

Module 10

Managing pain in HIV-infected Injecting Drug Users

Treatment and Care for
HIV-Positive Injecting Drug Users



Module 10

Managing pain in HIV-infected injecting drug users

Participant Manual

2007



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Module 1: Drug use and HIV in Asia: participant manual

Module 2: Comprehensive services for injecting drug users – participant manual

Module 3: Initial patient assessment – participant manual

Module 4: Managing opioid dependence – participant manual

Module 5: Managing non-opioid drug dependence – participant manual

Module 6: Managing ART in injecting drug users – participant manual

Module 7: Adherence counselling for injecting drug users – participant manual

Module 8: Drug interactions – participant manual

Module 9: Management of coinfections in HIV-positive injecting drug users – participant manual

Module 11: Psychiatric illness, psychosocial care and sexual health – participant manual

Module 12: Continuing medical education – participant manual

Trainer manual: Treatment and care for HIV-positive injecting drug users

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Contents

Abbreviations and acronyms	iv
Module 10: Managing pain in HIV-infected IDUs.....	1
Overview	1
Introduction	2
General principles of pain management.....	3
Acute pain management	3
Chronic pain management	5
Different treatment settings: IDUs on pharmacotherapy.....	6
Different treatment settings: inpatient and outpatient	7
Examples of treatment options	8
Treatment options: examples of risk management strategies	9
Summary.....	10
Exercise 10: Case studies.....	11
Annex 1: PowerPoint presentation 10: Managing pain in HIV-infected IDUs	12

Abbreviations and acronyms

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
ARV	antiretroviral
ASEAN	Association of Southeast Asian Nations
CDC	Centers for Disease Control and Prevention (US Government)
FHI	Family Health International
HIV	human immunodeficiency virus
IASP	International Association for the Study of Pain
IDU	injecting drug user
NMDA	N-methyl D-aspartate (receptor)
NSAID	non-steroidal anti-inflammatory drug
OST	opioid substitution therapy
PCA	patient-controlled analgesia
PLWHA	people living with HIV and AIDS
SSRI	selective serotonin reuptake inhibitor
TENS	transcutaneous electrical nerve stimulator
UDS	urine drug screen
UGT	uridine 5'-diphosphate glucuronosyltransferase
USAID	United States Agency for International Development
WHO	World Health Organization

OVERVIEW



Objectives:

By the end of the session the participants will be able:

- To be familiar with the general principles of pain management
- To discuss pain management approaches for IDUs in different treatment settings including opioid substitution therapy (OST), and inpatient and outpatient settings
- To identify treatment options for the management of acute and chronic pain among IDUs



Time to complete session:

1 hour 30 minutes



Session content:

- General principles of pain management
- Acute pain management
- Chronic pain management
- Different treatment settings: IDUs on pharmacotherapy
- Different treatment settings: inpatient and outpatient
- Examples of treatment options
- Treatment options: examples of risk management strategies



Training materials:

- PowerPoint presentation 10: Managing pain in HIV-infected IDUs
- Module 10: Managing pain in HIV-infected IDUs
- Exercise 10

INTRODUCTION

Injecting drug users (IDU), like other substance users, are at higher risk than the general population of being involved in accidents and suffering traumatic injuries requiring hospitalization. The latter commonly involve surgical procedures and fairly often, problems with pain management. IDUs are more vulnerable to a variety of medical disorders that have an association with pain (e.g. abscesses and cellulitis, septic arthritis, osteomyelitis and HIV-related manifestations such as neuropathy). Common reasons for difficulties in pain management in IDUs relates to their tendency for behavioural disturbances (e.g. drug-seeking behaviour, relapse to drug use) and a significant degree of tolerance to most analgesics and sedatives. It has been shown that long-term, particularly high-dose opioid users (i.e. chronic pain patients on opioids and IDUs on OST) commonly acquire a state of opioid-induced hyperalgesia. This further increases such patients' vulnerability to painful stimuli. Furthermore, a background history of childhood trauma, as is commonly identified among IDUs (and many patients who suffer from the chronic pain syndrome), has also been associated with apparent "pain proneness" (i.e. increased vulnerability to experience a greater degree of pain compared with other people). A doctor is therefore sometimes faced with a situation where they must manage the underlying medical condition, drug dependency and the pain management problem at the same time. Chronic pain disorders are usually long term and relapsing conditions. Their management is fundamentally similar to the management of chronic drug dependency: this can mean that concurrent management of both co-morbidities can be done more easily within an existing drug treatment programme.

In some circumstances, for example, in a hospital inpatient setting, the doctor may be able to liaise with one or more other specialists such as an anaesthetist with specific pain management skills. Many general hospitals now have protocols on how to deal with the situation of pain management in patients who are drug dependent. In other circumstances, the doctor may work in a general practice (primary care) or other outpatient-type setting where limited specialist support may be available. In such a setting, reference to the following information on pain management in IDUs may be helpful. It is advisable for a doctor to make contact with a specialist (or a specialist centre) who can be reached easily.

The two most important principles in providing pain management for IDUs are: (1) *ensuring adequate analgesia*; and (2) *risk management strategies* (i.e. managing the risks associated with prescribing narcotics for drug-dependent individuals). IDUs commonly report negative treatment experiences from doctors with regard to pain management.

It is always important to make a thorough *assessment of pain* in IDUs because some pain symptoms should alert the doctor to a need for immediate medical intervention (e.g. the possibility of perforated peptic ulcer requiring surgery or the development of abdominal pain with early bowel obstruction). These conditions may sometimes be "masked" because the patient is chronically using opioids and therefore may present late, only when the underlying pain has escalated. Careful assessment of the patient's symptoms, including pain, at the first visit also demonstrates to the patient that the doctor is taking the symptoms seriously and helps to establish a trusting relationship between the patient and health-care provider.

It is also important to have an understanding of the *classification* of pain because some types of pain respond better to specific treatments. Primarily *nociceptive* pain (i.e. pain related to the acute stimulation of nerve endings in tissue) responds to simple analgesics and opioids, whereas other forms of pain, notably *neuropathic* pain (i.e. pain related to underlying nerve damage), often does not respond to simple analgesics and sometimes even opioids, although the latter may sometimes prove useful. Neuropathic pain is generally treated with anticonvulsant or antidepressant medications (e.g. carbamazepine, gabapentin and amitriptyline). For guidance, refer to the International Association for the Study of Pain (IASP) web site: <http://www.iasp-pain.org/>.

GENERAL PRINCIPLES OF PAIN MANAGEMENT

It is recommended that the WHO “analgesic ladder” concept be considered when deciding on analgesic use in any patient group. Even though non-pharmacological treatments may have limited efficacy in this patient group, such treatments do have complementary effects with prescribed analgesics and therapeutically, patients are managed in a manner that is not solely pharmacologically based. This means choosing to start with simple analgesics (i.e. bottom of the ladder) and using them at appropriate dosing intervals. Should the analgesic effect be suboptimal, progress up the ladder to a slightly more potent option, such as codeine or tramadol, which can often be prescribed as a combination analgesic (e.g. acetaminophen/paracetamol with codeine). In situations where these measures fail, the physician may need to give “stronger” opioid analgesics such as oxycodone, morphine or methadone. In some instances, a local intervention such as a nerve block or epidural analgesia may be considered. With drug-dependent patients, it is recommended that longer-acting, orally administered forms of medication be chosen rather than short-acting forms. The effects of the latter wear off quickly and patients treated with short-acting drugs tend to be preoccupied with the timing of doses and may be perceived to be “drug-seeking”. Longer-acting analgesics can help reduce this potential problem. Further, it is recommended that oral analgesics be utilized in preference to injected ones because of the longer duration of effect and, sometimes, the difficulty in weaning the patient away from injectable narcotics. A combination of treatments generally works better than a single modality; a multidisciplinary team (e.g. doctor, physiotherapist, psychologist) approach is therefore recommended.

Sometimes it is advisable to consider using adjunctive pain medication, which may augment analgesic efficacy. Examples include some of the anticonvulsant drugs (e.g. carbamazepine and gabapentin) and/or some antidepressant medications (e.g. amitriptyline) and antispasmodics/muscle relaxants (e.g. baclofen, 5–10 mg tid and buscopan, 10 mg qid). It is essential to provide the chosen analgesic regimen in a dosage that is effective throughout the dosing interval. If the analgesic effects begin to wane before the next dose is due this may lead to the emergence of behavioural problems. Because most IDUs have significant cross-tolerance to many analgesics and sedatives, it is therefore usual to prescribe a higher than normal dose (particularly of opioid analgesics) initially. Next, promptly assess the effect of that dose and, in doing so, demonstrate to the patient your intention to treat them effectively, thereby gaining their confidence and, hopefully, cooperation.

ACUTE PAIN MANAGEMENT

Probably the most important aspect of pain management in IDUs with acute pain is to provide analgesic efficacy *early* in the course of treatment. This means providing a reasonable, often higher than usual, dosage of an opioid analgesic (if this is required). In an outpatient clinic (or the doctor’s office), time should be spent with the patient and family/friends to clearly explain the treatment plan, ensure frequent reviews and warn the patient about the risks of using other drugs while taking potent analgesics. It is important to start with a dose likely to be effective and review the patient soon after to gauge the response and determine an appropriate dosing strategy. The latter almost always involves daily dispensing of medications, preferably in conjunction with some supervision at home. It is equally important to spend time at the bedside with inpatients to explain the treatment plan so that they are aware of possible opioid analgesic tolerance and to make clear that you have taken this into consideration and that their pain management will be continuously reviewed. The treatment plan should involve frequent reassessment of the patient’s response to the analgesic intervention. This is reassuring for the patient and substantially reduces the likelihood of behavioural problems and non-compliance with treatment.

In some cases needing acute pain management, for example, a fracture or a dental abscess, the combination of a non-steroidal anti-inflammatory drug (NSAID) with an opioid (higher than usual dose) could be initially considered, along with the possibility of local interventions such as regional anaesthesia or nerve block (in the case of a limb fracture), or intercostal block for fractured rib(s). In the case of dental abscess, treatment of pain might include an oral analgesic combination (with an anti-inflammatory drug), local measures such as an anti-inflammatory gel or mouth wash and, possibly, a local anaesthetic solution for gargling.

An inpatient morphine dose given to an “average” heroin user may be of 20–30 mg, three- to four-hourly *strictly*. Where possible, a continuous morphine infusion with a patient-controlled device (with “lock-out”) attached (patient-controlled analgesia [PCA]) often works particularly well in more complex pain situations but generally requires anaesthetist involvement. Sometimes an infusion of ketamine, an N-methyl D-aspartate (NMDA) receptor antagonist that can help augment opioid effects), can be used in a patient who may have particularly high tolerance to opioids (e.g. a person chronically using very high doses).

As with all forms of medical treatment, the quality of the doctor–patient relationship is strongly correlated with the success or failure of the treatment intervention. This is particularly true when working with IDUs, who often report negative experiences with doctors who have previously treated them. Being able to successfully engage a patient in a therapeutic relationship is one of the most important goals of medical treatment, and especially in a pain management strategy. Whenever possible, seek support from a specialist in pain management (e.g. anaesthetist) and from a consultant in addiction medicine when managing particularly complex and/or acute pain in hospitalized IDUs. In some instances, the use of behavioural contracting may also be necessary if challenging behaviours are encountered (e.g. threatening behaviour). It may also be necessary to provide support for the ward staff who may have particular difficulty dealing with the IDU patient.

Another important consideration when planning any acute pain management intervention for IDUs is the need to consider the likelihood of an emerging “drug withdrawal” reaction (and thus, “craving” with the risk of absconding), typically occurring in the first two days after hospitalization. Missing this potential problem is a common mistake that may lead to behavioural instability in the patient and will make pain management more difficult. For IDUs using heroin, opioid withdrawal may cause a temporary exacerbation in their perception of pain, together with some general distress from the withdrawal symptoms themselves. This condition is easily avoided if the initial pain management is effective and, when using opioids in the analgesic regimen, if the dose is high enough to achieve effective analgesia and obliterate any potential withdrawal symptoms. Hence, the doctor manages *two situations at once: the acute pain and the avoidance of any withdrawal symptoms*.

With regard to other IDUs, particularly psychostimulant (e.g. amphetamine) users, a history of some prior exposure to opioids is common and therefore there is a possibility of opioid tolerance. Opioid withdrawal symptoms may be less likely, but this needs to be assessed on an individual basis. In a patient who is primarily an amphetamine user, the most common problem relates to the re-emergence of significant craving (and therefore, relapse risk) after three or four days of abstinence from the drug. This may be even shorter for people who are dependent on short-acting stimulants such as cocaine. The role of substitution pharmacotherapy (e.g. methadone maintenance treatment as a replacement for illicit heroin use) for psychostimulant users is still not well established and “anticraving” medications are of limited use. Hence, the therapeutic relationship remains fundamentally important for effective management of these patients. Usually, they respond well to high-dose opioids.

CHRONIC PAIN MANAGEMENT

Any pain management approach depends on whether the patient is in acute or chronic pain. IDUs are known to require longer periods of time for rehabilitation after injury and some are more likely to develop chronic pain problems after injury. Hence, in outpatient clinics and pain management programmes, IDUs are not an uncommon patient group. However, because of the complexity of these patients (and sometimes, the fact that they may have relapsed to illicit drug use), they are frequently rejected from such venues. For these reasons, IDUs sometimes end up seeking pain management at services that are primarily set up to provide drug rehabilitation (i.e. drug and alcohol services).

The general approach to managing IDUs who have chronic pain involves reviewing the (above-mentioned) general principles, since these simple intervention approaches are often overlooked or have not been adhered to by the patient for various reasons. Thereafter, confirm the diagnosis of pain to ensure that medical deterioration has not occurred (e.g. progressive disease such as recurrent vertebral “crush” fractures in a patient known to have osteoporosis). Some patients may have a somatoform pain disorder (refer DSM-IV) as a diagnosis; this condition is not rare in patients with drug dependency, including IDUs. Generally, they are managed in much the same way as other chronic pain patients.

It is also important to review carefully the past history to ascertain which treatments have or have not worked or have not yet been properly utilized. For example, the patient may refuse all physiotherapy because of one “bad” experience in the past. Next, consider formulating a treatment plan that involves both pain management and “normal drug rehabilitation” treatment (e.g. counselling, case management, group therapy, assistance with psychosocial problems, etc.) being delivered concurrently. The treatment plan needs to be strictly time-limited (e.g. not more than three months) so as to require regular review of the overall strategy and the patient’s progress. It is a good idea to have the patient commit to the strategy by signing a formal “treatment contract” agreement that includes aspects such as medication rules, attendance for clinic appointments, acceptance of urine drug screening (UDS) if required, agreement to stay with one prescriber use only one pharmacy for medication and participate in dependence treatment activities.

The evidence from treatment evaluation of chronic pain strongly suggests that *functional restoration* (i.e. increasing the level of activity and general day-to-day functioning) is the most important goal, more so than “pain scores” or other subjective measures of pain control. Therefore, the best overall management strategy for drug-dependent patients with chronic pain involves a treatment plan that encourages the patient to increase levels of activity while at the same time addresses the patient’s drug and other psychosocial problems. As an example, an IDU using heroin with chronic phantom limb pain who still injects can be managed with methadone so as to “cover” both dependence and analgesic requirements. Pain management in such patients usually requires higher than normal dosages and/or split-dosing: taking methadone twice a day instead of once. Methadone provides better analgesic efficacy when given more than once a day.

If methadone is not an option, another oral, long-acting opioid can be chosen (e.g. slow-release morphine [MS Contin] or extended-release oxycodone [Oxycontin]). Finally, all chronic pain patients should be dispensed only small amounts of opioids at a time (e.g. never more than a week’s supply at one time); some may need daily, supervised dispensing as with methadone treatment. This minimizes the risk of dose escalation and overdose; it also allows the prescriber to better monitor the use of medication by the patient.

DIFFERENT TREATMENT SETTINGS: IDUs ON PHARMACOTHERAPY

Some IDUs who present with pain management problems may be attending the acute treatment facility for the first time; some may already be in a form of drug rehabilitation treatment; while others may be engaged in pharmacotherapy maintenance programmes that may involve methadone, buprenorphine or naltrexone.

In patients who are not on any pharmacotherapy for their drug dependence, the approach to pain management starts from the first principles as outlined above. In patients on maintenance pharmacotherapy, the approach is different. Methadone-maintained patients usually receive a once-daily dose, but in acute pain the analgesic efficacy of methadone is better when the drug is administered every four to six hours. Hence, a doctor needs to decide between two options: (1) to increase the methadone dose and provide it on a more regular basis (this is more applicable to the inpatient setting); or (2) to provide an alternative short-acting opioid such as morphine in addition to the normal "homeostatic" daily methadone dose.

In the case of patients maintained on buprenorphine, management can be more difficult. While buprenorphine is an effective opioid analgesic, its efficacy may not be comparable to high-dose methadone or morphine treatment. Therefore, the two options for acute pain management with buprenorphine involve either increasing the buprenorphine dose and providing the drug (as with methadone) to up to four times daily (again more applicable in an inpatient setting) or, unlike the situation with methadone, discontinuing this drug and prescribing a high-potency opioid alternative such as fentanyl or morphine orally or parenterally. Buprenorphine can be administered as an intramuscular or intravenous injection but is also available as a sublingual tablet. This preparation can be useful postoperatively (e.g. where the patient is not permitted to eat or drink anything) or in a patient with nausea and unable to swallow tablets.

Finally, some patients may be on naltrexone (usually 50 mg daily) for the treatment of alcohol or opioid dependence. In a few countries, some heroin users are currently being treated with naltrexone implants (i.e. a depot injection preparation). With a long-acting preparation such as a depot or an implant, the effects of that drug either remain fairly constant over a period of time or wane very slowly. In a patient taking the tablets on a daily basis, the plasma levels and duration of the pharmacological effect of naltrexone will begin to decrease within 24 hours of stopping the medication. Essentially, there are two approaches to managing patients on naltrexone. First, in a preoperative situation, the drug is withheld and the anaesthetist alerted to the fact the patient has been on naltrexone. Chronic therapy with naltrexone actually lowers opioid tolerance and therefore these patients may have an increased sensitivity to the effects of opioid early in the treatment. Patients who have implants or depot naltrexone "on board" can still be treated with opioids but in significantly higher doses than one might normally consider. The usual approach in this circumstance is to provide morphine via an infusion (PCA) where the initial doses are high and judged, after continuous review (i.e. at least four-hourly), to be effective. Later, these doses are slowly reduced as the naltrexone effects begin to wear off. If this is not done, the opioid effects may reach an overdose level as the naltrexone begins to wear off. Patients who have naltrexone implants (or depot preparations) generally have fairly low plasma levels that are easily "overridden" by high-dose morphine infusion treatment.

DIFFERENT TREATMENT SETTINGS: INPATIENT AND OUTPATIENT

Once a patient is admitted to hospital, acute pain management can be significantly improved by adopting a team approach, incorporating the anaesthetist, ward nursing staff and other hospital staff likely to be involved (physiotherapist, psychiatrist, etc.). Some hospitals have adopted a policy and procedural guidelines for IDUs admitted with acute pain. The need for this approach has arisen

because of the problems often encountered when these patients are admitted to hospital and good pain management strategies have not been adopted.

Cases of severe pain often require the provision of potent opioids and hence, strong, oral, long-acting opioids (such as slow-release morphine or methadone) or the maintenance of a morphine infusion should be considered. Ideally, the infusion has some patient-controlled administration device attached so that they may self-administer boluses of additional opioid analgesic when required, but there should also be a “lock-out” time period to avoid excessive use and overdose. These technologies are commonly monitored by anaesthetists within the general hospital setting.

Another problem relates to finding and maintaining intravenous access in IDUs who commonly have scarred and sclerosed peripheral veins due to their long-term intravenous drug use. Thus, many of these patients need to have central venous lines inserted in order to maintain intravenous access, and this provides the patient with immediate access to an “easy site” for intravenous self-injection of illicit drugs, either in the hospital (brought in by friends or other drug users) or while temporarily outside the institution. Hence, any decision to use a central venous access in an IDU commits the treatment team to maintaining regular and close monitoring of that patient. At the earliest suspicion of any risk of absconding or of active injecting while in hospital, the patient’s management strategy needs to be immediately reassessed to determine whether the analgesic efficacy is adequate and at the same time “cover” any drug withdrawal symptoms (including drug craving). If the opioid doses are adequate, both pain management and opioid/drug-seeking behaviour should be effectively managed.

Despite this, if clandestine injecting by the patient still occurs, a treatment contract with the patient should be drawn up, making clear the advantages of complying with treatment (improved health and cure of acute medical conditions) and the consequences of non-compliance or continued illicit drug use (including possible forced discharge from the hospital). In any patient who demonstrates ongoing illicit injection or risk of self-discharge, the central venous line should be removed.

In the case of IDUs presenting in the outpatient setting, parenteral drugs should not be used. Usually, the patient will have mild-to-moderate acute pain and generally responds to an analgesic combination as described above. Doses and dosing intervals of currently used medications may need to be adjusted upwards. In the same instance, a short course (time-limited and “supervised”) with an alternative opioid may be required. The alternative opioids generally used are oxycodone or morphine, which are well tolerated by most patients. The IDU as an outpatient needs to be regularly reviewed, at least on a daily basis, to assess the effectiveness of the treatment intervention and to gain the patient’s confidence. This helps in ensuring the compliance of the patient in the longer term.

Always consider combining an NSAID to assist analgesic efficacy, particularly when there is an acute, inflammatory process (e.g. abscess). Because these patients are usually illicit drug users, it is safest to provide opioid analgesia by daily supervised pharmacy dispensing. Providing opioid analgesics (particularly large amounts) to these patients may result in the patient escalating their dosage, attempting to inject the medication, or diverting the drug to other people. It is also essential to explain to each patient that pain treatment is temporary and as the acutely painful condition improves the dosage of opioid analgesic treatment will be reviewed and sequentially reduced over time. Again, the quality of the doctor–patient relationship is of paramount importance. Regular negotiation with the patient should help to bring about the eventual reduction and discontinuation of the analgesic intervention. It is also of great clinical value to maintain regular contact with the pharmacist, who sees these patients on a daily basis and can provide valuable feedback about the day-to-day status of the patient.

EXAMPLES OF TREATMENT OPTIONS

Longer-acting NSAIDs (e.g. naproxen or diclofenac) can be very helpful in managing acute pain, particularly when there is an inflammatory component to the mechanism of pain. If the patient has any relative contraindication to NSAID therapy (e.g. recent bleeding peptic ulcer or concurrent anti-coagulant therapy), an alternative simple analgesic such as acetaminophen/paracetamol should be considered (this drug is also available as a slow-release preparation). These simple interventions are effective and often neglected in treating IDUs because this patient group often has limited confidence in such medications. These patients may need specific education or counselling regarding the co-analgesic effects of these analgesics, particularly when used in combination with opioids.

Tramadol is an opioid analgesic that also has some action as a serotonin reuptake inhibitor. For this reason, the drug may interact with other serotonin-enhancing medications such as the SSRIs and it can also interact with analgesics such as pethidine/meperidine. When used, the slow-release oral preparation is preferred (e.g. 100 to 200 mg twice daily). When stronger oral opioids are necessary, oxycodone, morphine or methadone are usually employed. Again, oral and slow-release preparations are preferred. Methadone is a long-acting drug and therefore does not need to be provided in a slow-release form. Opioids are generally provided in combination with simple analgesics to enhance the effectiveness of both.

During the initial phase of treatment, the patient needs regular review to determine the efficacy of the pain management intervention and, later, to determine the appropriate rate of reduction. Some patients may have problems with "breakthrough pain" (acute pain episodes that "break through" the analgesic effects of long-acting opioids). For this scenario, it is commonly recommended to provide short-term, extra doses of the opioid being prescribed but in short-acting/immediate release form (e.g. morphine tablet, syrup or injection). Similar to cancer patients receiving such treatments, if these "rescue doses" are frequently used throughout a 24-hour period, the total rescue dose is added to the regular dose to calculate the next day's extended release dose in the hope that the patient's "breakthrough/rescue" requirement will diminish. The goal is to provide the best possible analgesic cover with the smallest possible dosing interval. With IDUs, rescue doses may be made available by attendance at their pharmacy or otherwise supervised in the home environment by a responsible person.

For night-time sedation, many of these patients will request "sleeping tablets" or they may be concurrently benzodiazepine dependent. In the latter case, it is often better to not try to achieve detoxification during pain management, but rather to achieve a compromise with the patient that allows continued prescribing of a mutually agreed upon benzodiazepine (e.g. long-acting diazepam). In other situations, a sedating, antidepressant medication is commonly used because it can help with night-time sedation and also facilitates the effects of prescribed analgesics (e.g. amitriptyline 50–75 mg at bedtime; doxepin 50–75 mg at bedtime; or mirtazapine 15–30 mg at bedtime). If the patient has particular problems related to muscular spasm, a simple antispasmodic/muscle relaxant drug can be prescribed. For example, smooth muscle relaxation can be facilitated by prescribing a mild anticholinergic (e.g. hyoscine), and skeletal muscle relaxation can be facilitated by prescribing baclofen.

Prescribing opioids to any patient, particularly opioid-dependent patients, requires concurrent attention to the management of constipation, the most common complication of chronic opioid use. Therefore, anticonstipation therapies that are safe to use on a longer-term basis can be used (e.g. fibre supplements, generous fluid intake, fecal softeners, lactulose).

Local anaesthesia (e.g. regional nerve blocks, local anaesthetic infiltrations) should always be considered, where appropriate and available.

Non-pharmacological treatments also need to be considered because they can augment the analgesic effects and potentially help in reducing the patient's tendency to "focus" only on the drug aspects of therapy. Examples include: the use of local heat packs, massage, physiotherapy, stretching, meditation, transcutaneous electrical nerve stimulator (TENS) machine and counselling/psychological therapy (cognitive-behavioural therapy).

TREATMENT OPTIONS: EXAMPLES OF RISK MANAGEMENT STRATEGIES

In prescribing for IDUs, underestimating the dose can lead to pain management failure and an unhappy patient, while overestimating the dose may cause the patient to be oversedated or even overdosed. There are risks associated with the route of administration of opioid drugs, particularly the placement of central venous catheters and peripheral lines, which may invite some patients to inject themselves. There are risks associated with inpatient IDUs where visitors bring them drugs without the knowledge of the medical treatment team. Similarly, there are risks associated with the outpatient prescription of opioid analgesics to IDUs, who may co-habit or be in regular contact with other IDUs who may wish to purchase or even steal the prescribed medications. Some IDU patients may even "overstate" their pain and try to procure additional opioid analgesics.

IDUs who receive prescribed opioid analgesics to take home may have small children and therefore need to pay particular attention to safe storage of their medications. The home situation should be assessed either by means of an outreach visit or having the family visit the consulting rooms to enable a clear discussion about the risks of medication provision and safety precautions that need to be undertaken while opioids are being prescribed.

Essentially, risk management strategies involve a combination of one or more of the following:

1. The provision of only small quantities of medication, usually a daily supply, sometimes with "supervised" dispensing (i.e. this means that the pharmacist actively watches the patient swallowing the medication and checks to see that this medication is not being concealed under the patient's tongue; this helps reduce the risk of diversion).
2. The identification of a stable and reliable family member (or other suitable friend) who can co-supervise the patient's medication at home and provide feedback to the prescribing doctor.
3. The prescriber/doctor communicates regularly with the dispensing pharmacist (outpatient setting) and ward nurses (inpatient setting).
4. The patient is regularly monitored, at least twice a day (inpatient setting) or at least daily in the outpatient setting. When a patient cannot travel to the clinic regularly (e.g. leg fracture), outreach visits may be necessary.
5. Safe storage of drugs is always required, particularly when there are young children at home.
6. It is usually worthwhile to require the patient to provide a urine sample for drug screening. This allows the identification of the analgesic prescribed (confirming that the patient is actually taking what is prescribed) and checking to see whether the patient has relapsed to using illicit drugs.
7. Whenever possible, avoid the use of central lines or other intravenous devices unless absolutely necessary. When deemed necessary, close monitoring of the patient is absolutely essential. Before such an intervention, consider all other modalities of drug administration; these include other forms of analgesic delivery such as subcutaneous infusion (as is sometimes used in palliative care medicine), sublingual narcotic administration (e.g. buprenorphine tablets), intramuscular injection, suppository, or transdermal patch (e.g. transdermal buprenorphine or fentanyl). Many of the short-acting opioids such as morphine and fentanyl can also be delivered by intranasal spray; simple aerosol devices are available at most hospitals or can be made up.

8. Any potential for drug interactions also needs to be considered and managed, especially if the patient is already taking multiple drugs.
9. Monitor for the side-effects of medication (e.g. for opioids, typically constipation, dry mouth with increased risk of tooth decay) and manage appropriately.

SUMMARY

The key elements in the management of an IDU with pain involve an initial thorough assessment of the pain condition (confirm diagnosis and past treatment history), consideration of the treatment options given the setting (i.e. inpatient or outpatient), formulation of a treatment plan, and prompt delivery of effective analgesia with appropriate doses within a monitored strategy.

It is imperative to treat patients with the most effective combination of both non-pharmacological and pharmacological therapies as early as possible to both treat their pain and fully engage them in a therapeutic relationship with the aim of ensuring an effective pain management strategy. It is essential to consider risk management as part of the overall treatment strategy when managing IDUs in either an inpatient or outpatient setting, and coordinate with experts in pain management and rehabilitation medicine.

EXERCISE 10.1

CASE STUDIES

Case study 1

A 29-year-old male IDU with a past history (seven years ago) of a motor vehicle accident and low back injury (prolapse of L5/S1 intervertebral disc) is seen by an orthopaedic surgeon; surgery is not advised but the patient complains of severe pain so morphine tablets are prescribed. The patient returns to his general practitioner; as time progresses, he complains of increasing pain so that the general practitioner provides a further increase in the dosage. Eventually, the patient claims to have lost the prescriptions and requests further repeat prescriptions. The general practitioner then refers him to you for an opinion on further management. When you examine the patient, you find active (i.e. recent) needle track marks. The patient states he cannot walk further than 50 metres and can no longer work or manage most home duties. Discuss the approaches to management.

Case study 2

A 34-year-old female IDU who has been drinking in the afternoon (smells of alcohol) presents to the emergency department after being hit on the right side of her body by a passing car. On examination, she is found to have a compound fracture of the right humerus and multiple fractured ribs. She is distressed and demanding pain relief; she has old venous scarring from previous injecting drug use on both forearms. She is recommended orthopaedic surgical treatment and the anaesthetist is called in. The patient's past history of being an IDU is noted and a family member informs that the patient had a naltrexone implant inserted two months previously and that she [the patient] had subsequently stopped injecting heroin (a UDS is therefore requested). However, the patient has been drinking heavily at times and occasionally using amphetamines and you are asked to advise on inpatient management.

Presentation 10: Managing pain in HIV-positive IDUs

Managing pain in HIV-positive IDUs

Session objectives

- Identify the general principles of pain management
 - ◆ Acute pain management
 - ◆ Chronic pain management
- Review commonly used pain medications
- Discuss different treatment settings, including IDUs attending drug treatment services, inpatient and outpatient settings
- Identify treatment options for the management of acute and chronic pain

Activity 1: Large group discussion

- A very thin young man comes to your clinic complaining of chronic leg pain. He is agitated, aggressive, impatient and demands pain killers. You notice he has track marks.
- What is your reaction?
- What would you do?

Introduction

- IDUs have higher rates of injury/trauma that can causing pain problems.
- Chronic (high-dose) opioid users have tolerance to most opioid effects and can develop hyperalgesia.
- IDUs may develop withdrawal symptoms, including drug craving, further complicating their medical treatment and pain management.

Pain management: general principles

- Review the patient's symptoms and take a history of prior treatment
- Review previous diagnostic evaluations: perform new or repeat diagnostic testing as indicated to:
 - ◆ Confirm the diagnosis
 - ◆ Determine the need for surgical or other treatment
 - ◆ Demonstrate to the patient that their complaints are adequately addressed
- Start with the WHO "analgesic ladder" approach
- Consider analgesic combinations (e.g. opioid + NSAID) and adjunctive medications
- Always engage non-pharmacological strategies (e.g. heat packs, massage, physiotherapy, meditation, etc.)

Categories of pain

- **Nociceptive pain** is the stimulation of intact pain receptors, or nociceptors. There are two types of nociceptive pain:
 - ◆ **Somatic pain** involves pain receptors in the skin, soft tissue, muscle and bone
 - ◆ **Visceral pain** involves pain receptors in the internal organs and hollow viscera
- **Neuropathic pain** is the stimulation of damaged or compromised nerve tissue, especially in the peripheral nerves.

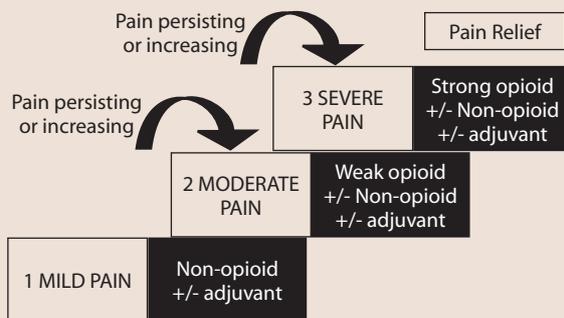
Characteristics of pain

- **Nociceptive pain:**
 - ◆ Somatic pain is usually well localized and described as throbbing, aching or pressure-like
 - ◆ Visceral pain is poorly localized or diffuse
 - ◆ Responds well to opioids and non-opioids
- **Neuropathic pain:**
 - ◆ Characterized by a burning, tingling, stabbing, shooting pain caused by minimal stimuli (i.e. light touch) or a “pins and needles” sensation
 - ◆ Responds better to adjuvant medications than to opioids and non-opioids

Assessment of pain

- Pain should be assessed regularly and systematically (“the fifth vital sign”).
- Pain is subjective: believe patient and family reports about pain and what relieves it.
- Pain intensity can be assessed by using a 0–10 scale – 0 being no pain and 10 being the worst possible pain.
- After pain has been identified and treated, it is important to assess whether your interventions have worked. If not, another therapy should be tried.
- Pain assessment/interventions and responses should always be documented in the patient’s chart.

The WHO three-step analgesic ladder



Adapted from World Health Organization. *Cancer pain relief*, Geneva, WHO, 1990.

Analgesics for pain

- Non-opioids: acetaminophen, paracetamol, aspirin, NSAIDs (indomethacin, ibuprofen, naproxen, piroxicam [Feldene], analgin, diclofenac [Voltaren], profenid, alaxan, idarac, ketorolac [Toradol])
- Weak opioids: codeine, hydrocodone
- Strong opioids: morphine, fentanyl patch, hydromorphone, methadone
- Adjuvant medications: steroids, antidepressants, anticonvulsants, psychostimulants

Medications and dosing for acetaminophen, NSAIDs and adjuvant medications for chronic pain

Acetaminophen and NSAIDs	Usual oral dose for adults
Acetaminophen	650 mg q 4 h
Aspirin (ASA)	975 mg q 6 h (max 4 g/day)
Indomethacin	10–25 mg tid
Ibuprofen	400–800 mg tid
Adjuvant medications	Usual daily oral dose range
Anticonvulsants	
Carbamazepine	200–1600 mg
Gabapentin	900–1800 mg
Phenytoin	300–500 mg
Antidepressants	
Amitriptyline	25–100 mg
Imipramine	20–100 mg
Trazodone	75–225 mg
Benzodiazepines	
Clonazepam	1.5–6 mg

Equianalgesic and starting doses of opioids

Drug	Approximate equianalgesic dose		Usual starting dose for moderate to severe pain	
	Oral	Parenteral	Oral	Parenteral
Opioid agonist				
Morphine	30 mg q 3-4 h	10 mg q 3-4 h	30 mg q 3-4 h	10 mg q 3-4 h
Hydromorphone	7.5 mg q 3-4 h	1.5 mg q 3-4 h	6 mg q 3-4 h	1.5 mg q 3-4 h
Methadone	15 mg q 6-8 h	10 mg q 6-8 h	15 mg q 6-8 h	10 mg q 6-8 h
Hydrocodone*	30 mg q 3-4 h	N/A	10 mg q 3-4 h	N/A
Oxycodone*	30 mg q 3-4 h	N/A	10 mg q 3-4 h	N/A
Codeine*	180-200 mg q 3-4 h	130 mg q 3-4 h	60 mg q 3-4 h	60 mg q 2 h

*May be available in fixed dose tablet combination with acetaminophen or aspirin. Source: WHO. *Palliative care for people living with HIV/AIDS: clinical protocol for the WHO European Region*. Copenhagen, Denmark, WHO, 2006

Routes of administration

- The oral route is the preferred route for opioid medications. It is cheaper and more convenient.
 - ◆ If patient is in severe pain, a faster route should be chosen, such as IV.
- Sustained-release medications work well. They decrease pill burden a constant level of medication in the blood stream (e.g. MS Contin every 12 hours).
- The transdermal fentanyl patch is very convenient, applied to the skin every 48–72 hours.
- Breakthrough pain medications (short-acting) are necessary when extended-release medications are used.

Non-pharmacological interventions

- Can be used concurrently with medications
- Patients and families can be involved in these interventions
- Easy for patients to do at home, inexpensive
- Interventions include:
 - ◆ Acupuncture
 - ◆ Heat or cold packs
 - ◆ Massage
 - ◆ Deep breathing exercises
 - ◆ Meditation
 - ◆ Physical therapy and exercise

Acute pain

- Prompt treatment with effective dosing will usually also facilitate a better therapeutic relationship
- Regular dosing with an appropriate analgesic dose with frequent review: monitor closely and support staff
- Possible role for local anaesthesia (e.g. regional blocks) or infusion devices (patient-controlled analgesia [PCA])
- Whenever possible, link with other specialists (e.g. pain management) and the family

Chronic pain

- Review diagnosis and prior treatment history
- Formulate a treatment plan incorporating functional restoration and stabilizing drug use
 - ◆ The goal should be maximizing function and comfort, not necessarily eliminating the pain
- Do not use short-acting or parenteral analgesics for chronic pain: long-acting, oral medications preferred
- Provide a strategy for pain “crisis” or “breakthrough” pain using short-acting medications
- Consider a “treatment contract”: regularly reviewed, multidisciplinary approach
- Manage any potential drug-related risks

IDUs on OST in naltrexone: acute pain management

- Patients on methadone may have both the dose and the dosing interval increased OR have morphine (high doses) added.
- Buprenorphine may also be increased by dose and dosing interval OR be stopped and an alternative opioid used (e.g. fentanyl).
- Naltrexone tablets should be stopped if opioids used (tolerance?); implants and depot formulations cannot be removed but are “overridden” by high-dose morphine (or methadone) treatment.

Different treatment settings: inpatient and outpatient

- **Outpatient treatment:**
 - ◆ See patient regularly; engage family/others
 - ◆ Small amounts of medication (monitor)
 - ◆ Use only oral medications
 - ◆ UDS and examine (active needle marks?)
- **Inpatient treatment:**
 - ◆ Usually high opioid doses to contain both pain and potential drug craving/withdrawal emerging
 - ◆ Use parenteral medications as indicated
 - ◆ Risk management; support nursing staff; engage other specialists (e.g. anaesthetist)

Treatment options: examples of risk management strategies

- Restrict amounts of medication (monitor)
- Consider dose “supervision” (pharmacist)
- Regular contact with patient (examine, do UDS) and communication with family/others (pharmacist, nursing staff)
- Use IV access only when absolutely necessary
- Ensure safe storage of medication at home
- Consider home visits (“outreach”)

Treatment contract

A written agreement between the patient and clinic that details the responsibilities of each party with regard to the patient’s treatment. Elements include:

- ◆ Regular schedule for follow-up appointments
- ◆ Fixed schedule for refill of chronic pain medications
- ◆ A limited number of doses of medicine for acute or breakthrough pain per refill period
- ◆ Agreement that the patient will not acquire pain medication from any other source
- ◆ Agreement that management of the pain medication is the responsibility of the patient and that no replacements will be given for lost or stolen medicine
- ◆ Pledge that the patient will continue substance dependence treatment as recommended by the health-care provider
- ◆ Agreement on the use of the UDS

Summary

- Thorough assessment and treatment plan
- Prompt analgesia with appropriate doses
- Regular review and enlist others to assist in ongoing monitoring
- Try to avoid parenteral drugs and IV access if possible (otherwise closely supervise)
- Analgesics: oral, longer-acting formulations generally better, particularly in chronic pain
- Manage the pain and the addiction concurrently and always consider risk management strategies

Activity 2: Case study 1

A 29-year-old male IDU with a past history (seven years ago) of a motor vehicle accident and low back injury (prolapse of L5/S1 intervertebral disc); surgery is not advised but the patient complains of severe pain so morphine tablets are prescribed. As time progresses, he complains of increasing pain and is prescribed increasing doses of morphine. Eventually, the patient claims to have lost the prescriptions and requests replacement prescriptions. The general practitioner then refers him to you. When you examine the patient, you find active (i.e. recent) needle track marks. The patient states he cannot walk further than 50 metres and can no longer work or manage most home duties.

Case study 1 (cont.)

1. What is the first thing that you will do?

- ◆ Review the patient’s complaints and treatment history
- ◆ Review the previous medical evaluations, repeat or order diagnostic testing as appropriate

2. How will you manage the patient’s pain?

- ◆ Use oral, long-acting medications
- ◆ NSAIDs may be useful in addition to opiates
- ◆ Methadone would be best to treat both the chronic pain and as substitution therapy
- ◆ Other long-acting opiates: MS Contin or oxycodone
- ◆ Offer non-pharmacological treatment options: meditation, physiotherapy, exercise, heat, etc.

Case study 1 (cont.)

3. What other options may help this patient?

- ◆ Referral to drug treatment programme
- ◆ Multidisciplinary approach (pharmacist, drug treatment, mental health)
- ◆ Treatment contract
- ◆ Regular clinic visits
- ◆ Home visit, if appropriate

Case study 2

34-year-old female IDU involved in an accident presents with rib fractures and a compound fracture of the humerus. She has been drinking heavily and smells of alcohol. A family member reports the patient has a naltrexone implant, has not injected heroin for ~ 2 months, but has since been "binge drinking" and "using amphetamines".

On examination, there are old venous scars from prior injecting drug use (UDS is requested). The patient is distressed and demanding "something for pain".

Case study 2 (cont.)

1. What are the major issues in acute management of this patient?

- ◆ Compound fractures will need surgical referral
- ◆ Acute pain management in the emergency room
- ◆ Prior history of injecting drug use and current naltrexone implant may require higher doses of opiate medication given IM or parenterally
- ◆ Alcohol use and potential for alcohol withdrawal

Case study 2 (cont.)

2. How will you control the patient's pain?

- ◆ Initially, use IV morphine, titrate every 5–10 minutes to control pain, high doses may be needed to overcome tolerance and effect of naltrexone
- ◆ Regional blocks: upper extremity, intracostal blocks for ribs
- ◆ PCA for postoperative period
- ◆ Benzodiazepines for alcohol withdrawal (beware of sedation with concurrent opiate use)
- ◆ Daily review of pain management while in the hospital
- ◆ Multidisciplinary team approach with anaesthesiologist, surgeon, physical therapist, etc.
- ◆ Ice, heat, early physical therapy

Treatment and Care for HIV-Positive Injecting Drug Users

The “Treatment and Care for HIV-Positive Injecting Drug Users” training curriculum is designed for clinicians who provide treatment and care, including ART, for HIV-positive injecting drug users. The training curriculum consists of a trainer manual, 12 participant manuals, and a CD-ROM with PowerPoint presentations and reference articles. Topics covered in the curriculum include:

Module 1: Drug use and HIV in Asia

Module 2: Comprehensive services for injecting drug users

Module 3: Initial patient assessment

Module 4: Managing opioid dependence

Module 5: Managing non-opioid drug dependence

Module 6: Managing ART in injecting drug users

Module 7: Adherence counselling for injecting drug users

Module 8: Drug interactions

Module 9: Management of coinfections in HIV-positive injecting drug users

Module 10: Managing pain in HIV-infected injecting drug users

Module 11: Psychiatric illness, psychosocial care and sexual health

Module 12: Continuing medical education

Trainer manual

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