University Hospitals Birmingham NHS
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CONTROLLED DOCUMENT

Guidelines for the Use of Naloxone in Palliative Care in Adult Patients

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Contents

1. Scope of the guideline

1.1. This guideline provides information about the use of naloxone, an opioid antagonist, in the palliative patient who is receiving prescribed opioid medication in the clinical setting.

1.2. It is not intended to cover the management of acute opioid overdose.

1.3. It does not cover administration in the patient's home environment.

1.4. Advice on treatment with continuous naloxone is outside the scope of this guideline but an overview is given. SEEK ADVICE from colleagues in critical care medicine / specialist palliative care.

2. Guideline background

2.1. This guideline has been produced in response to the National Patients Safety Agency recommendation (May 2006) and should be read in conjunction with the Trust guidelines on high dose opiates.
Naloxone must be available in all clinical locations where morphine and diamorphine injections are administered or stored.[1]

2.2. There is no NICE guidance on the use of naloxone for overdose of prescribed opioids, therefore the former Pan Birmingham Cancer Network Specialist Palliative Care Audit and Guidelines Group developed these guidelines to ensure safe and consistent practice in line with local expert opinion. They are based on information in PCF 5 Palliative Care Formulary (2014).

2.3. Naloxone is a potent opioid antagonist and is used in reversal of opioid-induced respiratory depression, either in overdose or in those patients who have suffered exaggerated response to conventional doses.[2]

Guideline statements

3. General principles

3.1. Naloxone must only be used in palliative care in those circumstances where a clinician suspects opioid-induced toxicity.

3.2. Naloxone is not indicated for:

> Patients on opioids who are dying as a natural result of their disease progression
> Symptoms induced by non- opioids e.g. barbiturates, benzodiazepines
> Opioid induced drowsiness and/or delirium which is not life threatening

REMEMBER:

3.3. It is important, in the management of patients in pain, that the signs of advanced progressive disease are not confused with those of opioid overdosage, leading to inappropriate use of naloxone.

3.4. Patients on regular opioids for pain and symptom control are physically dependent; naloxone given in too large a dose or too quickly can cause an acute withdrawal reaction and an abrupt return of pain that is difficult to control.

3.5. Patients who are taking opioids and have recently received another intervention (e.g. Radiotherapy or nerve block) are at risk of opioid toxicity. This might be some time after the delivery of the above intervention – a number of weeks in the case of radiotherapy).

3.6. Naloxone's antagonism of buprenorphine is less complete because of the latter's high receptor affinity. (Repeated doses may be required (SEEK SPECIALIST ADVICE).

3.7 For palliative care patients receiving methadone for pain relief please be aware this drug has a long half-life and repeated doses or continuous infusion of naloxone may be required if opioid toxicity is suspected (SEEK SPECIALIST ADVICE)

4. Diagnosis and treatment of opioid induced respiratory depression

4.1. If respiratory rate > 8 breaths/min and the patient is easily rousable and not cyanosed, adopt a policy of 'wait and see'; consider reducing or omitting the next regular dose of opioid or reducing rate of /discontinuing continuous parenteral administration

4.2. If respiratory rate < 8 breaths/min, and the patient is comatose/unconscious and/or cyanosed:

>stop opioid administration

>dilute naloxone 400 micrograms (1 ampoule) to 10ml with 0.9% sodium chloride for injection in a 10ml syringe

>initially administer 80 micrograms (2ml of diluted naloxone) intravenous (IV) as a slow bolus then flush the cannula with 0.9% sodium chloride

>administer 20 micrograms (0.5ml) IV every 2 minutes until the patient's respiratory status is satisfactory

>if respiratory rate is still <8 breaths/min consider increasing boluses to a maximum of 80 micrograms (2 ml of diluted naloxone) every 2 minutes

>flush the cannula with 0.9% sodium chloride after each bolus injection

>further boluses may be necessary because naloxone is shorter acting than morphine (and other opioids)

>the aim is for slow, paced administration of the drug to avoid a surge of pain from complete antagonism of opioid

>patients usually respond after 80 – 160 micrograms (2-4ml of diluted naloxone) with deeper breathing and an improved conscious level

>wait until there has been a sustained improvement in consciousness before restarting a lower dose of opioid

>if there is little or no response consider other causes (e.g. other sedatives, sepsis,)

4.3 If repeated naloxone doses are required, start a continuous intravenous infusion of naloxone:

>add 1mg of naloxone (2.5ml of 400 microgram /ml naloxone injection) to 100ml 0.9% sodium chloride to give a concentration of 10 mcg/ml

>calculate the dose requirement per hour by totalling the naloxone bolus doses and dividing by the time period over which all the doses have been given

>start the IV infusion of naloxone at half this calculated rate

>adjust the naloxone infusion rate to keep the respiratory rate above 8 (do not titrate to the level of consciousness)

>continue to monitor the patient closely

>continue the infusion until the patient's condition has stabilised

>additional IV boluses may need to be given using naloxone diluted in sodium chloride 0.9% as above.

5. Other management issues

5.1. Intra-venous is the preferred route of administration for naloxone, but it can be given intra-muscularly or sub-cutaneously if venous cannulation is not possible (If using IM/SC route, be aware that onset of action will be slower, approx. 2-5 minutes, though duration of action may be more prolonged).

5.2. Administer high flow oxygen via face mask, if the patient is hypoxic.

6. Monitoring after first Naloxone administration

6.1. Naloxone has a much shorter half-life than morphine. There is a risk that opioid toxicity will recur as the naloxone wears off and the opioid is still active. Respiratory rate and oxygen saturation must be monitored closely until stable. The length of this period of monitoring will be dependent on the half-life of the opioid causing toxicity. The half-life of morphine and some other opioids is prolonged in renal failure and other metabolic disturbance.

6.2. It may be appropriate to transfer the patient to a facility where naloxone infusion and monitoring can be initiated. This course of action must be considered if respiratory depression continues to recur despite repeated administration of naloxone (as above).

7. References

1. National Patient Safety Agency. Ensuring safer practice with high dose ampoules of diamorphine and morphine. Issued- 25th May 06. Available at: www.npsa.nhs.uk/nrls/alerts-and-directives/notices/morphine-diamorphine/ Accessed November 2008

2. Twycross R. Wilcock A. et al. Palliative Care Formulary 3. Third Edition, Oxford, 2007. Electronic version available at: www.palliativedrugs.com . Accessed November 2008.

8. Bibliography

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2. 'Guidelines for severe opioid intoxication' Benítez-Rosario MA, Doyle R, McDarby G, Hanningan M. Galway Hospice Foundation, Ireland (2007)

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4. 'Inappropriate use of Naloxone in Cancer Patients with Pain' Paolo et al. Journal of Pain and Symptom Management. Vol 11: 2 (1996)

5. 'Acts of Omission and Commission in Pain Management: The Ethics of Naloxone Use' Fins J. Journal of Pain and Symptom Management. Vol 17:2 (1999)

6. PCF 5 Palliative Care Formulary (2014)

7. NHS Lothian Palliative Care Guidelines (January 2009)