



Recognition and Management of the Chronic Pain Syndrome

HAMILTON HALL, GREG McINTOSH, TONY MELLES

Hamilton Hall, MD, FRCSC, Medical Director, Canadian Back Institute, Toronto

Greg McIntosh, BHK, Research Coordinator, Canadian Back Institute, Toronto

Tony Melles, BSc PT, Executive Director, Canadian Back Institute, Toronto

From the Research and Development Department, Canadian Back Institute, Toronto, Ontario

Published in: Canadian Journal of Continuing Medical Education 1995; 7(2): 39-48.

INTRODUCTION:

Chronic pain syndrome is a behavioural disorder. It is a pattern of abnormal behaviour in which pain becomes the patient's primary focus and the principal determinant of all activity. As many as 10% of patients with chronic painful conditions have reported development of a pain focused behaviour. (1) In our own patient population, we believe this percentage is at least double that figure. Discriminating between physical pain of long duration and non-organic pain reflecting heightened sensory perception is a clinical challenge. Some doctors may not be aware that the alternative diagnosis of chronic pain syndrome exists. Others who do recognize the problem underestimate its significance. Some family doctors do not feel qualified to make the diagnosis and believe that the condition can be recognized only by psychologists or psychiatrists.

Pain focused behaviour is not, in the conventional sense, a medical problem. It is not a disease and there is no predictable cure. The standard medical paradigm does not apply. It is a diagnosis which should be made reluctantly and only after eliminating all reasonable physical causes.

There are many misconceptions pertaining to the chronic pain syndrome. Perhaps the most damaging is the idea that the pain is not real. The term "psychogenic" pain has developed pejorative connotations. All pain is real and whether the source of that pain lies in a physical pathological process or in an increased awareness of sensory input, the end result is the same. Dismissing the patient's complaints as "all in your head" serves no positive goal. The patient with a pain perception problem is not malingering. The damaging effects on the quality of life are pervasive and consistent. They are not under voluntary control.

Patients exhibiting chronic pain behaviour are often categorized as bed-ridden or house bound. In reality many patients with pain focused behaviour function outside the home albeit at a reduced level. While the need for treatment may be less urgent in the functional patient, there is still the need to identify the problem and avoid unnecessary physical investigation.

OVERVIEW:

Recognition of the chronic pain syndrome is usually possible from the patient's history. A syndrome is a collection of signs and symptoms and identification of the typical pattern is a logical starting point. The detrimental effect of pain on all aspects of the patient's life is a recurring theme. (2) Virtually every decision is predicted upon the presence, absence or severity of pain. The limiting factor is not task completion, but whether or not pain will allow the patient to continue. The history reflects the patient's feeling of helplessness and isolation.

Chronic pain is defined as pain that persists beyond the usual course of an acute illness, or beyond a reasonable time for tissue damage to deal. (3) Six months is an often quoted time frame for chronic pain development. The actual range varies widely. Some patients may develop a pain focused approach within days of an event. Other may endure a physical problem for years without developing pain dominated behaviour. Although a previous history of emotional disturbance, childhood abuse or psychiatric illness has been implicated in the development of chronic pain behaviour, there are no consistently valid indicators of a patient's vulnerability. (4,5) It is best to assume that anyone given the necessary circumstances can succumb to this behavioural abnormality.

Typically, the patient with a predominantly behavioural pain problem presents with a lack of objective physical findings. The opposite assumption, that the presence of an identifiable organic problem eliminates the possibility of abnormal pain behaviour, does not hold. Residual physical limitations can actually intensify the patient's negative emotional response.

The diagnosis of "soft tissue injury" is commonly applied; unfortunately, rather than defining a specific structural problem it often signifies the physicians inability to demonstrate a definite organic lesion. This semantic subterfuge is not harmless. By providing even a spurious physical diagnosis, attention and treatment are diverted from the behavioural component.

To compound the problem, patients with chronic pain syndrome adhere tenaciously to the belief that their pain results from a physical cause. (2) They are driven to find the organic source of their problems and regard the physician's inability to provide satisfactory structural explanations as a failure of medical diagnosis. Patients are unwilling to accept the determination that a behavioural problems exists or that an exaggerated pain perception is the real cause.

A patient exhibiting chronic pain syndrome will routinely exaggerate his or her pre-morbid level of activity and physical capabilities. This is not a conscious exaggeration, but rather the expansion of past exploits so typical of normal memory. This perspective is further distorted when these distant events are viewed at a time of reduced function and constant pain.

HISTORY:

The history almost invariably includes a pattern of sleep disruption. (6) A disturbed sleep pattern is such an integral part of the behavioural change that a description of normal sleep should raise serious doubts as to the validity of the diagnosis of chronic pain syndrome.

Pain arising from an uncomplicated soft tissue lesion tends to diminish with time. Natural healing leads to a decrease in extent and intensity over a few weeks. In contrast, symptoms derived from a heightened awareness and the memory of previous pain tends to intensify and expand. The patient reports a broadening array of symptoms with complaints developing in parts of the body unrelated to the original complaint. As one area responds to treatment, a new trouble spot develops. The patient reports a satisfactory response at the same time indicating that the overall level of function has deteriorated. (2)

Mechanical pain has a predictable response to treatment. (7) Structural complaints respond to alteration in load and changes in the pattern of movement. Conventional treatment produces the anticipated result. For patients with pain focused behaviour, routine therapy can lead to unusual symptoms. Since the pain itself

without a physical component, is the source of the disability, focusing on the pain through passive pain directed therapy can intensify rather than ameliorate the problem.

Both excessive medical involvement and medication overuse are the hallmarks of a patient with chronic pain syndrome. (6) The physician, in a well intentioned attempt to detect an underlying obscure physical source, may order a variety of investigative procedures and request further consultation. The patient remains intent on discovering the "true" cause of the problem and the process indicates the physician's concern. Medication is ineffective for pain control. The patient routinely exceeds the prescribed dosage. Although this increase is not effective, it is maintained. Numerous physician visits, fruitless ongoing investigations and medication, which fails to control pain, validate the patient's behaviour and justify a belief in the failure of the medical approach. Altering this belief after months of ineffective treatment and promoting the patient's acceptance of a behavioural cause is a formidable task.

Sexual dysfunction and associated family disruption are the norm. (1,8,9) Loss of libido, impotence and the loss of sexual satisfaction shift attention to a variety of potential physical problems and often totally obscure the behavioural abnormality. The intimate nature of the problem and the emotionally charged response of both patient and partner, to an allegation of a psychological component, make the retreat to further physical testing a tempting alternative. Recognizing elements of chronic pain behaviour should alert the physician to the possibility that the patient's pain, while real, does not have an appropriate physical cause. This pattern, however, cannot be considered a true chronic pain syndrome unless it is determined that the patient's conduct is self perpetuating. An emotional response to pain is a normal reaction. To some degree every pain sufferer will encounter anxiety, hostility or depression. It is only when the emotional response and the resultant change in behaviour becomes the predominant problem, that the diagnosis of chronic pain syndrome should be considered.

Between the normal emotional reaction and a self perpetuating pattern of abnormal pain focused behaviour lies an intermediate stage that is perhaps best described as circumstantial pain syndrome. (2) While the behavioural abnormality has become the principal disabling factor, its continued existence is the direct result of the patient's current circumstances. Financial gain, increased attention, control of an unmanageable situation and escape from an untenable position are powerful motivators. Identifying these circumstances becomes an essential component in correcting the situation. (10)

The visible response to pain varies according to the situation. This reaction is universal, but it is the magnitude of that response that defines the patient with a behavioural problem. Even established behaviour is affected by the present circumstances. The difference between circumstantial pain behaviour and a true chronic pain syndrome lies in the fact that improving the situation will correct the former, but can only partially ameliorate the latter.

PHYSICAL EXAMINATION:

The physical examination of a patient with a chronic pain syndrome must be assessed in conjunction with the history. The presence of non-organic findings, usually represented by a series of tests described by Waddell et al. (11) are significant only when the history is dominated by pain focused behaviour.

Superficial or excessive non-anatomic tenderness to light palpation of the skin are both measures of the patient's heightened attention to sensory input. The anticipation of pain can be elicited by such manoeuvres as light downward pressure on the top of the head or rotation of the pelvis through the hip joints while stabilizing the lumbar spine. Neither manoeuvre produces pain in patients with organic low back disorders. The test are routinely positive in patients suffering chronic pain syndrome.

The variance in straight leg raising between sitting and prone lying is a well recognized non-organic response. (12) It is important when assessing the difference that the recumbent patient have the contra-lateral hip and knee flexed to mimic the seated lumbar posture. Performing a straight leg raise with the contra-lateral leg extended will reduce the available range by about 20 degrees. (12) The variation may represent a poor test technique without relevance to the patient's perception of pain.

A variation of the routine straight leg test is to elevate each leg individually and then lift both legs together. Both legs remain extended. The patient with an organic lesion producing sciatic irritation will find it more comfortable to have both legs lifted. The reverse will be true for the pain focused patient who believes that if lifting one leg is painful, elevating both legs should hurt twice as much.

Voluntary weakness is a finding that must be assessed cautiously. It is difficult to determine whether or not the patient is giving maximum effort. A cogwheel release or a sudden collapse following a moment of strong resistance are both suggestive of a non-organic response. In some small motor groups, these reactions are difficult to detect. The presence of local pain may inhibit the patient's reaction and create the false impression of an inappropriate response.

The physical examination of a patient who has remained inactive for an extended period, because of pain focused behaviour may demonstrate genuine mechanical findings. A loss of flexibility with resultant pain on movement is a common finding. Identifying these organic elements within the predominantly non-organic picture may provide useful points from which to initiate treatment.

MANAGEMENT:

Management of the chronic pain syndrome is not just pain management.(13) Concentrating on the symptom or offering a variety of short term pain control techniques will have no lasting benefit. It will, however, reinforce the patient's preoccupation with pain and validate the current level of disability. The key to successful management is to shift the patient's attention to a more productive area. Minimizing the pain focus is a goal for both patient and practitioner. Invalid behaviour is a learned response and breaking the habit is difficult. The question is whether or not the ongoing perception of pain precludes a safe graduated increase in function. (3)

The first step is an establishment of rapport. The patient must believe that his or her pain is accepted as real and that the physician understands the magnitude of the problem. Dismissing the patient's complaints or suggesting that he/she lack determination or strength to overcome the problem is counterproductive. The patient will accept the emphasis on function only when his or her complaints of pain have been acknowledged.

Once exercise therapy has been initiated and the patient's active participation secured, further discussion or direct treatment of pain is appropriate. The patient's activity will be governed by a new set of parameters. It is not sufficient to ignore the pain, substitution must occur. If an activity was limited previously by pain it should now be limited by a preset goal of time, distance, weight or the number of repetitions. Create goals that are measurable, achievable and that are accepted or even proposed by the patient. (2,8) For example, if pain limits walking to 10 minutes suggest that the patient walk for half of that time. Completion of the task is guaranteed and the goal is independent of the patient's symptoms. In the sessions that follow, gradually increase the target keeping the increments small and obviously document the progress. The ultimate goal is to push the target beyond the point of pain limitation.

Such a program requires both patient acceptance and a willingness to participate. Motivating the patient to undertake what will inevitably be a painful routine is one of the most important and difficult aspects of management. Unlike the athlete, the chronic pain patient may lack intrinsic motivation, but the physician is still the coach not the healer.

The one exception to the overriding functional approach may occur if well defined mechanical pain patterns can be established. Activity is directed toward the short term control of pain through altered posture or specific movements. Although the focus returns temporarily to pain, the long term goal does not change. Demonstrating to the patient that the ability to decrease pain intensity, is within their own ability, is a powerful motivator. (14)

It is frequently advisable to reduce the level of medication. Placing the patient on a time dependent schedule is the first step. As with activity regulation, pain is no longer the determining factor. Drugs serve as the

ultimate validation of their illness behaviour. The ineffectiveness of the medication in promoting a return to normal function is a measure of the seriousness of the problem. While it seems logical that pain medication should be used when pain is present, this is a spurious argument for patients suffering from chronic pain syndrome. Scheduling the medication throughout the day without reference to the level of pain shifts the focus and may be the initial strategy in reducing the total level of consumption. (8)

Because sleep disruption is such an integral part of the behaviour disorder, normalising sleep patterns is virtually a necessity. Institute a fixed wake-up time. Set the hour without relation to pain and in accordance with the patient's wishes. Sleeping late is not allowed and the patient cannot compensate for a poor night's sleep by napping throughout the morning. The second phase of sleep restoration is the establishment of a bed-time ritual. There must be strict compliance to the chosen time and it is preceded by a fixed sequence of events. The patient is advised to avoid overeating, smoking, drinking and strenuous exercise immediately before bed time. The positive ritual includes light refreshment, a period of reading or watching television or relaxation exercises. These activities take place outside the bedroom. The bed is reserved for sleep. Lying in bed to read or watch television is not only physically uncomfortable, but often presages a sleepless night.

CONCLUSION:

Success in the management of the chronic pain syndrome relies on the patient's willingness to accept responsibility. This requires the support of family or friends and the ability to monitor the patient's behaviour and response. Changing a well established pattern of pain focused behaviour is difficult and may lie beyond the scope of the family practitioner. But recognition of the syndrome should alert every physician to the risk of inappropriate investigation and the excessive prescription of pain medication. It suggests a course of therapy directed toward active patient participation and the avoidance of long term use of passive pain relieving modalities. It requires strong and repetitive reassurance that the problem, while real, is not the result of serious unrecognized organic pathology. Explaining pain behaviour to the patient may require a degree of poetic licence on the part of the practitioner, but dismissing the pain as a result of an emotional problem or as an imaginary complaint will only create problems. It is essential to convince the patient that his or her life need not be dominated by pain. Treatment is frustrating, recovery slow and success limited, but without appropriate guidance the patient with an established chronic pain syndrome has virtually no chance of returning to normal.

References

1. Catchlove, RF: A guide to diagnosis and management of chronic pain. Can J CME Nov/Dec: 33, 1991
2. Hall, H: The New Back Doctor, McClelland and Stewart, Toronto, 1995
3. Clifford, JC: Successful management of chronic pain syndrome. Can Fam Physician 39: 549, 1993
4. Polatin, PB, Kinney RK, Gatchel, RJ, Lillo, E, Mayer, TG: Psychiatric illness and chronic low back pain: The mind and the spine - which goes first? Spine 18:66, 1993
5. Wurtele, SK, Kaplan, GM, Keairnes, M: Childhood sexual abuse among chronic pain patients. Clin J Pain 6:110, 1990
6. Hall, H: More Advice from the Back Doctor. McClelland and Stewart, Toronto, 1987
7. McKenzie, RA: The Lumbar Spine: Mechanical Diagnosis and Therapy, Spinal Publications, Waikanae, New Zealand, 1990
8. Keefe, FJ, Beckham, JC, Fillingim, RB: The Adult Spine: Principles and Practice. Raven Press, New York, 1991
9. Hall, H, McIntosh G, Melles, T: A different approach to back pain diagnosis: Identifying a pattern of pain. Can J CME 6:31, 1994
10. McIntosh, G, Melles T, Hall, H: Barriers to rehabilitation of back injuries. J Occup Rehabil (In Press)
11. Waddell, G, McCulloch, JA, Kummel, E, Venner, RM: Non organic physical signs in low back pain. Spine 5:117, 1980
12. Mayer, TG, Gatchel R: Functional Restoration for Spinal Disorders: The Sports Medicine Approach. Lea and Febiger, Philadelphia, 1988
13. Hall, H: The Back Doctor. Bantam-Seal, Toronto, 1980
14. McIntosh, G, Melles, T, Hall, H: Return to work after chronic back pain rehabilitation. J Neuromuscul System 2:112, 1994

Patient Information Sheet - Recognition and Management of the Chronic Pain Syndrome

Chronic pain syndrome is a behavioural disorder. It is a pattern of abnormal behaviour in which pain becomes the patient's primary focus and the principal determinant of all activity. There are many misconceptions pertaining to the chronic pain syndrome. Perhaps the most damaging is the idea that the pain is not real. All pain is real and whether the source of that pain lies in a physical problem or in an increased awareness, the end result is the same.

The history almost invariably includes: 1) medication overuse, 2) a pattern of sleep disruption, 3) excessive medical involvement, and 4) Sexual dysfunction and associated family disruption.

Management of chronic pain syndrome is not just pain management. Concentrating on the symptom or offering a variety of short term pain control techniques will have no lasting benefit. It is frequently advisable to reduce the level of medication. The first step is to develop a time dependent schedule is the first step. Scheduling the medication throughout the day without reference to the level of pain shifts the focus and may be the initial strategy in reducing the total level of consumption.

Address the sleep disruption by instituting a fixed wake-up time. Set the hour without relation to pain and in accordance with your previous normal practice. Do not compensate for a poor night's sleep by napping throughout the morning. Establish of a bed-time ritual. There must be strict compliance to the chosen time that is preceded by a fixed sequence of events. The positive ritual may include light refreshment, relaxation exercises and a period of reading or watching television.