Cancer Pain

Pain occurs in over 50% of cancer patient. At least one third of these patients has moderate to severe pain. In Malaysia, less than 20% of patients with moderate to severe cancer pain receive opioid analgesics.

Definition

Cancer pain can be originated from the cancer itself or complications of cancer such as pressure symptom, debility, treatment complications and concurrent pathology.

Types/Pathophysiology

Nociceptive Pain	
• Somatic Pain	- Character is aching, stabbing or throbbing, and usually well localised. - Examples: bone metastases, ulcers
• Visceral Pain	- Character is cramping or gnawing when due to obstruction pain of hollow viscus; aching, sharp or throbbing when due to tumour involvement of organ capsule. - Pain is usually diffuse and difficult to localise and may be referred to somatic structures. - Examples: intestinal obstruction, liver metastases

Neuropathic Pain	- Character is burning, pricking, electric-like, shooting or stabbing, and sometimes may have a deep aching component. - Pain is often associated with loss of sensation in the painful region. - Allodynia or dysaesthesia may be present.

Sign and Symptom

Pain assessment aims to determine

1. Nature and pathophysiology of pain
2. Severity of pain
3. Impact of pain on functions and quality of life
4. Response to interventions

History taking

Characteristics of pain	• Site – single/multiple • Intensity – pain score • Quality – sharp/dull/throbbing/colicky, etc. • Radiation of pain • Timing – persistent/episodic/ on movement/spontaneous • Aggravating and relieving factors • Associated symptom – numbness/abnormal sensation/hyperalgesia/ allodynia, etc.
Cancer history	• Site(s) – primary/metastatic • Treatment(s) – surgery/chemotherapy/radiotherapy
Medication	• Analgesia • Side effects • Concurrent medications including traditional/alternative medications • Treatment response/adherence
Co-morbidities	• Renal/liver disease • Cardiac/respiratory disease • Previous alcohol or drug abuse • Cognitive impairment • Other pain conditions – acute/chronic
Psychosocial	• Emotional/psychological – depression/anxiety/stress, etc. • Effects on ADL/appetite/sleep • Effects on socio-economics functioning • Perception of pain and pain medications

Physical Examination

Examination is to look for the extent of problems, quality of life and related symptoms.

In cases of neuropathic pain, neurological examination should be included.

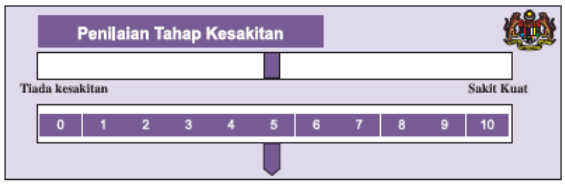
Pain assessment Tools(Appendix)

Adults and Children > 7years old-Numerical Rating Scales (NRS)/ Visual Analogue Scale(VAS)

1 month -3 years old- FLACC Scale

3 years – 7 years old- Wong Baker Faces Scale

1. Combined NRS/VAS



2. Wong-Baker Faces Scale

The Wong-Baker faces scale (adapted from Wong DL et *al, eds, Whaley and Wong's essentials of pediatric nursing* 5th ed. St Louis, MO: Mosby, 2001)

3. FLACC Scale

CATEGORY	SCORING		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaints	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to distractable	Difficult to console

Each of the five categories is scored from 0-2 with total range of 0-10.

Category of severity

Mild cancer pain: 1-4

Moderate cancer pain: 5-6

Severe cancer pain: 7-10

Investigation

It is done to clarify diagnosis and assist clinical decision making ie Xray, Bone scan , Ct scan and MRI.

Blood investigations are including FBC, Liver Function Test and Renal Profile. The investigations should be ordered judiciously.

Treatment

Successful cancer pain management requires multidisciplinary approach and participation of patients and their family members and carers.

Management of cancer pain should follow the WHO Analgesic Ladder

The concept of ‘Total Pain’ includes psychological, social and spiritual issues which may modulate the perception of pain in cancer pain. This includes education to health care providers, patients and family members to overcome the barriers to effective pain management

Non Pharmacological

Psychosocial Intervention: anxiety and depression

Physical and Complementary therapy: Exercise/ TENS /Massage and Aromatherapy/Acupuncture

Interventional Techniques: Neurolytics sympathetic plexus blocks/Neuraxial Opiod therapy/Vertebroplasty/Intrathecal neurolytic saddle blocks

Pharmalogical

WHO Analgesic Ladder: 3 steps Analgesic ladder which will be stepped up according to severity of pain score, from non opiod , weak opiod and strong opiod

Severity of pain	Type of medication
Mild(Step 1)	Non opiod: Paracetamol/NSAIDS(Ibubrufen, Mefenamic acid,Sodium Diclofenac,Meloxicam)/COX2 inhibitor (Celecoxib, Etorocoxib) +/- adjuvant*
Moderate(Step 2)	Weak Opiod: Tramadol/Dyhydrocodein(Df 118)/Codein +/- non opiod and adjuvant*
Severe(Step 3)	Strong Opiod: Morphin/Oxytcodone/Fentanyl +/- non opiod and adjuvant*

*Adjuvant refers to drugs that have primary indications other than pain but have analgesic properties in some painful conditions. It is also known as co analgesic

Adjuvant Drugs Used in Cancer Pain

Drug Class	Examples	Conditions
Antidepressants	Amitriptyline, Duloxetine	Neuropathic pain
Anticonvulsants	Carbamazepine Sodium Valprorate Gabapentin Pregabalin	Neuropathic pain
Anticholinergicic	Hyoscine butylbromide	Pain in bowel obstruction
Corticosteroids	Dexamethasone Prednisolone	Pain due to pressure effects related to tumour eg brain, liver metastases, spinal cord compression
N-Methyl-D Aspartate (NMDA) Receptor Antagonists	Ketamine	Opioid poorly responsive pain

Biphosphonates	Pamidronate Zoledronate Clodronate	Pain from bone metastases

Breakthrough Pain Management

It defines as a transient exacerbation of pain that occurs either spontaneously or in relation to a specific trigger despite relatively stable and adequately controlled background pain.

Patient with chronic cancer pain who had received regular around the clock (ATC) opioid therapy may need a breakthrough morphine (rescue) dose to control the pain. The widely accepted ratio has been 1:6 ie equivalent to 4Hourly Opioid doses. However in cases with renal impairment that need a smaller dose it can be as low as 1:12 of the 24 Hours dose.

It can be given as often as Hourly and the ATC dose for the next day is adjusted taking into account the total amount of rescue morphine taking for the last 24Hours.

Opioid Switching (Rotation)

It refers to changing one opioid with another in order to improve the balance between the analgesic therapy and its side effects.

Indications:

1. Inadequate pain relief despite appropriate dose titration of the initial opioid.
2. Intolerable side effects(sedation,nausea,vomiting and constipation)
3. Renal impairment
4. Practical consideration(patient preference, inability to swallow etc)

When switching to transdermal fentanyl, regular 4 Hourly oral opioid should be continued until after 12 hours of the application of the patch due to lag time of pharmacokinetic action.

When converting patient who is on SR Opioid preparation, the patch should be applied together with last dose preparation.

Suggested dose conversion ratio

From To	Codein mg/day	Oral Morphine mg/day	Sc Morphine mg/day	Oxycodone mg/day	Fentanyl TD mcg/h
Oral codeine mg/day		8	20	12	24
Oral morphine mg/day	8		2.5	1.5	3
SC Morphine mg/day	20	2.5		0.6	1.2
Oxycodone mg/day	12	1.5	0.6		2
Fentanyl TD mcg/h	24	3	1.2	2	

Multiply
Divide

Referral

Palliative care Team/ Pain Clinic in Hospital:

Moderate pain (if need other than Tramal)/Severe pain /Need medications that not available in Primary Care/Need interventional therapy/Paediatric Group

Rehabilitation/Traditional Complementary Medicine: physical therapy

Dietician

Medical Social Worker

SOCSO/Majlis Agama Islam/Pusat zakat

HOSPIS/Domiciliary team/NGOs

MANAGEMENT OF CANCER PATIENT WITH PAIN IN PRIMARY CARE