SIGN

Scottish Intercollegiate Guidelines Network

NHS Quality Improvement Scotland

106

Control of pain in adults with cancer

Quick Reference Guide

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ASSESSMENT OF PAIN

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

D **Prior to treatment an accurate assessment should be performed to determine the cause, type and severity of pain, and its effect on the patient.**

Pain assessment should include:

- physical effects/manifestations of pain
- functional effects (interference with activities of daily living)
- psychosocial factors (level of anxiety, mood, cultural influences, fears, effects on interpersonal relationships, factors affecting pain tolerance; *see table 1*)
- spiritual aspects.

Table 1: Factors affecting pain tolerance

Aspects that lower pain tolerance	Aspects that raise pain tolerance
Discomfort	Relief of symptoms
Insomnia	Sleep
Fatigue	Rest, or paradoxically, physiotherapy
Anxiety	Relaxation therapy
Fear	Explanation/support
Anger	Understanding/empathy
Boredom	Diversional activity
Sadness	Companionship/listening
Depression	Elevation of mood
Introversion	Understanding of the meaning and significance of the pain
Social abandonment	Social inclusion
Mental isolation	Encouragement to express emotions

D **The patient should be the prime assessor of his or her pain.**

PRINCIPLES OF PAIN MANAGEMENT

D **Patients with cancer pain should have treatment outcomes monitored regularly using visual analogue scales, numerical rating scales or verbal rating scales.**

C **Self assessment pain scales should be used in patients with cognitive impairment, where feasible.**

- **Observational pain rating scales should be used in patients who cannot complete a self assessment scale.**
- **Pain assessment should be carried out regularly (at least daily).**

PRINCIPLES OF PAIN MANAGEMENT (Contd.)

B	**Patients should be given information and instruction about pain and pain management and be encouraged to take an active role in their pain management.**
D	**The principles of treatment outlined in the WHO cancer pain relief programme should be followed when treating pain in patients with cancer.**
B	**A patient's treatment should start at the step of the WHO analgesic ladder appropriate for the severity of the pain.**
B	**Prescribing of analgesia should always be adjusted as the pain severity alters.**
☑	If the pain severity increases and is not controlled on a given step, move upwards to the next step of the analgesic ladder. Do not prescribe another analgesic of the same potency.
☑	All patients with moderate to severe cancer pain, regardless of aetiology, should receive a trial of opioid analgesia.
D	**Analgesia for continuous pain should be prescribed on a regular basis, not 'as required'.**
D	**Appropriate analgesia for breakthrough pain must be prescribed.**
☑	Explain to patients with chronic cancer pain that pain control medication must be taken regularly to gain optimal results.

HISTORY TAKING

Detailed history taking is vital to comprehensive assessment. History taking should include:

- site and number of pains
- intensity/severity of pains
- radiation of pain
- timing of pain
- quality of pain
- aggravating and relieving factors
- aetiology of pain
  - pain caused by cancer
  - pain caused by treatment
  - pain associated with cancer related debility (eg decubitus ulcers)
  - pain unrelated to cancer or treatment
- type of pain
  - nociceptive
  - visceral
  - neuropathic
  - complex regional pain syndrome.
  - mixed
- analgesic drug history
- patient beliefs about the meaning of pain, effectiveness of its treatments and consequences of drug therapies
- presence of clinically significant psychological disorder eg anxiety and/or depression.

BREAKTHROUGH PAIN

D	**Patients with moderate or severe breakthrough pain should receive breakthrough analgesia.**
D	**When using oral morphine for breakthrough pain the dose should be one sixth of the around the clock morphine dose and should be increased appropriately whenever the around the clock dose is increased.**
☑	When using oral transmucosal fentanyl citrate the effective dose should be found by upward titration independent of the around the clock opioid dose.

PATIENTS WITH RENAL IMPAIRMENT

C	**In the presence of reduced kidney function all opioids should be used with caution and at reduced doses and/or frequency.**
☑	In patients with poor or deteriorating kidney function, the following are of considerable importance to prevent or manage toxicity: ▪ choice of opioid ▪ consideration of dose reduction and/or an increase in the dosage interval ▪ change from modified release to an immediate release oral formulation ▪ frequent clinical monitoring and review.
☑	Alfentanil, buprenorphine and fentanyl are the safest opioids of choice in patients with chronic kidney disease stages 4 or 5 (estimated glomerular filtration rate < 30 ml/min/1.73 m^2).
☑	Specialist palliative care advice should be sought for the appropriate choice, dosage and route of opioid in patients with reduced kidney function.

PREDICTABLE SIDE EFFECTS

Gastrointestinal

A	**Patients taking non-steroidal anti-inflammatory drugs who are at high risk of gastrointestinal complications should be prescribed either misoprostol 800 mcg/day, standard dose proton pump inhibitors or double dose histamine-2 receptor antagonists as pharmacological prophylaxis.**

Nausea and vomiting

☑	Patients commencing an opioid for moderate to severe pain should have access to a prophylactic antiemetic to be taken if required.

Opioid-induced

☑	Patients prescribed strong opioids who have inadequate pain control and/or persistent intolerable side effects should receive a thorough holistic reassessment of pain and pain management.

STEP 1: MILD PAIN *(< 3 out of 10 on numerical rating scale)*	STEP 2: MILD TO MODERAT *(3 to 6 out of 10 on numeric*
Drug options: Paracetamol ± NSAID ± adjuvants	**Drug options**: Opioid for mild to mode + step 1 non-opioids ±
A **Patients at all stages of the WHO analgesic ladder should be prescribed paracetamol and/or a non-steroidal anti-inflammatory drug unless contraindicated.**	D **For mild to moderate p** *out of 10 on a visual an or a numerical rating sc* **opioids such as codeine given in combination w opioid analgesic.**
Other agents	
B **Bisphosphonates should be considered as part of the therapeutic regimen for the treatment of pain in patients with metastatic bone disease.**	
A **Patients with neuropathic pain should be given either a tricyclic antidepressant** *(eg amitriptyline or imipramine)* **or anticonvulsant** *(eg gabapentin, carbamazepine or phenytoin)* **with careful monitoring of side effects.**	
A **Cannabinoids are not recommended for the treatment of cancer pain.**	
☑ The use of ketamine as an analgesic should be supervised by a specialist in pain relief or a palliative medicine specialist.	
PAIN INCREASING OR PERSISTING ➔	***PAIN INCREASING PERSISTING***

IE WHO ANALGESIC LADDER		
E PAIN *al rating scale)*	**STEP 3:** **MODERATE TO SEVERE PAIN** *(> 6 out of 10 on numerical rating scale)*	
erate pain adjuvants	**Drug options**: Opioid for moderate to severe pain + step 1 non-opioids ± adjuvants	
pain, *(score 3-6 nalogue scale cale)* **weak e should be with a non-**	D	**Oral morphine is recommended as first line therapy to treat severe pain in patients with cancer.**
	D	**Diamorphine is recommended as first line subcutaneous therapy to treat severe pain in patients with cancer.**
	Alternative opioids: alfentanil, buprenorphine, diamorphine, fentanyl, hydromorphone, methadone and oxycodone	
	☑	To minimise the potential risks to patients of errors occurring between different brands and formulations of oral morphine preparations, prescribers should gain familiarity with one brand of modified release oral morphine for routine use. It may be appropriate to consider others when individual patient-specific factors warrant a different product.
G OR →	**FREEDOM FROM CANCER PAIN**	

ROUTE OF ADMINISTRATION OF OPIOIDS

☑	The oral route should be used for administration of opioids, if practical and feasible.
D	**Continuous subcutaneous infusion of opioids is simpler to administer and equally as effective as continuous intravenous infusion and should be considered for patients unable to take opioids orally.**
☑	In patients with stable pain who are unable to swallow oral medication transdermal administration of opioids should be considered.
☑	Drug solutions for subcutaneous infusion should be diluted as much as possible in order to reduce the likelihood of drug incompatibility and minimise irritation at the subcutaneous site.

SCHEDULE OF ADMINISTRATION OF OPIOIDS

Patients with stable pain

D	**On oral morphine**	**SHOULD BE PRESCRIBED**	**one or twice daily modified release preparation**
D	**On oral oxycodone**		**a twice daily modified release preparation**
☑	On ral hydromorphone		a twice daily modified release preparation

SWITCHING BETWEEN STRONG OPIOIDS

☑	Patients in whom pain is not controlled despite optimisation of dose and opioid-related side effects preclude further upward titration should be switched to a different opioid.

CONVERSION RATIOS BETWEEN DIFFERENT OPIOIDS

☑	When converting from one opioid to another, regular assessment and reassessment of efficacy and side effects is essential. Dose titration up or down according to pain control and/or adverse effects may be required.

The table on the next page provides initial suggested conversion ratios only; the patient's clinical condition should be taken into account and breakthrough analgesia prescribed as necessary.

(Converting from) Current opioid	(Converting to) New opioid and/ or new route of administration	Divide 24 hour dose* of current opioid (column 1) by relevant figure below to calculate initial 24 hour dose of new opioid and/or new route (column 2)
Example 120 mg oral morphine in 24 hours	subcutaneous diamorphine	**Divide by 3** (120 mg / 3 = 40 mg subcutaneous diamorphine in 24 hours)
ORAL TO ORAL ROUTE CONVERSIONS		
oral codeine	oral morphine	**Divide by 10**
oral tramadol	oral morphine	**Divide by 5**
oral morphine	oral oxycodone	**Divide by 2**
oral morphine	oral hydromorphone	**Divide by 7.5**
ORAL TO TRANSDERMAL ROUTE CONVERSIONS		
oral morphine	transdermal fentanyl	*Refer to manufacturer's information***
oral morphine	transdermal buprenorphine	*Seek specialist palliative care advice*
ORAL TO SUBCUTANEOUS ROUTE CONVERSIONS		
oral morphine	subcutaneous morphine	**Divide by 2**
oral morphine	subcutaneous diamorphine	**Divide by 3**
oral oxycodone	subcutaneous morphine	**No change**
oral oxycodone	subcutaneous oxycodone	**Divide by 2**
oral oxycodone	subcutaneous diamorphine	**Divide by 1.5**
oral hydromorphone	subcutaneous hydromorphone	*Seek specialist palliative care advice*
OTHER ROUTE CONVERSIONS RARELY USED IN PALLIATIVE MEDICINE		
subcutaneous or intramuscular morphine	intravenous morphine	**No change**
intravenous morphine	oral morphine	**Multiply by 2**
oral morphine	intramuscular morphine	**Divide by 2**

* The same units must be used for both opioids or routes, eg mg morphine to mg oxycodone

** The conversion ratios of oral morphine:transdermal fentanyl specified by the manufacturer(s) vary from around 100:1 to 150:1

NON-PHARMACOLOGICAL TREATMENT

RADIOTHERAPY FOR RELIEVING PAIN IN PATIENTS WITH BONE METASTASES

B	**All patients with pain from bone metastases which is proving difficult to control by pharmacological means should be referred to a clinical oncologist for consideration of external beam radiotherapy or radioisotope treatment.**

CEMENTOPLASTY

D	**Patients with bone pain from malignant vertebral collapse proving difficult to control by pharmacological means should be referred for consideration of vertebroplasty where this technique is available.**
D	**Patients with bone pain from pelvic bone metastases proving difficult to control by pharmacological means and reduced mobility should be considered for percutaneous cementoplasty.**

ANAESTHETIC INTERVENTIONS

B	**Interventions such as coeliac plexus block and neuraxial opioids should be considered to improve pain control and quality of life in patients with difficult to control cancer pain.**
☑	Any patient with difficult to control pain despite optimal management of systemic/ oral therapy should be assessed by an anaesthetist with expertise in pain medicine, for consideration of an appropriate intervention. Patients most likely to benefit include patients with significant locally advanced disease, neuropathic pain or marked movement-related pain.

This Quick Reference Guide provides a summary of the main recommendations in SIGN Guideline 106, **Control of pain in adults with cancer.**

Recommendations are graded A B C D to indicate the strength of the supporting evidence. Good practice points ☑ are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice.

Details of the evidence supporting these recommendations can be found in the full guideline, available on the SIGN website: **www.sign.ac.uk**

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