pain with opiates and efforts to better appreciate the patient's perceived needs (A).

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CHAPTER 7: MYOFASCIAL DYSFUNCTION

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INTRODUCTION

The diagnosis of myofascial abdominal and pelvic pain is commonly overlooked by the general gynaecologist. Reiter and Gambone[1] reported on 122 patients with chronic pelvic pain (CPP) who had been referred to a multidisciplinary clinic after negative results of laparoscopy and underwent a thorough medical and psychological evaluation and follow-up for a minimum of 6 months after completion of therapy. Myofascial pain was the most common somatic diagnosis, accounting for 30% of such diagnoses. In most of these cases, the pain was in lower abdominal scars and responded well to trigger-point injection and, in 3 cases, scar revision. Gastrointestinal disorders were found in 14% and genito-urinary disorders in 11% of all 122 patients.

PATHOPHYSIOLOGICAL ASPECTS

In the neuromuscular stage, muscle hyperactivity and irritability are sustained by mechanical and postural stressors and prolonged contraction of muscle. Injury or microtrauma releases free calcium within muscle. Conscious awareness of pain provokes muscle guarding and splinting.

In the musculodystrophic stage, after sustained contractile activity the muscle attempts to adapt by increasing metabolic activity, which results in localized fibrosis.[2]

Travell and Simons[3] defined a myofascial trigger point as

> a focus of hyperirritability in a muscle or its fascia causing pain symptoms. It refers pain in a pattern specific to that muscle. An active trigger point is always tender, prevents muscle lengthening, refers pain on direct compression, mediates a local twitch response and often produces specific referred autonomic phenomena generally in its pain reference zone.

Trigger points are thought to occur in a muscle in response to acute or chronic stress caused by many factors, including chronic microtrauma, sleep disorders, fatigue, macrotrauma, systemic influences, and psychosocial stress. They may also be due to nerve entrapment, particularly when a Pfannenstiel incision was previously made in the distribution of the first to third lumbar nerves, where the ilioinguinal and iliohypogastric nerves are involved. They can occur in the abdominal rectus and oblique muscles, hip flexors (including the iliacus and psoas), adductor group, piriformis, gluteals, and pelvic floor musculature, referring pain in and around the abdominal wall and pelvis.[3] When a trigger point on the abdominal wall is palpated, the patient may respond with a jump or a local twitch. In Carnett's test, the area of abdominal tenderness is palpated while the patient voluntarily contracts her abdominal muscles by raising her head or legs. An increase in the pain indicates a myofascial origin, whereas a decrease indicates an intraperitoneal disorder.

MYOFASCIAL PELVIC PAIN

Hypertonus of the levator ani group of muscles (pelvic floor tension myalgia) produces pain poorly localized to the perivaginal and perirectal areas. Pain may also be felt in the abdominal lower quadrants, suprapubic areas, coccyx, and posterior thigh. Piriformis syndrome is a similar problem in the adjacent piriformis muscle. These disorders involve a high resting tone in the muscles and fascia that attach to the bony pelvis.

Table 1. Criteria for quality of evidence assessment and classification of recommendations

Level of evidence*	Classification of recommendations†
I: Evidence obtained from at least one properly designed randomized controlled trial.	A. There is good evidence to support the recommendation for use of a diagnostic test, treatment, or intervention.
II-1: Evidence from well-designed controlled trials without randomization.	B. There is fair evidence to support the recommendation for use of a diagnostic test, treatment, or intervention.
II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group.	C. There is insufficient evidence to support the recommendation for use of a diagnostic test, treatment, or intervention.
II-3: Evidence from comparisons between times or places with or without the intervention. Dramatic results from uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.	D. There is fair evidence not to support the recommendation for a diagnostic test, treatment, or intervention.
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.	E. There is good evidence not to support the recommendation for use of a diagnostic test, treatment, or intervention.

*The quality of evidence reported in these guidelines has been adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on the Periodic Health Exam.[24]
†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the Canadian Task Force on the Periodic Health Exam.[24]

Interstitial cystitis (IC), vulvodynia, and urethral syndrome associated with pelvic floor tension myalgia may contribute to the pain associated with these conditions.[4] Dyspareunia is common in patients with IC.

Weiss[5] recently reported successful outcomes in 52 patients using manual physical therapy to treat IC and urethral syndrome. The rationale was that pelvic floor myofascial trigger points are not only a source of pain and voiding symptoms but also a trigger for neurogenic bladder symptoms. Moderate to marked improvement occurred in 35 (83%) of the 42 patients with urethral syndrome and 7 of the 10 patients with IC. Electromyography demonstrated a decrease in pelvic floor resting tone. Symptoms had been present for 6 to 14 years.

Scars in the abdominal wall may cause abdominal or pelvic pain and in such cases usually demonstrate limited mobility. Similarly, perineal scars can affect sexual function if not sufficiently mobile. Reactive muscle contraction can produce vaginismus.

Myofascial pelvic pain may develop over time in response to pain caused by gynaecologic disease or as a direct result of faulty body mechanics or other problems. Differentiating the cause of the pelvic pain is often difficult for the gynaecologist and is best approached in conjunction with a physical therapist.

TREATMENT OVERVIEW

Patient education on pelvic floor function is vital to successful physical therapy. Physiological quieting and general relaxation with the use of biofeedback are taught to patients.

Manual soft tissue release is essential to reduce pelvic floor resting tone and tension. Acupuncture may also be helpful.[2] It is important to inactivate trigger points to restore muscle to its normal resting length before strengthening. Trigger points can be injected with local anesthetic, dry-needled, massaged, or sprayed with a coolant such as ethylchloride and then actively stretched, a technique that has been reported to be effective.[3] Physical therapists may use other modalities, such as high-voltage galvanic stimulation, ultrasound, heat, and ice. Therapeutic exercises are used to correct muscle weakness, tightness, and spasms.

OFFICE APPROACH TO MYOFASCIAL SOURCES OF GYNAECOLOGIC PAIN

Gynaecologic pain, or pain of pelvic origin, can arise from visceral organs in the pelvis, the muscular body wall (including the abdomen and low back muscles), the muscles of the hip region and upper thigh, and the lumbosacral nerves (nerve roots and peripheral nerves). Visceral pain has a wide variety of causes, both pathological (e.g., those associated with tissue damage or inflammation) and nonpathological (e.g., distention or increased capsular pressure). Pain in

muscles, whether those of the body wall (e.g., abdominal or low back muscles) or of the hips and extremities (e.g., gluteal and adductor muscles) is associated with discrete bands of muscle hardness and tenderness (myofascial trigger points).

Visceral and myofascial sources of pain can refer pain elsewhere. In particular, visceral pain can cause pain to be felt in the body wall and hip region, and myofascial trigger points can cause pain to be felt as deep pain, as if coming from the viscera. Myofascial trigger points are also associated with visceral organ dysfunction, such as irritable bladder syndrome and irritable bowel syndrome. Conditions such as IC associated with urinary frequency and pain can be worsened by myofascial trigger points in the abdomen, hip region, and pelvic floor. These trigger points can also cause pain that is felt to be coming from pelvic organs and can be indistinguishable from the pain of endometriosis.

Myofascial trigger points are caused by muscle stress or overuse and are most likely associated with local ischemia, which promotes both the contracted, hard band of the trigger point and the release of vasoactive substances that cause vasodilation and neurogenic edema and activate peripheral nerve nociceptive receptors, causing pain. Trigger points are identified by physical examination. Treatment of the muscular or myofascial component of pelvic pain syndromes is accomplished by inactivating the trigger point through manual means, as in physical therapy, or by needling or injection of local anesthetic into the trigger point. Identification and correction of predisposing, initiating, and perpetuating factors associated with the pain syndrome, whether muscular or visceral, is necessary to complete treatment and reduce or eliminate the likelihood of recurrence.

The gynaecologist can evaluate the abdomen for tenderness and myofascial trigger points, particularly looking for those that reproduce the patient's pain. The same can be done with the pelvic floor muscles, including the obturator, piriformis, and levator ani muscles. The muscle examination can be done at the time of the pelvic examination or in conjunction with it. A careful examination to exclude abdominal wall hernias must be performed, and the clinician must bear in mind that myofascial pain may coexist with other pelvic disorders. The interested and knowledgeable gynaecologist can extend the examination, as needed, using the following multiple-level examination protocol, a screening examination for mechanical causes of pelvic-region pain. The protocol guides the examiner through the examination process and instructs him or her in the treatment or correction of the low back and pelvic structural dysfunctions that often accompany visceral pelvic pain problems. The protocol assumes that a neurologic examination for disorders of the ilioinguinal, iliohypogastric, genitofemoral, and pudendal nerves has been conducted.

Examination for Hip and Pelvic-Region Function and Symmetry

1. Evaluate the patient while she is walking for scoliosis and for foot and knee abnormalities, such as excessive foot pronation, leg and foot rotation, and knee deformities.
2. Evaluate the patient while she is standing for shoulder height and iliac crest asymmetry. If the ipsilateral shoulder and iliac crest are both high, there is S-shaped scoliosis. If the contralateral iliac crest and shoulder are high, there is C-shaped scoliosis. In either case, the clinician must determine whether the scoliosis is caused by a fixed structural abnormality or a correctable functional abnormality.
3. Assess posterior superior iliac spine (PSIS) symmetry. If one PSIS is higher than the other, there is either a tilt of the pelvis due to real or pseudo-inequality in leg length or pelvic torsion, similar to asymmetry in iliac-crest height.
4. Assess anterior superior iliac spine (ASIS) symmetry. If one ASIS is higher than the other, there is either pelvic tilt or torsion. If the PSIS and the ASIS are both high on one side, there is real or pseudo-inequality in leg length. If the contralateral PSIS and ASIS are high, there is pelvic torsion.
5. Perform a standing forward-flexion test, palpating the PSISs, to determine if they move symmetrically or if one moves more rostrally than the other. The one that moves is "hypermobile" and the one that does not move as well is "fixed" or "hypomobile". If the PSISs do not move symmetrically, there is torsion of the pelvis during flexion. Torsion can be seen with any restriction or imbalance of the pelvis, including leg-length inequality, iliac bone rotation, and sacroiliac joint hypomobility. The examination sequence is intended to distinguish between these possibilities.
6. Perform a sitting forward-flexion test. If there is scoliosis when the patient is sitting, then there is pelvic height asymmetry, or shortening of one of the muscles that bends the spine (quadratus lumborum or iliopsoas). Palpate the PSISs as the patient bends forward. The PSISs should move symmetrically. If they do but there was an abnormal result in the standing forward-flexion test, then the abnormality is caused by iliac bone rotation (pelvic torsion). Sitting stabilizes the iliac bone so that it will not rotate when the body flexes while sitting. If the PSISs move asymmetrically, then there is sacroiliac joint hypomobility.

7. If there is evidence of iliac bone rotation, correct it. The side that is ipsilateral to the rising or rostrally moving PSIS is anteriorly rotated and needs to be posteriorly rotated. This can be done with muscle energy techniques, using the gluteus maximus to posteriorly rotate the iliac bone and the rectus femoris to anteriorly rotate the iliac bone.
8. To check the abnormality in a second examination position, have the patient lie supine and stand at the foot of the examination table. With the patient straight, check the anterior and posterior heights of the ASISs to determine if one side is high, which would indicate anterior or posterior rotation of the pelvis (which accompanies anterior or posterior rotation of the sacrum). Assess the positions of the medial malleoli relative to each other. They should be level. If not, note which one is higher (and thus which leg is functionally shorter). The patient then sits, the legs sliding downward with the anterior rotation of the pelvis. Note if one side moves further down than the other. They should move equally. If not, there is pelvic rotation. The side that moves further is anteriorly rotating. In general, there is agreement between the results of the forward-flexion tests and the supine-to-sitting test. Correct rotation as described for the iliac bone.
9. Assess levels of the inferior lateral angle of the sacrum for tilt. Assess the angle for anterior or posterior displacement. A sacral tilt will increase pressure on the ipsilateral sacroiliac joint.
10. Assess function of the gluteus medius muscle with the Trendelenburg test. A drop of the hip on the side opposite to the standing leg means that the gluteus medius is weak, either actually or functionally. Examine the gluteus medius for trigger points. If present, they should be treated and the Trendelenburg test repeated to see if the result becomes normal.
11. Evaluate the pubic symphysis for tenderness and symmetry. If abnormal, the symphysis should be mobilized by activating the adductor muscles. The patient is supine, feet together, and hips and knees flexed. The knees are abducted 45° to 60°. Standing at the patient's side, place a forearm between the patient's knees, your hand on the far knee and your elbow against the near knee. Ask the patient to adduct the knees against your forearm, which causes the adductor muscles to pull on the pubic ramus, widening the pubic symphysis. Do this at the same time as the sacroiliac flare described in step 13.
12. The patient is now prone. Standing at the patient's side, examine the sacrum for movement of the sacroiliac joint. The sacrum rotates about a diagonal line that runs from one superior aspect of the joint to the opposite inferior lateral angle. Depress one inferior lateral angle while palpating the contralateral superior aspect of the joint. The sacrum should rock across the diagonal axis. If not, it must be mobilized.
13. Before mobilizing the sacrum, flare the sacroiliac joints by having the patient lie supine, knees and hips flexed and feet together. The thighs are abducted 45° to 60°. Place your hands on the outside (lateral aspect) of each knee. Ask the patient to abduct the thighs against your hands. This places a laterally directed force on the iliac bones.
14. To mobilize the sacrum, place the hypermobile side superiorly while the patient lies in the lateral decubitus position. The legs are flexed at the hip and at the knee. If the hypermobile side is posteriorly rotated (the sacral sulcus on the hypermobile side being more shallow than on the freely moving side), it must be rotated anteriorly. To accomplish this, bring the upper shoulder forward during mobilization of the sacroiliac joint. If the hypermobile side is anteriorly rotated (the sacral sulcus on the hypermobile side being deeper than the freely moving joint), place the upper shoulder posteriorly during mobilization. Correction of anterior or posterior rotation is accomplished by creating the opposite condition (posterior rotation when the side is anterior, anterior rotation when the side is posterior). Now, have the patient bring her knees to the edge of the table, ankles and feet together, and bring the ankles and feet off the side of the table. Stand in front of the patient at the side of the table so that the patient's knees are stabilized by your left hand under the thigh, just above the knee. Place your right hand on top of both of the patient's ankles and rotate the legs downward together slowly (over 5 to 10 seconds) until a barrier is reached. Have the patient use the Lewit technique[6] of post-isometric contraction and relaxation to facilitate stretch and mobilization. Repeat this sequence until full motion is achieved. This action lifts the superior iliac bone away from the sacrum, to increase the joint space and achieve mobility.

Muscle Examination for Myofascial Trigger Points

Record the areas of tenderness and the referred-pain pattern of myofascial trigger points on a body diagram.

Level 1

The patient lies supine, with the knees bent and supported on a pillow to relax the abdomen. Palpate the abdominal wall, including the insertions of the abdominal muscles at the costal margins, at the iliac crest, and at the pubic bones, to assess tenderness and tightness of the abdominal wall. Palpate in both diagonal directions to detect tight linear

bands of contracted muscle in the external and internal oblique abdominal muscles, as well as vertically to detect tight bands of contracted muscle in the horizontal fibres of the transverse abdominal muscle. Palpate the rectus abdominus muscle across the fibres (i.e., with a transverse motion of the fingers) to detect tight, contracted bands of muscle. Assess tenderness of the abdominal wall throughout the examination. The patient then distends the abdominal wall, lifting it away from the contents of the abdominal cavity. The patient should be able to maintain the distention while breathing and talking. Palpate the abdominal wall again for tenderness (which will be from the abdominal wall and not from the internal organs) and discrete areas of hardness.

Palpate the adductor muscles of the medial thigh for bands of tight muscle and tenderness. Compress any tender spot firmly for 5 to 10 seconds to elicit referred pain, which might be felt in the groin, inner aspect of the thigh, or (in the case of the adductor magnus muscle) deeply, but poorly localized, in the pelvis.

The patient now turns to the lateral decubitus position, the head and arm supported by pillows. Position the superior leg behind the lower leg to drop the pelvis and increase the space between the rib cage and the iliac crest to facilitate palpation of the quadratus lumborum muscle. The lateral border of this muscle is between the 12th rib and the iliac crest, directly above the transverse processes of the lumbar spine, into which the muscle inserts medially. Note any tight bands and tenderness in this muscle.

Palpate the lumbar paraspinal muscles for linear bands of hardness or tautness, and note the patterns of any referred pain.

Palpate the three gluteal muscles (maximus, medius, and minimus), the piriformis, and the tensor fascia lata muscles for discrete bands of hardness or tautness and tenderness, and note the patterns of any referred pain.

Level 2

The patient lies supine, with the knee ipsilateral to the side being examined bent to relax the abdomen. Stand at the patient's side, the fingertips of the palpating hand lateral to the border of the rectus abdominus muscle, from the level of the umbilicus caudally. Place the other hand over the examining hand and guide the examining fingers so that the fingertips are pointing to the psoas muscle. Move the hand slowly into the abdomen, over six breaths from the patient, to move aside the bowel. The fingers will come to rest on the psoas muscle. Confirm location by moving the ipsilateral knee a few inches toward the chest to contract the psoas. Assess the muscle for tenderness. The examining technique can also be used for manual treatment of the muscle.

Examine the obturator internus with the patient supine and the legs flexed at the hips and knees, feet together, the legs falling away to the side. Palpate the muscle posterior (dorsal) to the adductor brevis, where it inserts onto the femur.

Palpate the pectineus muscle for groin pain, as it lies underneath the femoral neurovascular bundle. Palpate the muscle medially and superiorly to the femoral artery.

Level 3

Examine the levator ani muscle per rectum, sweeping the examining finger from anterior to posterior on each side, noting any tenderness and horizontal bands of tightness or hardness.

Examine the piriformis and obturator internus muscles for tenderness and discrete bands of tightness rectally or vaginally.

Reproduction of all or part of the patient's pain is sought when examining the pelvic and abdominal regions for tenderness and muscle hardness.

TREATMENT OF MYOFASCIAL TRIGGER POINTS

Injections

Inactivation of a trigger point by injection appears to result from the mechanical action of the needle at the trigger point, since it can be accomplished by dry needling without local anesthesia or the use of other materials. Local anesthesia is more comfortable for many patients and results in a longer-lasting reduction in trigger-point pain.[7,8]

A local twitch response or a report of referred pain indicates that the trigger zone has been entered. A small amount of anesthetic, usually 0.1 or 0.2 mL, is injected into the trigger zone. The needle is withdrawn to just below the skin and its angle changed; the needle is then passed through the muscle to another trigger zone. A conical volume of muscle can thus be examined for active trigger points without withdrawal of the needle through the skin. The trigger zone is explored in this manner until no further local twitch responses are obtained. At this point, the taut band is usually gone, and the spontaneous pain of the trigger point has subsided.

Historically, procaine has been used for this purpose, although lidocaine is also commonly used today. Procaine, in a dilute solution of 0.5%, has a short half-life, which is an advantage if the anesthetic solution spreads between tissue planes and produces a nerve block. When diluted to 0.25% in water, lidocaine has been shown to produce the least pain after injection, although when diluted in normal saline it works well enough, with minimal pain after injection.

Glucocorticosteroids and ketorolac have also been used, but they have not been the subject of controlled studies comparing their effectiveness against that of either local anesthesia or dry needling. Steroids have the disadvantage of being locally myotoxic, and repeated administration can produce all of the associated unwanted side effects. Saline or dry needling can be performed on persons allergic to local anesthetics. A systematic review of the literature found no advantage to the addition of any substance, whether steroids, ketorolac, or vitamin B12, which is sometimes added to the mix.[9]

Botulinum toxin has been successful in trigger-point inactivation.[10–12] It is of particular interest in the treatment of myofascial pain syndromes, including myogenic headaches or headaches of muscular origin, because it has a direct effect on pain mechanisms as well as on muscle contraction.[13]

There is no limit to the number of trigger-point injections that can be given. Common sense and patient comfort dictate restraint. Nevertheless, a sufficient number of muscles in the region must be treated to resolve a regional myofascial pain syndrome and allow effective stretching. Five to ten trigger-point sites can readily be treated per session, and some skilled physicians will treat considerably more in one session. Repeat injections into the same area are best done after an interval of a week to allow the muscle to recover. Complications are infrequent and include bleeding, pain, and, rarely, anaphylaxis if local anesthetics are used. Inadequate attention to postinjection aspects of treatment leads to failure to relieve pain.

Gunn and colleagues[14,15] reported on a method of trigger-point inactivation called intramuscular stimulation (IMS). IMS involves insertion of the needle directly into the trigger point and is a form of dry needling. It may be combined with electrical stimulation through the needle (percutaneous electroneural stimulation). None of these techniques has been subjected to clinical trials for effectiveness.

The abdominal contents can be avoided by depressing the abdominal wall with a tongue blade or the finger, so that the needle can be inserted laterally into the wall trigger point without risking injection through the wall into the bowel. Trigger points in the lateral abdominal wall can be needled or injected by grasping the wall musculature between the index and long fingers and the thumb to move the bowel out of the way and then injecting the grasped muscle with the needle, perpendicular to the plane of the muscle.

The piriformis muscle can be injected from the outside (percutaneously), after identifying the muscle by palpation, between the superior trochanteric insertion of the muscle and the sacral origin of the muscle below the PSIS.

The obturator internus can be injected from outside the pelvis or through the vagina. Rhonda Kotarinos, a Chicago physical therapist, uses a metal flute to guide the needle to the muscle trigger point when her gynaecologic colleagues inject trigger points through the vagina.

The levator ani muscle can be injected by inserting the needle lateral and a little ventral to the coccyx, one finger of the other hand in the rectum at the trigger point guiding the needle.

Physical Therapy

The goal of physical therapy for myofascial pain syndrome is to restore function to the affected person. Dysfunction is the result of pain that interferes with use of a body part or with sleep. Dysfunction therefore results from the manifestations of the trigger point; namely, tenderness, shortening of the muscle, with resultant limited or painful range of motion, and weakness. Referred pain falls into the category of pain-associated limitations, except that trigger points can be found in the zone of referred pain.

Physical therapy, or, more properly, manual therapy, is directed toward decrease of pain and restoration of a normal, pain-free range of motion. Referred pain will decrease with this treatment, but trigger points in the referred-pain zone must also be treated directly.

A treatment protocol that we have found to be effective has been adapted from the work of Dejong[3] of Switzerland and Travell and Simons[3] of the United States. The techniques have been influenced by the work of Gunn[14] of Canada and Lewit[6] of Czechoslovakia.

The protocol involves the decrease or elimination of pain by direct finger pressure on the trigger zone; that is, the tender part of the hard or taut band of muscle. Decrease in pain usually occurs within 15 to 20 seconds, and relaxation of the taut band usually occurs within 1 minute of compression. Compression is followed by a firm stretch of the local segment of muscle: a finger is run along the taut band for about 1 to 2 inches for about 3 to 5 repeats. Mobilization of the fascia is done next, with strong, firm pressure on the muscle directed through the referred-pain pattern. These therapeutic stretches of each muscle treated are performed to lengthen the shortened bands of contracted or hard muscle. The stretches are muscle-specific and must be done with knowledge of the functional anatomy of the muscle. Stretching must be limited in hypermobile women.

Concurrently, the patient is taught a home-treatment program.

Most muscles can be treated outside of the internal pelvis. However, stretching the levator ani can be very helpful to some patients and requires a stretch per rectum. The

piriformis muscle can be stretched via the pelvic approach but also can be treated outside the pelvis.

This program is continued until pain is reduced and range of motion is improved, at which time strengthening and core or lumbar stabilization can be introduced.

Other physical therapy modalities can supplement this protocol. Few studies have been published on the effectiveness of specific treatment techniques in myofascial pain syndromes, and fewer have been controlled or randomized. The reported outcome, however, is that ultrasound, massage, stretching, and heat can all be helpful in reducing pain and restoring function. Relaxation techniques and then manual stretching of the rectal sphincter and levator ani can be very helpful in persons with pelvic pain. Distension of the bladder can be very effective in reducing urinary frequency in persons with irritable bladder syndrome.

Rolfing and other techniques have their advocates and can also be effective. Rolfing is defined as creating a holistic system of soft tissue manipulation and movement education that organizes the whole body in gravity. It is named after Ida Rolf, who first described the technique.[16]

Part of a physical therapy program is the identification and treatment of structural abnormalities, such as pelvic asymmetry and scoliosis.

In a word, physical therapy can be effective when carried out about twice weekly, until the myofascial syndrome has begun to resolve. A home program is essential. Treatment can be brief for acute syndromes but can continue for months for CPP.

Sacroiliac Joint

The sacroiliac joint and its relation to pelvic pain are of historical importance as well as interest. Pain emanating from the region of this joint was recognized in the late 19th century and has remained in the fields of osteopathy and chiropractic ever since. The sacroiliac joint lost its popularity in favour of disc surgery and is only now being evaluated in relation to CPP. This joint is included in the discussions of CPP because of the clinical presentation, which may mimic visceral problems, especially in the lower quadrants of the abdomen, and the recent availability of treatments that hold promise.

The sacroiliac joint is a large joint made of articular cartilage. In men, there are ridges that interlock and prevent movement of the joint. This interlocking is generally absent in women, who have a smooth articular surface that has been assumed to assist with mechanical changes associated with childbirth.

The sacroiliac joint braces the weight of the torso and conveys force outward toward the ilium. Movement in the joint spaces has been appreciated by experienced therapists, and recently, more thorough testing of this movement has begun. The joint is held in place by dense ligaments. Current observations indicate that forward movement of the pelvis in relation to the spine (nutation) is limited by the long dorsal ligament of the spine and the thoracolumbar fascia. The opposite movement, counternutation, in which the sacrum flexes on the vertebral column, is held in check by the sacrotuberous ligament. The role of these ligaments, regulating nutation (forward movement of the sacrum) and counternutation (backward movement of the sacrum), is considered important in sacroiliac stability.[17,18] The actual mechanisms of pain in this joint remain poorly understood.

Clinically, pain emanating from the sacroiliac joint is appreciated in the posterior pelvis, with some radiation into the lateral aspect of the thigh. Some women experience abdominal pain in the right and left lower quadrants that is perhaps due to irritation of the psoas muscle, which courses along the anterior aspect of the joint.

Diagnosis of the sacroiliac problem is based on the appreciation of pain associated with strain induced in the region of the joint. A number of procedures are used in evaluating the joint, but their description is beyond the scope of this chapter. Although many of these functional tests have not been validated among therapists, it is generally recognized that individual therapists have particular skills in this area of investigation and are capable of evaluating pain from this site and establishing its relation to sacroiliac joint laxity. At present, there are no commonly used tests of sacroiliac stability other than clinical examination, although researchers are beginning to use ultrasound to detect movement in the joint.[19,20]

This pattern of pain is very common in women. There still is no clear understanding of the mechanics of the joint in relation to pain and joint mobility, although there have been investigations into the biomechanics of the joint.[21] New approaches to the management of pain that are under increasing evaluation include prolotherapy,[22] in which a sucrose solution is injected into the sacroiliac joint space or into multiple joint spaces in the vertebral column. The inflammation produced in the joint space results in restricted motion and reduced mobility. Although this therapy is becoming popular for pain in the lower back due to joint laxity, additional clinical trials into its use in the management of sacroiliac pain would be ideal.[23]

SUMMARY STATEMENT

Physical therapists are an important part of the health team in relation to CPP due to myofascial dysfunction (I).

Recommendations

1. Health care providers should become more aware of myofascial dysfunction as a cause of chronic pelvic pain (CPP) and the available treatment options (IB).
2. Patients should participate in the management of CPP due to myofascial dysfunction by actively using a home stretching and exercise program (II-2B).

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CHAPTER 8: MEDICAL THERAPY—EVIDENCE ON EFFECTIVENESS

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INTRODUCTION

In clinical practice, there are two approaches to the treatment of chronic pelvic pain (CPP). One is to treat the pain as a diagnosis and the other is to treat the disorders that cause or contribute to the pain.[1] In many patients, effective medical therapy could be achieved by using both approaches.

Detailed treatment of CPP associated with endometriosis was outlined in the SOGC consensus guideline in 1999.[2]

A meta-analysis of interventions for CPP not associated with endometriosis, primary dysmenorrhea, chronic pelvic inflammatory disease (PID), or irritable bowel syndrome determined that medroxyprogesterone acetate (MPA) was associated with a reduction of pain during treatment. Counselling supported by ultrasound scanning was associated with reduced pain and improvement in mood. A multidisciplinary approach was beneficial for some outcome measures. Adhesiolysis was not associated with an improved outcome except where adhesions were severe.[3] Treatment of chronic pain, which is different from acute pain, requires acceptance of the concept of managing rather than curing pain.

Pharmacologic treatment of pain is based on the knowledge that different profiles and mechanisms for transmission of pain information are involved.[4] After proper evaluation for possible causes of CPP, collection of adequate objective and subjective data, and determining that the pain could be related to or associated with endometriosis, most gynaecologists will choose a course of medical management, either empiric or specific, before further testing. This course could very well be both diagnostic and therapeutic.

ANALGESICS

These include acetylsalicylic acid, nonsteroidal anti-inflammatory drugs (NSAIDs), acetaminophen, narcotics, and medicinal marijuana. NSAIDs have been studied extensively in randomized controlled trials (RCTs) for dysmenorrhea and have proven efficacious.[5,6] However, individual response varies widely, and it seems reasonable to try different compounds before abandoning or adding another therapy. Even if not specifically studied for noncyclic CPP, empiric use of NSAIDs is among the first-line treatments recommended in most publications.[7]

Opioids are the main category of analgesics with central activity. Despite the paucity of data on their efficacy in chronic noncancer pain, chronic pain syndrome is frequently treated with opioids, alone or in combination with other drugs, in nonpalliative circumstances.[8] Clinical experience in pain centres suggests that opiate therapy may allow the return of normal function without significant adverse effects in those in whom other treatments have failed.[9] If there is no increase in function, opiate use should be reviewed. Hence, opioid maintenance therapy for CPP should be considered only after all reasonable attempts at pain control have failed and when persistent pain is the major impediment to improved function.

Successful pain management with opioids requires that adequate analgesia be achieved without excessive adverse effects (constipation, nausea, and vomiting). Although there may be individual variability in sensitivity to opioid side effects, there is little information in the literature suggesting that one opioid has a better or worse adverse effect profile than any other.[10] Withdrawal symptoms can occur when therapy is stopped or after conversion from another opioid.

The advocated approach to the relief of moderate to severe chronic pain involves around-the-clock use of sustained-release opioids, the dose individually tailored according to response, with assessment of safety, compliance, and misuse. There should be detailed documentation in the patient's chart that non-narcotic treatment has failed and that the patient has been counselled on potential risks. There should also be a written contract with the patient stating that the treating doctor is the sole provider of opioids and that the patient will actively participate in strategies to develop alternative pain therapies.[1] Close and regular follow-up are essential, and most patients should be seen monthly. If inappropriate use, drug diversion, or hoarding occurs and control cannot be maintained, the opioid treatment should be stopped.

HORMONAL AGENTS

Oral Contraceptives (OCs)

Various low-dose OCs have proven successful in studies of the initial management of dysmenorrhea.[11,12] These studies included patients not screened by laparoscopy, which suggests that patients with or without endometriosis were included. Only one report of an RCT of low-dose OCs for CPP and endometriosis has been published so far.[12] In this 6-month trial comparing cyclic OCs with a gonadotropin-releasing hormone (GnRH) agonist in women with laparoscopically diagnosed endometriosis, OCs were found to be of similar efficacy in relieving dyspareunia and nonmenstrual pain but less effective than a GnRH agonist in relieving dysmenorrhea. Six months after discontinuation of treatment, original symptoms had recurred in all patients.

It is recommended that OCs be used in the early medical management of CPP. Continuous use may be beneficial in suppressing the possible pain associated with estrogen and progesterone withdrawal.[13] Whether continuous OC use is more effective than cyclic use in CPP has not been evaluated in RCTs, but, with its low side-effect profile and risks, as well as high level of comfort, continuous monophasic treatment should be in the first line in most regimens.[4,14]

Progestins

Progestins induce decidualization and acyclicity of endometrium and endometriotic tissue. Therefore, in patients with CPP suspected to be endometriosis-related, MPA has shown beneficial effects. In one 12-month trial, MPA depot (150 mg every 3 months) had effects equivalent to GnRH agonists.[3] Oral MPA in a 50-mg daily dosage was effective in reducing pain scores at the end of therapy, but the benefit was not sustained.[5,15]

Since the introduction of the levonorgestrel-medicated intrauterine contraceptive device (IUD) (Mirena) in North America, we are awaiting studies on its possible beneficial effect on CPP in patients with suspected endometriosis. In one study, the use of this IUD alleviated pain and reduced the size of lesions in patients with endometriosis of the rectovaginal septum,[16] and in a pilot study insertion of the IUD after laparoscopic surgery for symptomatic

endometriosis significantly reduced the medium-term risk of recurrence of moderate or severe dysmenorrhea.[17]

Danazol

Danazol, a synthetic androgen that inhibits ovarian steroidogenesis and the pulsatile release of pituitary gonadotropins, has been the gold standard for the evaluation of most other medical treatments.[18] Danazol has been found to be more effective for pain relief than placebo in patients with a laparoscopic diagnosis of endometriosis[18] and in patients who had not undergone surgery.[19] At a dose of 400 to 800 mg/day, danazol is effective for CPP; it should be given for a minimum of 3 months before other medical options are considered.[4] The use of a danazol-medicated IUD to treat endometriosis-related CPP is being evaluated.

GnRH Agonists

GnRH agonists induce a hypoestrogenic state by inhibiting ovarian steroidogenesis. Five generic compounds have been evaluated: goserelin, leuprolide, buserelin, nafarelin and tryptorelin. Each suppresses estradiol levels to the postmenopausal range.[20] The suppression is more profound and constant with a monthly depot preparation.[21] Most studies of GnRH agonists for endometriosis-related pain and CPP are comparing these agents with danazol, progestins, or OCs.[6,7] Double-blind placebo-controlled studies have demonstrated that after 2 to 3 months of use of a GnRH agonist, pain was 80% to 100% relieved, whereas the results were inferior with the other medications or placebo.[8,22] Empiric use of a GnRH agonist was evaluated in an RCT involving 100 women with noncyclic pain and clinically suspected endometriosis.[23] After 12 weeks of therapy with depot leuprolide acetate (3.75 mg/month) the treatment group showed a significant reduction in pain scores, dysmenorrhea, and tenderness. Laparoscopy performed after completion of therapy showed less endometriosis in the group treated with the GnRH agonist than in the placebo group. Even patients with no visualized endometriosis responded favourably to treatment with a GnRH agonist.

Empiric use in selected patients could be considered, but even if a diagnostic/therapeutic modality has been found to be cost effective in the United States,[24] the evidence is lacking, and the long-term outcomes are unknown. Although the efficacy of GnRH agonist regimens has been proven, the short- and long-term side effects remain to be elucidated. Vasomotor symptoms and osteopenia can now be controlled with add-back therapy. Many steroidal and nonsteroidal agents have been used that suppress vasomotor symptoms completely and protect against decreases in bone density without affecting pain relief. Therefore, when therapy with GnRH agonists is prolonged beyond 6 months, add-back therapy should be considered.[25]

ANTIBIOTICS

The value of antibiotics in the management of CPP is controversial. Most US management algorithms include antibiotics, but these agents are of value only if criteria for PID are present. The US Centers for Disease Control recommends treating suspected PID, even if cervical cultures are negative, to prevent complications such as infertility.[26]

ANTIDEPRESSANTS

Antidepressants have been used to treat numerous chronic pain syndromes. However, some studies on tricyclic antidepressants in women with CPP and normal results of laparoscopy have reported a decreased intensity and duration of pain.[27] Since depression is more frequent in patients with CPP, antidepressant therapy and psychological support, in conjunction with other medical therapy, might improve clinical outcomes.[27]

NEUROLYTIC THERAPY

Neurolytic therapy may be done by injecting neurotoxic chemicals (phenol or alcohol) or using energy (heat, cold, or laser) in doses sufficient to destroy neural tissue. Although these therapies are most often used to treat a particular nerve dysfunction, they may also be used more centrally to try to decrease pain even if there is no specific diagnosis or specific nerve dysfunction.[7]

TREATMENT OF SPECIFIC DISORDERS

CPP often originates from a specific disorder. Interstitial cystitis, irritable bowel syndrome, adhesions, musculoskeletal diseases, endometriosis, and psychosocial problems are the most frequent. Most of these common diagnoses have been studied in reasonably good trials, and their treatment has been addressed elsewhere in this consensus guideline.

SUMMARY

Selection of a first-line medical therapeutic agent should be based on the nature of the pain, contraindications to medications, and desire for contraception. NSAIDs, OCs, or both should be tried early on, especially if the origin of the pain is suspected to be endometriotic. If therapy fails, second-line options, such as danazol, a progestin, or a GnRH agonist (with add-back therapy), have to be considered for a predetermined period. Empiric medical therapy could be cost-effective. If adequate pain relief is obtained, an appropriate maintenance regimen should be selected. Treatment failure should prompt review of diagnosis and treatment, in view of the multiple causes of CPP. Re-evaluation and treatment revision, including a surgical approach, should be considered.

CPP is a serious problem. Diagnosis and treatment can be complex. Medical therapy alone could be insufficient. Even if there is no cure, a combination of medical and surgical approaches might meet expectations in light of the multiple causes and contributing factors.

In summary, health care providers should be aiming towards the least complicated treatment that improves functional capacity despite the fact that chronic pain may continue.

SUMMARY STATEMENTS

1. Most commonly, treatment of CPP will require managing rather than curing pain (III).
2. Medical therapy alone may not be sufficient to alleviate pain in light of the complexity and the multiple causes of CPP (III).

Recommendations

1. Opioid therapy can be considered for pain control under adequate supervision (II-3B).
2. Hormonal treatment of chronic pelvic pain of gynaecologic origin, including oral contraceptives, progestins, danazol, and gonadotropin-releasing hormone agonists, has been studied extensively and should be considered as the first line for many women, especially those with endometriosis (I and II-1A).
3. Adjuvant medications, such as antidepressants and antibiotics, can be of supporting help in specific situations (II-3B).

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CHAPTER 9: SURGERY–EVIDENCE ON EFFECTIVENESS

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SURGICAL MANAGEMENT OF PELVIC ADHESIONS

There is evidence from one Cochrane study[1] that the surgical management of pelvic adhesions associated with endometriosis is effective in the management of pain for 6 months. The combined surgical approach of laparoscopic laser ablation, adhesiolysis, and uterine nerve ablation is likely to benefit patients with pelvic pain associated with minimal, mild, or moderate endometriosis. However, since only one trial was included in the analysis, this conclusion should be interpreted with caution.

Laparoscopic Adhesiolysis

Intra-abdominal and pelvic adhesions are causes of intestinal obstruction[2,3] and infertility.[4] As a cause of pelvic pain, their role is less clear. At the time of laparoscopy, intra-abdominal and pelvic adhesions can be found in approximately 25% of women with chronic pelvic pain (CPP).[5] If adhesions cause CPP, then adhesiolysis should resolve the pain. A randomized trial of adhesiolysis by laparotomy versus no adhesiolysis, however, failed to show any significant reduction in pain in the group treated with adhesiolysis compared with the control group.[6] The subgroup of women with severe adhesions showed a significant reduction in pain that was attributed to the adhesiolysis. A number of observational studies have also shown a significant reduction in pain among women with CPP after lysis of adhesions. These findings suggest that some adhesive disease may contribute to CPP.[7]

Although some imaging techniques may facilitate the diagnosis of adhesive disease, the gold standard is laparoscopy. Laparoscopy is also the gold standard for the treatment of adhesive disease; its advantage is well documented. Patients undergoing laparoscopy for the surgical treatment of adhesive disease have often had prior abdominal and pelvic surgery, however, so the risk of bowel and omental injuries is significant.

Techniques to minimize the risk of such injuries include open laparoscopy and placement of a trocar-cannula in the left upper quadrant to allow insertion of the umbilical trocar under direct vision or to carry out periumbilical adhesiolysis before the trocar insertion. Adhesiolysis may be facilitated by laser, electrosurgical, or sharp scissors dissection. Hemostasis should be obtained, and any injuries to the bowel should be immediately repaired. Adhesion barriers to prevent reformation of adhesions should be considered.

Uncontrolled studies have shown that laparoscopic adhesiolysis reduces pain perception in 60% to 90% of patients.[8] However, many patients have laparoscopically confirmed adhesive disease without any perception of pain. Better-designed trials are needed to clarify the issue of adhesiolysis.

Appendectomy

In gynaecologic practice, the appendix has been an underappreciated source of CPP. Many women with CPP are found to have appendicopathy. Conversely, many women with chronic appendicopathy are found to have gynaecologic disorders when undergoing laparoscopic appendectomy.[9] Appendiceal disease as a source of CPP may coexist with endometriosis. Approximately 20% of women with endometriosis have appendiceal disease.[10] In patients with endometriosis who present with pelvic or abdominal pain (especially right lower quadrant pain), one should therefore consider nongynaecologic sources of CPP, including chronic or recurrent appendicitis.[11,12]

One study suggested that the amount of histopathologic abnormality exceeds visible disease of the appendix by 11%.[9] Moreover, the investigators demonstrated that 34% of patients with reduced pain after appendectomy alone had no visible or histopathologic abnormalities. Two studies further suggested that prophylactic appendectomy may be beneficial in women with CPP as both a therapeutic and a preventive measure.[13,14]

We reviewed six uncontrolled retrospective and prospective studies that all described laparoscopic appendectomy as advantageous in the treatment of CPP.[8,13,15–18] Five of these studies reported relief of chronic pelvic or lower abdominal pain after appendectomy in 85% to 97% of women undergoing appendectomy alone or in conjunction with other surgical procedures. Adjunctive surgical treatments for CPP may include lysis of adhesions, resection of endometriosis, presacral neurectomy (PSN), laparoscopic uterine nerve ablation (LUNA), salpingo-oophorectomy, and hysterectomy. Since gynaecologic disease often accompanies appendiceal disease, it is difficult to demonstrate that disease of the appendix is responsible for the pain.

One recent retrospective study found that 12% of women undergoing diagnostic laparoscopy with appendectomy experienced relief of CPP in the absence of any other disorder.[9] Appendectomy was the main procedure in 102 patients, of whom 92 (90%) reported relief of their pelvic

pain. These results suggest that disease of the appendix may be a significant cause of CPP.

PSN AND LUNA

Adjunctive laparoscopic surgical procedures, including PSN and LUNA, can be technically demanding but continue to have a role in the management of CPP.[19]

Any surgical management of pelvic pain requires an understanding of the autonomic innervation of the pelvis. The disruption of afferent neural signals from the pelvic organs can reduce the perception of pain caused by endometriosis and other disorders.[20]

A prospective comparison of PSN and LUNA indicated that they were equally efficacious in the treatment of dysmenorrhea but that PSN had a more prolonged effect.[21] A recent randomized, double-blind trial of conservative laparoscopic surgery with adjunctive PSN or LUNA in women with severe dysmenorrhea caused by endometriosis demonstrated more pronounced and prolonged pain relief with PSN than with LUNA.[22]

SUMMARY STATEMENTS

1. The qualitative evaluation of surgery in the management of CPP is limited in terms of randomized clinical trials (III).
2. Laparoscopy is the mainstay of diagnosis and surgical treatment of CPP. Careful judgement is important when repeat surgery is being considered (I and II).

Recommendations

1. The lack of robust clinical trials of the surgical management of chronic pelvic pain should be addressed. The use of alternative epidemiologic models, including case-controlled and cohort-controlled trials, should be considered (III-A).
2. Further delineation of the role of appendectomy and of presacral neurectomy appears warranted in the management of endometriosis-related pain (III-A).

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CHAPTER 10: PSYCHOLOGICAL TREATMENT FOR CHRONIC PELVIC PAIN

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INTRODUCTION

Among the psychological treatments for chronic pain, cognitive-behavioural therapies (CBTs) are the most widely used and have the strongest empiric support.[1] CBTs for chronic pain management address the multiple determinants of the chronic pain experience. This spectrum of treatment methods engages chronic pain sufferers in an exploration of their personal pain modulators. The treatment approach provides instruction in strategies and skills for controlling the modulators through the patient's own efforts.

STRATEGIES

Treatment strategies included within the rubric of CBT include training in muscular relaxation, meditation, stress management techniques, recognizing and modifying negative or catastrophic cognitions or thoughts that amplify arousal and feelings of helplessness, lifestyle modification (including pacing of activities to avoid overexertion followed by exhaustion and physical de-conditioning), re-engagement in physically appropriate and personally fulfilling activities, and effective communication with family, friends, and health care providers.

To be successful, this treatment approach requires that patients come to understand their pain problem as being determined by psychological, social, and physical causes. Patients must also come to understand that reduction of pain and suffering is possible through their own efforts in addition to treatments such as medication and surgery.

Over the past 20 years, CBTs for chronic pain management have been extensively investigated for a variety of pain syndromes and have shown to be effective.[2–5] There is a limited literature applying these strategies to chronic pelvic pain (CPP).[6,7]

CBT is typically provided in a group setting, with 8 to 12 patients and 1 or 2 therapists, typically psychologists or other care providers with a mental health background. Health care providers with a background in caring for people with psychological consequences of chronic pelvic disorders may also offer these treatments in community settings. CBTs are a typical component of services offered in multidisciplinary pain management programs.

In summary, CBTs have broad empiric support for their effectiveness in reducing perceived pain intensity and distress in populations with chronic pain. Preliminary data suggest that this approach is effective for women with CPP.

SUMMARY STATEMENT

CBTs are considered the treatment of choice for helping women develop effective pain coping strategies (I).

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CHAPTER 11: MULTIDISCIPLINARY CHRONIC PAIN MANAGEMENT

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DEFINITION

Multidisciplinary chronic pain management refers to assessment, treatment planning, and ongoing coordination of intervention provided by a team of health care providers from relevant medical specialties and allied health provider disciplines.

MANAGEMENT CENTRES

Multidisciplinary pain management is typically provided in a chronic pain clinic or centre wherein the providers are all located and routinely provide joint assessment and treatment services. A standardized classification of pain centres has been developed by the International Association for the

Study of Pain. The four types of centres include modality-oriented clinics, pain clinics, multidisciplinary pain clinics, and multidisciplinary pain centres. Modality-oriented clinics provide one or several specific interventions, with no emphasis on comprehensive or integrated care. Pain clinics specialize in a particular diagnosis or pain in a specific area of the body; care is typically delivered by a single physician. Multidisciplinary pain clinics are staffed by a spectrum of health care providers and provide comprehensive assessment and integrated, coordinated intervention through inpatient or outpatient facilities; the clinics are not engaged in professional training or research and are typically not associated with major educational or research institutions. Multidisciplinary pain centres provide clinical services similar to those of multidisciplinary pain clinics as well as clinical training and research.

SCOPE OF CARE

Multidisciplinary care is commonly tailored to the particular needs of the patient and may include a combination of medical and rehabilitative intervention focused on eliminating or modifying the biological pain generators, as well as psychological and psychosocial intervention focused on helping the client, and her important social and family contacts, adapt successfully to the changes in function and capacity engendered by the chronic pain state. Multidisciplinary pain centres extend their reach into the community through cultivating relationships with other specialist providers, the family physician, and relevant community agencies.

Multidisciplinary pain management for chronic pelvic pain (CPP) may involve treatment by physicians specializing in gynaecology, gastroenterology, physical medicine and rehabilitation, urology, anesthesiology, psychiatry, sleep medicine, and addictions. Other team members represent nursing, physiotherapy, occupational therapy, kinesiology, clinical nutrition, psychology, pharmacy, and social work. Treatment strategies include medical, surgical, and rehabilitative interventions directed to resolving the biological pain generators, as well as a variety of psychosocial and rehabilitation strategies directed towards improved coping, appropriate lifestyle changes, physical fitness, and fitness for work.[1]

OUTCOMES RESEARCH

Multidisciplinary chronic pain management has been the subject of extensive outcomes research for the past 25 years. Systematic reviews of this literature[2–4] have confirmed the value of this treatment approach with regard to clinical outcomes for low back pain. A Cochrane systematic review of interventions for the treatment of CPP in women[5] provided support for multidisciplinary management that was based on one randomized controlled trial.[6] Systematic reviews of the economic outcomes of multidisciplinary chronic pain management have stressed the need for higher quality research.[7]

In summary, these data suggest that multidisciplinary chronic pain management provided by qualified teams of medical and rehabilitation specialists with tertiary-level knowledge of CPP is the ideal treatment approach for women with CPP.

SUMMARY STATEMENT

Current evidence indicates that tertiary-level multidisciplinary chronic pain management is the most effective treatment approach for women with CPP (I).

Recommendation

1. Multidisciplinary chronic pain management should be available for women with chronic pelvic pain within the publicly funded health care system in each province and territory of Canada (III-B).

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CHAPTER 12: COMPLEMENTARY AND ALTERNATIVE MEDICINE

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INTRODUCTION

The pathogenesis of chronic pelvic pain (CPP) remains poorly understood, and, therefore, treatment is often unsatisfactory.[1] Consequently, complementary and alternative medicine (CAM) is increasingly of interest to both patients and health care providers. The Cochrane Collaboration now has more than 1750 completed Cochrane reviews, of which more than 100 relate to CAM.[2]

However, the literature specifically relating to CPP and CAM is limited. As with the literature from allopathic sources, the studies have been small, they might have been pilot studies that compared treatment modalities but could not always be double-blinded,[3] and they might not have been fully randomized. Most studies to date have been concerned with dysmenorrhea (primary or secondary) or pelvic pain associated with pregnancy.[4] There are no current references on the use of homeopathy for CPP.

TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION AND ACUPUNCTURE

The Cochrane Collaboration has reviewed the use of TENS and acupuncture, when compared with one another, with placebo, with pharmacotherapy, and with no treatment.[3] Nine RCTs were identified, and the review concluded that high-frequency TENS was effective in the treatment of dysmenorrhea. One methodologically sound trial of acupuncture also suggested benefit.[6]

A case report on a 23-year-old primigravida with CPP at 27 weeks' gestation documented that acupuncture significantly reduced the patient's use of narcotics and allowed her to maintain normal activity.[4] Several recent studies have also found benefit from acupuncture in back pain[7] and in lumbar and pelvic pain in pregnancy.[8] Further, acupuncture appears to be a durable therapy for symptom relief in men with chronic prostatitis and CPP syndrome.[9] Acupuncture/acupressure has received approval from the Food and Drug Administration in the United States for use in the relief of chronic pain in oncology patients.[4]

As a therapeutic modality, acupuncture has a long tradition in Chinese medicine for the treatment of gynaecologic and obstetric problems. There is, as yet, no comprehensive allopathic explanation for its clinical benefits, but proposed mechanisms include gate control of pain pathways, increased endogenous opioid release, and altered sympathetic tone.[9]

PLANTS AND HERBAL AND DIETARY THERAPIES

Traditional healing provides for a large percentage of primary health care needs in many populations. One study screened plants used by South African Zulu traditional healers in the treatment of dysmenorrhea.[10] Several plant extracts exhibited high inhibitory activity against cyclooxygenase and therefore the prostaglandin biosynthetic pathway responsible for painful uterine contractions.

The Cochrane Review of herbal and dietary therapies for primary and secondary dysmenorrhea[11] suggested that magnesium supplementation might help reduce symptoms.

SUMMARY

CPP is a frustrating and disabling condition, with as yet unclear neuroendocrine etiology. A multidisciplinary approach to diagnosis and care is currently recommended.[12] For visceral-peritoneal pain, acupuncture is beneficial. Musculoskeletal sources of pain respond to physiotherapy and biofeedback training. Somatic-myofascial pain has been reduced with massage, ultrasound stimulation, TENS, and, especially, trigger-point injection and dry-needling modalities. Grounding all treatment is the sincere acknowledgement of the complexity and authenticity of this chronic condition.

SUMMARY STATEMENT

Alternative therapies for chronic pelvic pain that have been found helpful include acupuncture, physiotherapy, and biofeedback training. Use of pelvic ultrasonography with explanation has been found to help. Massage, surface ultrasound stimulation, and TENS may also help relieve pain.

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CHAPTER 13: PATIENT PERSPECTIVES

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PATIENTS' NEEDS

A 2002 needs assessment survey by the Society of Obstetricians and Gynaecologists of Canada (SOGC) of subjects with chronic pelvic pain (CPP), undertaken using the principles of qualitative research, determined that the following were the most important needs of these patients:

- the need for the health care professional to legitimize the pain,
- the need for the patient to be heard during the patient contact visit,
- the need for the patient to receive support in numerous forms, and
- the need for the patient to take responsibility for a path towards health (III-B).

A LOOK INTO THE FUTURE

In the future, a woman with CPP will be recognized as having a condition that requires rehabilitation and not solely acute care management. She will be managed by a team of individuals who are aware of the principles of multidisciplinary care, including a physiotherapist, a psychologist, a primary care physician, and a gynaecologist. Such an approach will be funded by the local hospital or regional health authority on the basis of its effectiveness and cost efficiency.

Emphasis will be placed on achieving higher function in life with some pain rather than cure. The management of directed therapy will be based on treatments that have been subjected to clinical trial. There will be a permanent record of the findings at any previous laparoscopy that can be shared and compared over time. Health personnel involved in the patient's management will have been trained in the specific areas of myofascial dysfunction and the appropriate clinical use of opiates in the chronic pain state.

In addition to participating in clinical trials of various therapies, the patient will become aware of newer approaches that may be of assistance through Internet access to the results of clinical trials. One of the main areas of development will be the use of gene therapy to overcome problems in spinal cord pathophysiology.

SUMMARY STATEMENT

Qualitative analysis of data on the needs of patients with CPP has revealed the following as the most important:

- the need for the health care professional to legitimize the pain,
- the need for the patient to be heard during the patient contact visit,
- the need for the patient to receive support in numerous forms, and
- the need for the patient to take responsibility for a path towards health. (III-B)

CHAPTER 14: FUTURE DIRECTIONS

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EDUCATION

A 2002 needs assessment survey by the Society of Obstetricians and Gynaecologists of Canada (SOGC) on the management of chronic pelvic pain (CPP) revealed a desire for more training in the recognition and management of CPP. SOGC members expressed the need to modify the approach to CPP and for help in diagnosing its causes.

The lack of knowledge in assessing CPP etiology is most evident in the identification of trigger points. The broad scope of CPP requires further education of medical students, residents, and health care providers. This means a complete reversal of attitude, from considering these patients hopeless and time-consuming to being genuinely concerned and seeing an opportunity to provide encouragement and hope.

Adult education has evolved from large-group lectures to small-group interactive sessions with hands-on participation. This approach to learning about CPP should be incorporated into our medical school and residency training programs. The issues raised in this consensus document could be addressed through postgraduate courses that teach identification of trigger points in the abdomen, back, and pelvis. CPP should be discussed at all continuing health education events, by means of case presentations and audience participation. Also, to help our members and the public understand and appreciate CPP, a patient information pamphlet should be produced and distributed.

RESEARCH

Research is needed to identify psychoneurologic dysfunctions that are responsible for CPP so that we can adequately treat and possibly cure the condition.

Recommendations

1. The curriculum for professional development should be expanded to include theory and techniques in the management of myofascial dysfunction (A).
2. Research into CPP should be encouraged, particularly in the areas of the impact of CPP on the use of health services, the pathophysiology of myofascial dysfunction, and gene therapy. Because randomized trials for qualitative outcomes are exceedingly difficult, alternative robust models, such as case-controlled or cohort-controlled trials, should be pursued (A).
3. Methods of improving interaction with patients should be explored. They might include formal contractual approaches to managing pain with opiates and efforts to better appreciate the patient's perceived needs (A).