Milton Keynes
University Hospital
NHS Foundation Trust

Pain Management

for acute and chronic pain in adults

Pocket Guide

for

Healthcare

Professionals

Milton Keynes University Hospital
NHS Foundation Trust

PAIN TEAM

DR. YASER MEHREZ - Consultant in Pain Medicine, Neuro-modulation and Clinical Lead for Chronic Pain

DR. SARAH ATURIA – Consultant in Pain Management and Clinical Lead for Acute Pain

EMMA CRUSH – Acute Pain Advanced Nurse Practitioner

PATRICIA TUFOUR - SARFO — Acute Pain Sister

ELLIE SHEARS – Chronic Pain Advanced Nurse Practitioner

ELENA CURTIS – Chronic Pain Advanced Nurse Practitioner

Consultants with interest in Pain

DR. VENKAT HARIHARAN – Consultant Anaesthetist

DR. AMIT KALLA – Consultant Anaesthetist

Pharmacist with interest in Pain

Pauline Ukariwe– Principal Pharmacist

Please contact Pain Specialist Nurses in the first instance: ext. 86007/87457/87458 for Acute Pain and ext. 86006 for Chronic Pain, Monday to Friday from 08:00-18:00. For inpatient referrals you could also refer patients via e-care.

Pain Team does a daily round and on Wednesdays, complex patients referred to the Pain Team can be seen on the wards by one of the consultants.

DEFINITION OF PAIN:

"Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" IASP,1994.

Classification of pain:

1. Classification based on inferred mechanism for pain describes :

Nociceptive pain

Pain that results from the activation of nociceptors by noxious stimuli (mechanical, thermal or chemical) and can be:

Somatic: dull, achy sensation, well localised and consonant with the underlying lesion, exacerbated by movement: e.g. postsurgical, musculoskeletal, arthritic, metastatic bone pain.

Visceral: crampy, deep, squeezing, poorly localised, often associated with autonomic sensations (nausea, vomiting, diaphoresis) e.g pancreatitis, intestinal obstruction, intraperitoneal metastasis.

Non-nociceptive pain

Neuropathic pain: burning, stabbing, shooting, allodynia caused by neural injury or irritation. e.g. trigeminal neuralgia, post herpetic neuralgia, peripheral neuropathy .

Psychogenic pain: pain that is presumed to exist when no nociceptive or neuropathic mechanism can be identified and there are sufficient psychologic symptoms to meet criteria for somatoform pain disorders, depression pain.

2. Classification based on the time course of symptoms is usually divided into acute, chronic and recurrent/flare up.

Acute pain: pain that is temporally related to injury and resolves during the appropriate healing period.

Chronic pain: pain that persists for more than three months or that outlasts the usual healing period. In some cases, psychologic factors play a significant role.

3. Classification based on etiologiy pays more attention to the primary disease process in which pain occurs rather than to the pathophysiology or temporal pattern e.g. cancer pain, arthritis pain, Sickle cell disease pain.

4. Classification based on the region of the body that is affected and is strictly topographic. Can be acute or chronic pain.

ADVICE IN MANAGING ACUTE AND CHRONIC PAIN

- always follow the Pain Ladder in escalating analgesia.
- remember that NSAIDS can be very helpful in managing the pain (chronic pains or acute post surgical pain) but not all patients can take them (elderly, asthmatics, patients suffering of cardiac failure, renal/hepatic impairment, peptic ulcers, patients on anticoagulant drugs).
- do not prescribe immediate acting release opioids on the regular side.
- immediate acting release opioids are: Oramorph, Sevredol, Oxycodone liquid (Oxynorm).
- if the patient require opioid analgesia but has nausea/vomiting as a side effect, remember to prescribe antiemetics rather than stop the pain relief medication.

- remember to prevent the constipation side effect associated with mainly opioid based analgesia by prescribing laxatives.
- due to the side effect of constipation, for post colorectal surgery patients avoid to use Codeine. We recommend Tramadol as a better option.
- while patient is on PCA, do not administer other immediate opioid medication.
- strictly monitor the vital signs, renal function and respiratory function for patients on opioids—parenteral administration — as there is a high risk for them to develop opioid toxicity/respiratory depression. As good practice, we recommend to have Naloxone prescribed on the PRN side (to be administered if respiratory rate is less than 8 resp./minute)
- if a patient is already on Fentanyl patches, do not stop them if the patient goes for surgery or requires PCA.
- patients in pain who are using already Buprenorphine patches may not respond to conventional opioids (antagonism). Remove patches before surgery and anaesthesia.
- make sure that chronic pain patients that are treated for an acute episode of pain have analgesic medication cover that includes their usual painkillers plus the extra pain relief medication for the acute episode.
- for chronic pain patients using oral opioids as their regular analgesic medication, if they are kept NBM and using a PCA , a bolus only dose might not provide the desired pain control. Consider adding a background infusion and if NBM status is prolonged, please refer to Pain Nurse.

in order to maximise the pain relief effect with minimal side effects, we advise to try to space out the analgesia, (regular and PRN) with a view of having a constant and effective background of analgesia through regular medication that can be topped up with PRN as needed.

- for patients that have severe pain during/after mobilising (e.g. back pain, post surgery, conservative management in fractures, elderly), try to give PRN analgesia 30 minutes prior to mobilising.
- *in most cases of neuropathic pain, the benefit of opioid analgesia is minimal or non-existent*. We recommend to try a small regular dose of one of the anticonvulsants (Gabapentin or Pregabalin) or antidepressants (Amitriptyline or Duloxetine). If the medication is effective, the dose can be slowly increased/ optimised (follow BNF guidelines for neuropathic pain). Neuropathic medication should be prescribed only as regular medication.

OPIATE CONVERSION CHARTS

FENTANYL TRANSDERMAL PATCH	**MORPHINE EQUIVALENCE (ORAL DOSE)**
12 mcg/hr	30 mg/24hrs
25 mcg/hr	60 mg/24hrs
50 mcg/hr	120 mg/24 hrs
75 mcg/hr	180 mg/24 hrs
100 mcg/hr	240mg/24 hrs

BUPRENORPHINE TRANSDERMAL PATCH DOSE	MORPHINE EQUIVALENCE (ORAL DOSE)
5 mcg/hr	12 mg/24 hrs
10 mcg/hr	24 mg/24 hrs
20 mcg/hr	48 mg/24 hrs
35 mcg/hr	84 mg/24 hrs
52,5 mcg/hr	126 mg/24 hrs
70 mcg/hr	168 mg/24 hrs

Please check manufacturers recommendations regarding the correct interval for changing patches.

DRUG NAME AND DOSE (ORAL DOSE)		MORPHINE EQUIVALENCE (ORAL DOSE)
CODEINE	30 mg	3 mg
DIHYDROCODEINE	30 mg	3 mg
TRAMADOL	50 mg	5 mg
OXYCODONE	5 mg	7.57 mg
PETHIDINE (ORAL)	50 mg	5 mg
PETHIDINE (INJ.)	12,5 mg	3 mg
DIAMORPHINE (s/c inj)	10 mg	33 mg

Equianalgesic dosage conversion:

- Morphine sulphate oral to IV or SC ratio is 2:1
  (10 mg oral=5 mg IV,SC)
- Oxycodone oral to IV/SC ratio is 1.5:1
  (10 mg oral=6.6 IV/SC)

DOSING IN RENAL IMPAIRMENT

There is a risk of accumulation of active metabolites with repeated doses of opioids for patients with renal impairment. For mild to moderate pain Tramadol is recommended. For severe pain, low doses of Oxycodone (preferable) or Morphine can be given. The following chart is general advice for prescribing doses in renal impairment for all routes of administration. Where regular opioids are required, Buprenorphine or Fentanyl transdermal patches might be an option. Age, weight and other co-morbidities

eGFR ml/min	**MORPHINE IR**	**OXYCODONE IR**	**Dose interval (hourly)**
20-50	75% of normal dose (7.5mg)	75% of normal dose (3.75mg)	6
10-20	50% of normal dose (5mg)	75% of normal dose (3.75mg)	6-8
<10	Small dose (1.25-2.5mg)	50% of normal dose (2.5mg)	6-8

Naloxone dosing is the same in normal renal function as well as renal impairment. Repeated doses may need to be given (half life of naloxone is less than opioids).

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