As in any area of medicine, our objective in treating chronic pain is to help patients recover, or, failing that, at least lessen their pain. To attain that objective, we must first make a correct diagnosis. We must then implement the appropriate treatment measures, bearing in mind their limitations. This requires establishing a level of trust with each patient. We, as physicians, must also derive some satisfaction from seeing patients, otherwise, our effectiveness is likely to be limited.

Making a Correct Diagnosis

In cases of chronic pain, making a proper diagnosis is a challenge, as pain is a subjective symptom, and we often lack objective biological evidence to detect the cause of the pain. The process of diagnosis involves a thorough history-taking, physical examination, and possibly imaging studies or other diagnostic tests. Once the diagnosis is confirmed, appropriate treatment can be initiated.

To summarize, treating chronic pain requires patience and a multidisciplinary approach. Physicians must establish trust with their patients, and work together with other healthcare professionals to develop effective treatment strategies. By doing so, we can help patients improve their quality of life and reduce their pain.
explain the patient’s symptoms. We must first rule out treatable diseases, such as infections, tumors, inflammatory diseases and fractures, which will adversely affect the patient’s health if he/she remains undiagnosed and untreated.

In certain instances, diagnosis might seem simple and evident. Dealing with a patient suffering from chronic pain, however, can be frustrating. Each time physicians see a chronic-pain patient, they might wonder whether they have missed something. Moreover, certain patients will insist that physicians find the exact cause, and on each examination, will insist on additional investigations. How should we deal with this problem?

The first step is to define chronic pain. The author proposes the following working definition: Pain that has been present for more than six months, with stable symptoms for the past three months, and that has been appropriately investigated.

Stable, chronic pain (i.e., lasting more than six months) is rarely caused by a treatable disease. For pain lasting under six months, however, it is wise to question the diagnosis and pursue investigations and consultations.

Having the Right Attitude

When no exact cause can be found, physicians must explain the situation to the patient. Patients must be reassured that such situations are commonplace, and that you believe them when they say they are in pain. They must also be told that the series of investigations and consultations has come to an end, and that you can go no further in seeking the cause of their pain symptoms.

The next step is to explain that the pain may never disappear and that you, in your capacity as a physician, can only help attenuate and control the intensity of the pain to some extent. The patient will then have to live with the pain and function in spite of it, playing an active role in controlling the symptoms.

Above all, physicians must not fool themselves into thinking they can cure the chronic-pain patient. Neither must they continue treating a patient who is entirely passive and insists that the physician make the pain disappear.

Each time we see chronic-pain patients, we must be prepared to have them look us straight in the eye and say they feel no better at all—that they
are still in pain. The contrary generally comes as a surprise. Once patients have talked about their persistent suffering, however, most will inform their physicians of improvement on a functional level, and the majority will leave the doctor’s office with a smile and a word of heartfelt thanks, even though they may still be in pain. This is because we have lessened their overall suffering.

Pathophysiology

How can pain be explained when tissues seem healthy? Pain transmission is complex. It occurs via various chemicals, such as substance P, histamine, bradykinin and other substances that are released in a cascade after a trauma occurs. It occurs especially via two types of fibers in the peripheral nerves—C and A-delta fibers. These fibers connect to the posterior surface of the spinal cord, where a multitude of synapses and projections that lead to several parts of the brain are located. Damage to a peripheral nerve, the spinal cord, and, perhaps, the central nervous system—especially the thalamus—may explain the phenomenon of chronic pain. With regard to the peripheral nerves of the spinal cord, it has been demonstrated that a lesion can cause persistent allodynia. As for the thalamus, there are several hypotheses based on fascinating experiments.

We know that if the proximal nerve is blocked with lidocaine before peripheral trauma occurs, once the blocking effect dissipates, no hyperalgesia results in the traumatized region.\(^1\) Without the block, however, not only is pain felt during trauma, but hyperalgesia persists afterwards.

We also know that by stimulating certain parts of the central or peripheral nervous system, we can diminish or eliminate pain, sometimes during stimulation only, but in other instances for prolonged periods. These studies demonstrate that pain is often not due to changes in the peripheral nerves, but rather in the spinal cord or the brain itself. Authors refer to this phenomenon as “sensitization.” Melzack has advanced the gateway hypothesis to explain how stimulation of a certain type of nerve will close the gate and, thus, block the impulses of nerves transmitting the sensation of pain.\(^2\) No one knows, however, why the treatment has long-lasting effects in some patients, while in others, it is ineffective.

Other theories refer to the pain cycle. When pain is suppressed briefly with an analgesic, such as lidocaine, the pain often may diminish for a prolonged period, or even disappear entirely, after several uses of the medication.\(^2\) It is not known why.

As physicians, we, therefore, must accept empirical treatments for which we have no explanation. We must also acknowledge that in similar cases, the effectiveness of various therapeutic means may differ greatly from one patient to another.

Therapeutic Options

Grieving and Psychology. All patients suffering from chronic pain must go through a grieving process. Consider the following case scenario: A 35-
year-old married man, who is active in hockey clubs and is the father of an eight-year-old boy, sees a physician after an automobile accident. The man suffers from cervical and lumbar pain. He can no longer play hockey, wrestle with his son, make love, or resume his job as a stock handler. As a result, he feels useless, loses his appetite, continually thinks about his problems and cannot shake his sadness. Luckily, with time and partial relief of his pain, he adapts and is now studying for a new job in electronics.

Some people grieve normally and adapt to loss over time. For others, however, grieving becomes pathological, and they experience loss acutely or become depressed. In cases of prolonged grieving, psychotherapy is indicated, and a referral to a psychologist is appropriate. Even if you have good psychotherapeutic skills, refer the patient. Do not try to play all roles with a chronic-pain patient, as you cannot provide all the resources necessary.

We have known for 15 years now that an intradermal injection of 0.1 cc of sterile water can relieve pain. Since this treatment is virtually risk-free, it is worth trying.

Occupational Therapy and Coping with Limitations. While helping patients grieve the loss of certain capacities, the physician must help them understand their new limitations and find creative ways of adapting to the situation. An occupational therapist can make useful suggestions. The physician’s role is to reassure patients, even if they push their limits and experience pain that will not damage bones or muscles. Certain people will choose to go out and play golf even if they know they will wind up in bed the next day because of the pain. They will venture to do so, however, only if they understand that an increase in pain does not result in biological damage to their bodies.

Drug Therapy.

Somatic Pain (dull pain, ostealgia, musculotendinous pain) should be treated with the following medications:

- Acetaminophen; and
- Nonsteroidal anti-inflammatories (NSAIDs), only if opioids prove ineffective. Bear in mind that NSAIDs can be dangerous, whereas opioids are not, if used in appropriate doses; and
- Opioid analgesics
  - There is no maximum dosage of morphine or hydromorphone.
  - Drowsiness is generally indicative of an overdose, or that the pain is not responding to the opioid.
  - Patients with a history of substance abuse are eligible for treatment with opioids, but boundaries must be set and the medication must be dispensed on a weekly basis.
  - Once the dosage has stabilized, prescribe long-acting tablets so that the patient can eventually forget about the pain.3

Neuropathic Pain (burning sensation, numbness, sudden, brief shooting pain). The following two categories of drugs can be effective in cases of neuropathic pain:4

- Desipramine, 10 mg to 150 mg per day
- Gabapentin, 300 mg to 3,600 mg per day5

These drugs can be used in combination.

In older patients, desipramine must be used with caution because of the risk of arrhythmia. Topical capsaicin and creams containing lidocaine (e.g., lidocaine/prilocaine) are sometimes used.

Capsaicin reduces the peripheral release of substance P, an essential molecule for pain transmission. It should be applied four times daily, but only
if the skin is undamaged. Lidocaine/prilocaine cream is useful for circumscribed neuropathic pain (e.g., hyperalgesia in scar tissue), breaking the pain cycle. It should be applied four times daily for one week, then discontinued to determine whether the pain has subsided for a prolonged period.

**Injections and Nerve Blocks.** A single dose of a nerve block rarely eradicates pain on a prolonged basis. Repeated use of nerve blocks, however, is often effective in doing so. It is, therefore, useful to repeat its use at least three times, if the initial dose proves effective.

Refer the following conditions to an anaesthetist:
- Low-back pain requiring an epidural.
- Reflex sympathetic dystrophy requiring a sympathetic block.
- Intercostal pain requiring an intercostal block.
- Refer cases of facet-joint pain requiring a facet-joint nerve block to a radiologist:
  Do not expect nerve blocks to relieve pain in more than 50% of chronic-pain patients or for more than a limited period of time. If pain relief is significant, repeat the dosage at least 10 times in an attempt to break the pain cycle.

Increase your use of blocks and local injections. In the case of localized pain, inject a small amount of lidocaine around the site. Repeat approximately 10 times in subsequent weeks. In many instances, this will successfully break the pain cycle for good.

**Sterile Water: A Little-Known Analgesic.** We have known for 15 years now that an intradermal
injection of 0.1 cc of sterile water can relieve pain. Since this treatment is virtually risk-free, it is worth trying. We have successfully relieved low-back pain by injecting sterile water in sites where pain is experienced. The injection itself causes an intense burning sensation, however. Since pain relief generally lasts for a few days to a few weeks, the procedure must be repeated frequently.

Other Therapeutic Options. Aside from drugs, injections and psychotherapy, other approaches also should be integrated into the treatment of chronic pain:

- Physiotherapy;
- Acupuncture;
- Manipulation;
- Massage;
- Heat and/or cold; and
- Transcutaneous electrical nerve stimulation (TENS).

Patients often will report that their physiotherapy was terminated because they had reached a plateau. They may not have enough money to pay for private physiotherapy, acupuncture, or manipulation. In such cases, it is recommend that the patient does exercises, either at home or in a swimming pool. Many municipalities have free aquafitness classes. Moreover, baths, showers and the application of hot and cold are accessible to all patients.

A TENS device may be useful in some cases. TENS often can be rented from medical supply stores. If the device proves useful, the patient can purchase one for approximately $150. The instructions for basic use are rather straightforward. The electrodes are placed on the skin and connected to the device (about the size of a cellular phone). The electrical stimulus can be given continuously or in bursts. The intensity is chosen so the patient feels the current, but does not consider it painful. The device can be used intermittently or all day, depending on the patient’s response.

Conclusion

We do not know all the causes of chronic pain. Treatments are often empirical and do not fully eradicate pain. Nevertheless, we can provide pain relief for most patients by combining various therapeutic approaches, consisting of medication in almost all cases, as well as exercise and physiotherapy. We must adopt an attitude of patience when treating these patients. Patients must understand that a certain level of pain is likely to persist and that it is up to them to meet the challenge of learning to enjoy life in spite of the pain.

References


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Answer the questions in our quiz found on page 183 and send the response card to the University of Calgary for CME credits.