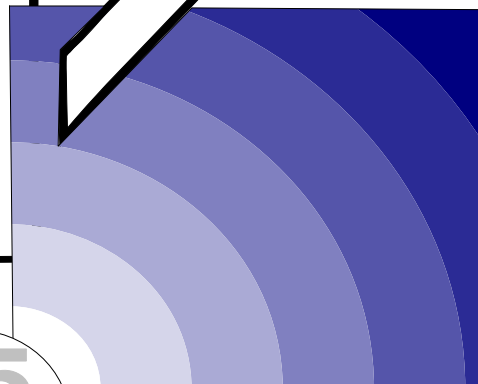
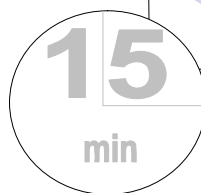


CLIP

15 minute Worksheet



Helping the patient with pain

6: Understanding the adverse effects of opioids

Intermediate level

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Aim of this worksheet

To understand the adverse effects of opioids and how to manage these.

How to use this worksheet

- You can work through this worksheet by yourself, or with a tutor.
- Read the case study below, then work on the questions overleaf.
- The work page is on the right side, the information page is on the left.
- Work any way you want: you can try answering from your own knowledge (in which case fold over the information page), you can use the information page (this is not cheating- you learn as you find the information), or you can use other sources of information
- It should take you about 15 minutes. If anything is unclear, discuss it with a colleague.
- If you think any information is wrong or out of date let us know
- Use the activity on the back page and take this learning into your workplace

Case study

Pat is a 36 year old woman, married with two sons aged 12 and 9. She had problems with her bowels for several months before some rectal bleeding made her see her GP. Investigations revealed a carcinoma of the sigmoid colon with liver metastases. She copes with some denial and refuses to tell her sons.

She was started a week ago on morphine for her pain. Her husband telephones you to say her pain is better, but she's feeling sick, she hasn't moved her bowels and she keeps nodding off in front of the television. He says she wants to stop the morphine to keep her head clear and to keep the morphine in reserve until things get 'really bad'.

v1: 2008

Morphine worries

Will I be drugged? Will I get addicted? Shouldn't we save it until the pain's really bad? Is this the end?

- *Feeling drugged is unlikely* since tolerance to many side effects is rapid (ie. the effects wear off quickly). Once on a stable dose patients are usually safe to do many activities, including driving.
- *Tolerance to analgesia is not seen* (ie. pain relief does not wear off with time)
- *Withdrawal symptoms are likely* if morphine is stopped abruptly (usually colic and diarrhoea), but this is *not seen* if the morphine is reduced slowly over 5 days.
- *Addiction to morphine is very unlikely*. It is very unusual for pain patients taking morphine to develop a craving for the drug. The circumstances in which they take morphine do not encourage addictive behaviour, and patients have no difficulty stopping morphine if their pain is relieved by other means.
- *Constipation is very likely*: this occurs in 99% of people on opioids and does not wear off. However, using a combination of a stimulant (eg. senna, bisacodyl) and a softener (docusate or lactulose) means it is *very unusual* that a patient has to stop taking morphine because of constipation.
- *Hallucinations, confusion, and nightmares are very unlikely*.

Opioid intolerance

True intolerance to opioids is very unusual, while allergy to opioids is rare.

Real intolerance

Fear of opioids is the commonest cause of intolerance, but can usually be managed with explanation.

Reduced drug clearance:

Opioid	Renal impairment	Liver impairment
Morphine	Active metabolites accumulate (M6G, M3G)	Little effect unless impairment is severe
Hydromorphone	Active metabolites accumulate (H3G)	Little effect unless impairment is severe
Oxycodone	Oxycodone accumulates	Oxycodone accumulates
Fentanyl	Little effect	Fentanyl accumulates
Methadone	Little effect	Methadone accumulates

Apparent intolerance:

Dose too high: this is a common problem, and is probably the reason Pat had problems after her caesarean.

Titration too rapid: another common problem. 25-50% increases (usually every third day) is a reasonable rate.

Conversion ratio incorrect: it is easy to make a mistake with the large number of opioids and routes available (see CLiP worksheet, *Changing Opioids*)

Other cause of confusion: when used correctly opioids are an uncommon cause of confusion. Infection, other drugs and biochemical disturbances are much more common.

Constipation: this should nearly always be manageable.

Opioid adverse effects

Constipation (usually, 95%) - little or no tolerance
Dry mouth (often, 40%) - probably no tolerance
Nausea: (sometimes, 30%) - tolerance 5-10 days
Sedation (sometimes, 25%) - tolerance 3-5 days
Poor gastric emptying (sometimes, 20-25%) – no tolerance

Respiratory depression (uncommon) –tolerance in 1-3d
Confusion (uncommon, 1-2%) - little or no tolerance
Myoclonic jerks (uncommon)- no tolerance
Itch (uncommon) – no tolerance

Treatment of opioid adverse effects

- *Constipation*: start a stimulant laxative (eg. senna) plus a softener (eg. docusate or lactulose)
- *Dry mouth*: see CLiP worksheet on *Oral Problems*.
- *Nausea (area postrema stimulation)*: start low dose haloperidol (1 - 3mg at night)
- *Vomiting caused by gastric stasis*: start a prokinetic agent eg. metoclopramide, domperidone.
- *Sedation*: this usually wears off by itself within 5 days, but if it persists consider using a different opioid.
- *Respiratory depression*: this is very unusual if palliative care doses and titrations are followed. If reversal is needed naloxone is titrated IV without reversing the analgesia. Give 400mcg in 10mls normal saline, in 1ml IV boluses until respiration improves. An infusion may be necessary, again at a level that does not reverse analgesia.
- *Confusion*: if due to drowsiness then the confusion will wear off, but with CNS stimulation it will be necessary to switch to another opioid or use other analgesia. Hallucinations are very uncommon.
- *Myoclonic jerks*: these are a useful sign of opioid toxicity and usually means a reduction in dose is needed.
- *Itch* is in all the books, but in practice is uncommon.

Write

Pat might have a number of fears about morphine. How likely is it that one of these fears may happen?

Fears about morphine	Likelihood of this effect happening in Pat – please ring your answer			
Feeling drugged (eg. being unable to drive)	Very unlikely	Unlikely	Likely	Very likely
Pain relief wearing off, needing dose increase	Very unlikely	Unlikely	Likely	Very likely
Withdrawal symptoms on stopping morphine abruptly	Very unlikely	Unlikely	Likely	Very likely
Addiction (ie. a craving for morphine)	Very unlikely	Unlikely	Likely	Very likely
Severe constipation	Very unlikely	Unlikely	Likely	Very likely
Hallucination	Very unlikely	Unlikely	Likely	Very likely

Think

Pat's says that after a caesarean operation many years before, the doctor told her she was allergic to morphine. Was she truly intolerant of the morphine?

Q. What could cause true intolerance to morphine?

Q. Think of situations that would cause morphine to be incorrectly blamed for a problem?

Write

These are all possible side effects of morphine: complete the details

Side effect	Usually, often, sometimes or uncommon?	Does it wear off?	Treatment?
Constipation			
Dry mouth			
Nausea			
Sedation			
Poor gastric emptying			
Respiratory depression			
Confusion			
Myoclonic jerks			
Itch			

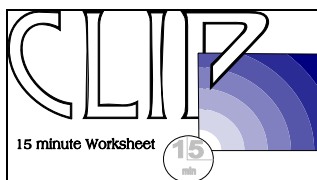
FURTHER ACTIVITY: Understanding the effects of opioids

Review the protocols used by your team for prescribing and assessing the effects of morphine.

FURTHER READING: Understanding the effects of opioids

Journal articles

- Boyd KJ, Kelly M. Oral morphine as symptomatic treatment of dyspnoea in patients with advanced cancer. *Palliative Medicine*. 1997; 11(4): 277-81.
- Bruera E, Macmillan K, Pither J, MacDonald RN. Effects of morphine on the dyspnoea of terminal cancer patients. *J Pain & Symp Manag*, 1990; 5(6): 341-44.
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- Sarhill N, Walsh D, Nelson KA. Hydromorphone: pharmacology and clinical applications in cancer patients. *Supportive Care in Cancer*. 2001; 9(2): 84-96.
- Sykes N, Thorns A. Sedative use in the last week of life and the implications for end-of-life decision making. *Arch Int Med* 2003; 163(3): 341-4
- ### Resource books and websites
- A Guide to Symptom Relief in Palliative Care*, 5th ed. Regnard C, Hockley J. Abingdon: Radcliffe Medical Press, 2004
- Cancer Pain Relief and Palliative Care*. Geneva : WHO, 1990.
- Oral Morphine, Information for Patients, Families and Friends*. Twycross R., Lack S.A. Beaconsfield Publishers. 1988.
- Oxford Textbook of Palliative Medicine* 3rd ed. Doyle D, Hanks G, Cherny NI, Calman K eds. Oxford : Oxford University Press, 2003.
- PCF3- Palliative Care Formulary*, 3rd ed. Twycross RG, Wilcock A. Oxford: Radcliffe Medical Press, 2008. Also on www.palliativedrugs.com
- Symptom Management in Advanced Cancer*, 3rd edition. 2001. Twycross RG, Wilcock A. Abingdon: Radcliffe Medical Press.
- Wall and Melzack's textbook of pain*, 5th ed. Stephen B. McMahon and Martin Koltzenburg, eds. Edinburgh : Elsevier Churchill Livingstone, 2006.



Current Learning In Palliative care
An accessible learning programme for health care professionals

15 minute worksheets are available on:

- An introduction to palliative care
- Helping the patient with pain
- Helping the patient with symptoms other than pain
- Moving the ill patient
- Psychological needs
- Helping patients with reduced hydration and nutrition
- Procedures in palliative care
- Understanding and helping the person with learning disabilities
- The last hours and days
- Bereavement

Also available online on

www.helpthehospices.org.uk (click on 'e-learning')