Chronic Pain Syndromes and their Management

S. Datta

Saudi Medical Journal 1993; 14(5): 398-408

Chronic and acute pain which affects millions of people worldwide, is very often inadequately treated. This causes great suffering and disability which may last from a few weeks to becoming permanent. The economic cost of this is enormous. In chronic pain, the pain outlasts the normal course of disease or injury and the disorder may be somatic or psychogenic, or both. Chronic pain management requires full patient evaluation before institution of therapy, and the best results are achieved by a multipronged approach. Severe pain affects more than 30% of cancer patients. The pain may be acute or chronic or related to the tumour and so the approach to management may differ, but the goal must be to relieve pain and maintain full functional status. There are many methods available for the management of pain including non-pharmaceutical methods but the most simple and efficacious method is by the use of oral analgesics, singly or in combination.

"We must all die. But that I can save him from days of torture, that is what I feel is my great and ever new privilege. Pain is a more terrible lord of mankind than even death itself."

The importance of this topic stems from the fact that acute and chronic pain affects millions of people annually, and in many patients with chronic pain and a significant percentage of those with acute pain, it is inadequately relieved. Consequently, pain is the most frequent cause of suffering and disability that seriously impairs the quality of life for millions of people throughout the world. Bonica has long argued that the term 'chronic benign pain' (used in distinction to pain associated with cancer) is seriously misleading. Chronic pain is never benign, he contends; it is a malign force that can devastate its victims’ lives and even lead to suicide. Based on data published by the National Center for Health Statistics of the USA and other sources, it is estimated that in 1988 68 million Americans had persistent pains due to different chronic painful disorders. Cancer related pain affected 1.1 million Americans and 9 million patients worldwide. Very many of the patients were disabled for weeks, months or even years. About 5 million were disabled permanently.

The economic cost of acute and chronic painful conditions among Americans in 1988 caused over 5 billion days of limited or complete disability; 900 million work days were lost and it cost in excess of 120 billion dollars for health care and compensation etc.

Pain Pathways

Pain has been officially defined as 'an unpleasant sensory and emotional experience associated with
actual or potential tissue damage or described in terms of such damage' (IASP Subcommittee on Taxonomy 1979).\(^4\)

Pain can be of two types, each with its highly specific receptor and pathway. The first, sharp nociceptive pain is carried by myelinated Aδ fibres causing reflex withdrawal. This pain is not affected by morphine. The second, dull pain is carried by myelinated C fibres resulting in spasm and rigidity promoting rest and healing. Neurotransmitters isolated from these fibres include substance P (SP), fluoride resistant acid phosphatase (FRAP) and vasoactive peptide (VIP).\(^5\)

**Segmental mechanisms**

Impulses reach the spinal cord via the dorsal spinal root entering the dorsal horn where impulses are relayed and processed (Fig. 1).

The dorsal horn is divided into laminae each corresponding to a portion of the horn's anatomic and functional characteristic. Here the nocispecific cells receive mainly Aδ fibres sending the first pain signals to the brain. The substantia gelatinosa is where most of the modulation occurs. Modulation is achieved via excitation, inhibition, facilitation and convergence.\(^6\)

**Central pain pathway**

After intense modulation in the dorsal horn the pain signals are carried along in long neospinothalamic fibres that proceed to the lateral thalamus relaying then to the postcentral gyrus. They give off a collateral to the periaqueductal grey matter (PAG). The short palaeospinothalamic fibres that project to the medial thalamic nuclei are involved with autonomic reflex responses concerned with respiration, circulation and endocrine function. The majority of the spinoreticulo-diencephalic pathways end in the brain stem. Projections from here reach the thalamus and hypothalamus\(^5,6\) (Fig. 1).

**Descending modulation of pain**

The PAG receives inhibitory protection from the hypothalamus which inhibits the inhibitor interneurones in the PAG. The axons descend in

---

**Figure 1.** The ventrobasal thalamus is reached by A\(\beta\) fibres via dorsal column nucleus and medial lemniscus and the direct spinothalamic tract (STT). This STT arises in laminae I and V and is activated by A\(\delta\) fibres. The STT sends excitatory collaterals to the periaqueductal grey matter (PAG). C Fibres which may be presynaptically inhibited by A\(\delta\) fibres reach lamina II. From here they converge to deeper layers of spinal grey matter to form the spinoreticular (SRT) passing to reticular formation. Thence projections reach the hypothalamus and intralaminar thalamic nuclei. Some fibres from the spinal cord reach this directly by the palaeospinothalamic tract and finally reach the prefrontal cortex. The hypothalamus also sends excitatory fibres to the PAG. Thence the serotoninergic fibres descend in this dorsolateral funiculus (DLF) to the spinal cord to activate inhibitory interneurones on the border of lamina I and II. Reproduced with permission of D. Bowsher.\(^*\)
the dorsolateral funiculus to synapse on the border between marginal lamina (I) and substantia gelatinosa (II) of the grey matter\(^5\) (Fig. 1).

Melzack & Wall have assessed the present status of the gate-control theory in the light of new physiologic research. Despite considerable controversy and conflicting evidence, the value of the concept of gating (or input modulation) is stronger than ever.\(^7\)

In chronic pain, the pain outlasts the normal course of disease or injury, loses its biologic importance and serves no useful function. The disorder may be somatic or psychological or both. Sensitization or persistent stimulation of polymodal receptors and cross-talk between bare axons are potential mechanisms for chronic pain. Pain resulting from partial or complete interruption of afferent impulses results in deafferentation pain. Patients with persistent chronic pain develop habituation to the sympathetic responses and provided they do not have major underlying psychopathology or operant (learned) pain or both, may remain relatively stable physiologically for long periods of time. In contrast, patients with pain primarily due to psychopathology or operant mechanisms, eventually manifest vegetative signs and develop progressive physical deterioration because of disturbance of sleep, decrease or loss of appetite and often by excessive medication, all of which contribute to general fatigue and disability.\(^8\) Among the chronic pain population there is a high rate of social problems including divorce and suicide.

Chronic pain may be worsened by psychogenic mechanisms or may primarily be due to them. Stress increases production of bradykinin and serotonin, pain sensitizing substances. In conjunction with muscle spasm they cause vasoconstriction and aggravate the pain. Some patients with chronic pain develop a behavioural pattern after an initial injury, which usually elicits certain awards. This secondary gain leads to reinforcement of pain behaviour and can outlast the original injury or disease that caused it.\(^6\)

Psychological factors are as important as sensory input in determining pain perception and more important in their contribution to suffering. Various responses to painful conditions exist, but depressive features tend to predominate in the chronic pain population. Analysis of the psychological and somatic perspectives in a chronic pain patient provides a better understanding of the patients’ complaints of pain. The skilful handling of the distressed patient can transform an initial visit into the first in a series of therapeutic manoeuvres.\(^9\) The physiological and psychological impact of cancer pain is greater than that of non-cancer chronic pain. The physical deterioration is more severe. Cancer patients also develop greater emotional reactions of anxiety, depression and neurosis to pain.\(^10\)

The mechanisms of chronic pain have still not been entirely elucidated, but several theories of what occurs at various levels in the nervous system have aided our understanding of pathophysiology of chronic pain and helped us appreciate that the mechanisms of chronic pain may be quite different from those of acute pain. This appreciation, in turn has helped us understand the need for different treatments of acute and chronic pain.\(^6\) It is now accepted that comprehensive multi-disciplinary pain programmes produce marked subjective and functional changes resulting in a much higher rate of return to work.\(^11\)

**Patient Evaluation**

As with other fields of medicine a full and complete patient evaluation is an essential part of pain clinic management. In the evaluation of patients, various aspects must be covered.

**Patient history**

A detailed history of problems must be elucidated. This can be assisted with a questionnaire. History must cover:

1. **Personal history**—education, occupation, employment status, marital status and relationship, and family environment.
2. **Pain history**—including site, duration, place of onset, pain characteristics, response to activity and associated symptoms.
3. **Management history**—of prior treatment, prior surgery, medications and diagnostic tests.
4. **Other history**—of job characteristics, compensation/disability, sleep disruption, activity scales and treatment expectations.\(^12\)

**Physical examination**

Physical examination of the pain patient requires an understanding of anatomy and pathophysiology. The most important step is selection of appropriate data systematically collected, integrated and analysed with the eventual goal of identifying and diagnosing the underlying problems. A standard examination protocol must include observing the patient’s affect, musculoskeletal
system, neurological examination for muscle strength, reflexes, sensation and analysis of gait. This may be done in either sitting, when joint range of motion and reflexes are tested, or supine when the leg raising test is performed. The prone position is used to examine all the spinous processes. The standing position may also be occasionally needed. Research shows that pain consultation of cancer patients resulted in identifying previously undiagnosed pain etiology and new neurogenic diagnosis in a large number of patients, emphasizing the importance of neuro-oncologic evaluation of patients.

Diagnostic tests

To confirm a clinical impression certain tests may be needed which include plain X-ray, computed tomographic (CT) scans, myelography, magnetic resonance imaging (MRI), bone scan and electromyography.

Diagnostic and prognostic blocks

Local anaesthetic blocks may be used in determining nerve pathways involved and help elucidate pain mechanisms, whether they are visceral or somatic. They also help to predict response to therapy. It is important to do a careful psychological assessment before undertaking any diagnostic block.

Without doubt the most difficult aspect of regional block use in pain diagnosis is in the interpretation of clinical findings produced. The two categories of misinterpretation are:

1. False positives—arise when the pain reduction is inferred as being a specific consequence of the block, when in fact the pain reduction is due to some other action e.g. placebo response, unreliable patient report.
2. False negatives—arise when a block does not relieve the pain inferring that the site or nerve is not involved in the pain process, e.g. incomplete block, referred pain or unreliable patient report.

The anatomic basis of diagnostic blocks is that the sympathetic nervous system is isolated from other components of the peripheral nervous system within the paravertebral sympathetic and prevertebral sympathetic ganglia. Another approach takes advantage of the differences in sensitivity of the different nerve fibres to the blocking effects of local anaesthetics. The peripheral sympathetic nervous system is very suitable for selective neurologic blockade at the stellate ganglion, lumbar sympathetic chain and coeliac plexus.

Management of Chronic Non-Malignant Pain

Chronic non-malignant pain usually has a recurrent disabling nature and these patients may very often have the ‘3-D problem’—disabled, usually depressed and addicted or habituated to drugs. Contrary to our training and instincts it is not necessarily a primary goal in chronic pain to discover whether the pain is ‘organic or functional’. However, what must be established is medical stability and the absence of any potentially insidious or malignant process. The goal of assessment in chronic non-malignant pain is to identify the possible multiple physiological (peripheral and central nervous system) components as well as psychological and perceptual factors that are contributing to a very real, distressing and disabling problem.

Once the unique combination of medical-behavioural factors is identified for a particular approach, interdisciplinary team treatment goals can be identified. The most commonly accepted for management of the patient with chronic non-malignant pain are as follows:

1. Return to maximal functional physical capacity, given age, sex and medical status.
2. Eliminate use of narcotic analgesics and hypnotosedative drugs.
3. In lieu of drugs or invasive procedures which have failed or may contribute to iatrogenic problems, learn and master pain and stress self-management techniques.
4. Reduce the potential emotional impact of chronic illness and improve mood, sleep and maximize self-efficacy for pain control so the individual can take responsibility for health maintenance.
5. Return to work and/or home-making activities as well as leisure activities, thereby reducing reliance on the disability compensation and health care system.

The above goals are interdisciplinary with each member of the team working towards them. If a particular intervention is not changing the patient status on these goals, it should be stopped or altered. The accomplishment of the above goals usually leads to long-term reduction in subjective pain ratings. In patients with clinically apparent levels of depression, treatment modalities specifically targeting depressive symptoms deserve serious
consideration as an integral component of pain management programmes.\textsuperscript{19}

Treatment planning of the chronic non-malignant patient can be based on different complexity levels. Once treatment has begun, information on the patient reaction to treatment and compliance with prescribed treatment regimen can be added to the existing knowledge base. Patients may then be shifted from one level of care to another as is needed for optimal treatment\textsuperscript{20} (Table 1).

**Management of Pain Associated with Malignancy**

Moderate-to-severe pain affects about one-third of cancer patients receiving therapy and about 60–90\% of patients with advanced disease. Management of cancer pain requires an organized approach with a broad framework of knowledge.

Cancer pain may be defined by its temporal aspects: acute, chronic or incidental or on the basis of its physiological mechanisms: somatic, visceral or neuropathic. Somatic pain is due to activation of nociceptors in cutaneous and deep tissue. Visceral pain results from infiltration, compression, distention or stretching of thoracic or abdominal organs. Neuropathic pain results from injury to the peripheral and/or central nervous system as a consequence of tumour growth or cancer treatment.

Type of patient may also be classified as:

1. Patients with acute cancer related pain: associated with the diagnosis of cancer, associated with surgery, chemotherapy or irradiation.
2. Patients with chronic cancer related pain: associated with cancer progression, associated with surgery, chemotherapy or irradiation.
3. Patients with pre-existing chronic pain and cancer related pain.
4. Patients with a history of drug addiction and cancer related pain.
5. Dying patients with cancer related pain.\textsuperscript{21}

After analysis of patients with cancer and pain, three distinct syndromes unique to this process have been identified. These pain syndromes are frequently misdiagnosed because health care professionals are unfamiliar with the clinical presentation.

The first category is associated with direct tumour involvement and accounts for 78\% of cancer pain population. Metastatic bone disease, nerve or hollow viscus involvement are the most common causes. The second category is associated with cancer therapy, and the third category are those who have pain not related to cancer or cancer therapy.\textsuperscript{22}

The Memorial Sloane Kettering Cancer Centre has developed the strategy that pharmacological approaches are the easiest and most widely available to begin with. It is now well accepted that if patients can receive adequate pain relief from analgesic drugs and remain functional then pharmacological approaches should be considered the mainstay for treatment. In the development of any strategy, a critical factor is that it must be individualized to the needs of the specific patient at a specific point in time and flexibility must exist to recognize the wide variety of approaches that may be useful.
The guiding principles in any therapeutic strategy include:

1. Individualization of the therapeutic approach.
2. Ensuring available expertise to provide therapeutic strategies for patients.
3. Continual reassessment of the degrees of pain relief and impact on mood, functional status, and patient and family acceptance.
4. Choosing the simplest procedure prior to the use of complicated and very expensive techniques.
5. Constant reassurement of the patient that the pain can be controlled.21

While treating cancer patients CARE is the mandate:

C = Concern, cheerfulness, compassion, competence.
A = Appropriate analgesics and adjuvant drugs.
R = Relief of pain at night, relief of pain at rest and/or movement during the day.
E = Energize your own resources. Extinguish the existing pain.23

Pain Management

Many pain syndromes are amenable to non-pharmacologic treatment but it is a rare physician who does not resort to analgesic prescription, which is usually the easiest and most expedient course.

Medications

Systemic analgesics

Selecting the most appropriate analgesic poses a complex challenge to the thoughtful physician as there is such a vast array of drugs available—each with specific indications, contradictions and adverse effects.

General principles of analgesic management

1. Base the initial analgesic choice on the patient’s report of pain (mild, moderate, severe).
2. Administer drugs orally whenever possible; avoid intramuscular injections.
3. Administer analgesics ‘by the clock’ rather than as needed.
4. Anticipate and aggressively treat analgesic side-effects.
5. Do not use placebos to determine whether pain is real.23

Non-opioid analgesics

Aspirin and other non-steroidal anti-inflammatory drugs (NSAID) are the mainstay of initial drug treatment for mild pain. These drugs have analgesic, anti-inflammatory and anti-pyretic activity. Side-effects include prolonged bleeding time, gastrointestinal irritation, renal insufficiency and occasional bone marrow depression. With large doses hepatotoxicity may also occur.

Opioid analgesics

For thousands of years these drugs have been used as superb analgesics. Morphine is the most commonly used opioid. There are many other opioids available all of which may be administered by a variety of routes. The common side-effects of opioids include constipation, nausea, sedation, respiratory depression and withdrawal. In some patients on therapy, opioid tolerance and dependence may occur.

Analgesic management scheme

Initial assessment before starting analgesics:

1. Classify the pain as somatic or neuropathic.
2. Take a careful analgesic history including response.
3. Assess the patient’s current medical condition.
4. Assess the patient’s level of pain (mild, moderate, severe).

Treatment of mild pain

Begin with one of the NSAID administered by the clock. If the pain is due to bone metastases one of the NSAID with anti-inflammatory effect is recommended.

Treatment of moderate pain

Begin with weak or moderate strength opioid analgesics by the clock either alone or in combination with an NSAID.

Treatment of severe pain

Begin treatment with short acting strong, oral opioid analgesics round the clock either alone or in combination with NSAIDs. If weak opioids are
already in use, calculate an equi-analgesic dose, or start at the low end of the recommended dose (Fig. 2).

**Stopping analgesic treatment**

It is usually no problem if the patient has been on non-opioid drugs, but sudden stoppage of opioid drugs might cause withdrawal symptoms. A recommended technique of withdrawing the drug is to reduce it by 75% every 2 days. When the total is about 10–15 mg morphine/day it may safely be stopped.

**Adjuvant drugs**

These drugs are used to treat specific types of pain (deafferentation) and ameliorate other symptoms.

**Antidepressants**

These are useful for neuropathic pain, concurrent depression or pain-related sleep disturbances. The analgesic effect appears to be unrelated to the antidepressant effect.

**Anticonvulsants**

These are useful for neuropathic pain because they suppress neuronal firing, e.g. phenytoin/ carbemazepine. Side-effects of these drugs include ataxia, altered liver function, bone marrow depression including fatal aplastic anaemia.

**Anti-anxiety drugs**

Used for patients who have a great deal of anxiety or who suffer from sleep deprivation.

**Injection therapy**

**Cryoanalgesia**

The relief of pain by lowering tissue temperature has been well recognized but the mechanism of action is still unknown. It has been useful in chronic pain patients and cancer patients with bony metastases, resulting in prolonged pain relief and the neurolysis is reversible. There is usually no associated neuritis.

**Nerve blocks**

These blocks may be short-acting or long-acting blocks.

**Short acting blocks**

Far more commonly performed and use local anaesthesia and/or corticosteroids. They are indicated in:

1. differential diagnosis and/or treatment of painful syndromes,
2. provision of analgesia for certain procedures,
3. provision of long-term analgesia by infusion.

Many chronic conditions can be treated with short-term blocks including sympathetic dystrophy, neuralgia and herpes zoster. Injection of trigger points with a local anaesthetic in myofacial
syndromes is useful.\textsuperscript{25} The rationale for the use of local anaesthetic nerve blocks in chronic pain patients is the reliability with which they interrupt sensory and nociceptive pathways. In early phases of chronic pain these blocks may produce prolonged relief of pain, the mechanism for which is not yet understood.\textsuperscript{26}

**Long-acting blocks**

When short-acting blocks do not provide a long enough duration of relief, a more permanent neurolytic blockade is used. It must be stressed that no nerve blocks are truly permanent, and it is not appropriate to perform multiple blocks on someone with diffuse disease. Neurolytic procedures are most appropriately performed on purely sensory nerves, since blocking a mixed nerve might result in motor impairment. Alcohol, phenol, cryoprobe or radiofrequency are the methods used for long-term blocks.\textsuperscript{25}

**Epidurals**

Epidural steroid injection is performed after failure of conservative management of discogenic pain. As the nerve compression is extradural in discogenic disease, it is rational to introduce the steroid epidurally at the site of compression. In combination with local anaesthetics, epidural steroids are very useful in sciatica.\textsuperscript{26}

Facet joint injection or facet nerve block may be of equal value as diagnostic tests, but neither is a satisfactory treatment for chronic back pain.\textsuperscript{27}

**Physical Measures**

A variety of physical measures which are available play a significant role in the management of chronic pain. In certain disease processes it is mandatory that physical therapy be instituted before any kind of intervention is planned.

**Physical therapy**

Physical therapy can affect relief of pain if applied in a timely fashion by a skilled provider.

**Exercise and manual therapies**

The pain management exercises used most frequently are aimed at improving flexibility, strength and postural alignment by reducing those structural asymmetries and muscle imbalance that result in chronic postural stresses.

**Traction**

Applied by a variety of means, traction is used to relax spinal musculature and to distract and separate vertebral joint surfaces mechanically. It might also enlarge the size of the intervertebral foramina and reduce nucleus protrusion which might help increase vertebral mobility.

**Massage**

This is one of the oldest forms of therapy for painful conditions. Massage may be either superficial or deep. In chronic stages deep tissue massage is said to be used to break up scar tissue and mobilize soft tissue structures.\textsuperscript{28}

**Manipulation for back pain**

Spinal manipulation is one of the oldest forms of therapy for back pain but remains controversial. In mobilization the chiropractic practitioner goes beyond the range of motion and takes up slack in the joint capsule. Repeated mobilization increases the range of motion. In manipulation a high velocity force is applied to cause motion in the para-physiologic zone. Motion beyond this point will cause damage. The risk associated with this technique is mainly due to the lack of knowledge in a small percentage of practitioners.\textsuperscript{29,30}

**Occupational therapy**

The aim of therapy is to restore productive life skills and independence to those who have chronic or acute disabilities. It helps patients with painful disorders to resume daily activity despite pain. Activity analysis allows a therapist to analyse a patient’s activity and then recommend modifications. Education is a priority for patients and includes aspects like change in movement patterns, joint protection techniques, energy conservation and a plan to rest frequently before they reach the point of pain or fatigue, so as to continue activity as long as possible without pain.\textsuperscript{31}

**Transcutaneous electrical nerve stimulation**

The electrical stimulation of large fibre afferents sufficiently inhibit noxious stimuli at the spinal cord to produce analgesia. Some evidence suggests that low frequency transcutaneous electrical nerve stimulation (TENS) is more effective in chronic pain whereas high frequency TENS may work better in acute pain.
Most commonly, electrodes are placed over the area of pain or tenderness. The frequency, amplitude, pulse width, placement site and duration and frequency of stimulation varies from patient to patient and so it is recommended that a trial of a few weeks be given before changing therapy. The only contraindication to its use is in patients with demand-type pacemakers.32

**Acupuncture**

This has been practised in China for 7000 years. It is based on the principle of the yin (negative) and yang (positive) whose coexistence and balance gives harmony to the universe. The effect of acupuncture analgesia can be reversed with naloxone and so is probably associated with release of endorphins. Therapy is most successful when needles are placed correctly and sessions held at least once a week. Acupuncture seems to be most beneficial in the treatment of musculoskeletal disorders, arthritis and headache.33

**Neurosurgical Procedures**

Essentially, patients undergoing neurosurgical procedures may be divided into those who have a life-threatening illness and those who do not. Pain caused, in particular, by advanced malignancy needs more drastic treatment; the risk of such treatment is balanced against the chance of a long period being pain-free.

Surgical procedures at the primary afferent level include anterolateral cordotomy, ganglionectomy, posterior rhizotomy, microsurgical decompression of nerve roots, ganglionlysis by injection and radiofrequency thermocoagulation, sympathectomy and lesioning of the spinal cord dorsal root entry zone. These operations can be highly effective for a wide variety of benign pain states and carry a relatively small risk.21

**Neurosurgery for the pain of malignancy**

By paying attention to the physiological disturbance that produces pain the surgeon can 'tailor' the operation to the individual patient, location and aetiology of the pain. This is likely to increase the success and reduce the associated incapacity. It is felt that patients should be considered for timely surgery, before the patient is severely debilitated by disease and the effects of poorly controlled chronic pain. The arguments for a non-invasive approach are compelling but nevertheless surgery can be recommended for a minority of cancer patients. It is important that clinicians should be aware of this option. The important advantages of well-timed surgery for pain in cancer patients includes:

1. better pain control in most cases,
2. elimination of medication or reduction of dosages to tolerable levels with few side-effects,
3. clearer mental state on reduced medications with an improved appetite and a better quality of life,
4. shortened hospital stay,
5. a return to the mobile state for some patients.34

**Chronic Pain in Paediatrics**

Chronic pain does occur in children. It does not receive the same attention as it does in adults because of the lower economic impact. Chronic pain in paediatrics is a very complex problem often involving physiological and pharmacological problems, psychological, social and family difficulties. Consequently it is strongly recommended that a multidisciplinary approach be used. A survey of school children suggests that about 10% have significant problems with recurrent abdominal pain, headache, limb pain and chest pain.35

Abdominal pain is fairly common in children. The most important approach is a good medical evaluation as there is a long list of different diagnostic possibilities including sexual abuse. Management is based on the diagnosis.

Headache is quite frequent in older children and adolescents. A differential diagnosis must include intracranial pathology. Childhood headaches are particularly amenable to behavioural therapy.36

Whatever may be the cause of pain, before initiating therapy it is very important to look into the psychological aspects of the child. Therapy with drugs and physical therapy may be successfully instituted in children.

Cancer pain in children may be due to tumour or to cancer therapy. Children with pain are best treated with narcotics administered as slow release tablets orally. If oral drugs cannot be taken the intravenous or subcutaneous route may be chosen. Successful management involves titration of doses to clinical effect and treatment of narcotic side-effects. In terminally ill children narcotics should be administered adequately with no fear of addiction. With optimal narcotic administration more than 95% of children with cancer can be made comfortable.37
Role of Anaesthetist

Anaesthetists play an important role in the management of chronic pain patients. They are usually well versed in the pharmacokinetics and pharmacodynamics of opioids, sedatives and antidepressants, drugs commonly used in the management of chronic pain. They are skilled in doing therapeutic and diagnostic nerve blocks. Anaesthetists have a special appreciation of the physiological and psychological effects of pain and thus play a pivotal role in management of chronic pain patients and in running pain clinics. If the anaesthetist can reasonably care for the more straightforward chronic pain problems, and by properly diagnosing and recommending referral of the more complicated patients to an appropriate treatment facility, he can do both the patients and the referring physicians a great service. Generally speaking though, anaesthetists are most effective when working in a multidisciplinary setting.4

References