Management of parenteral opioid induced respiratory depression in adults

This advice applies only to the management of adult patients administered parenteral opioids for the management of pain in the Acute Hospital setting. For advice on the management of overdose of oral or illicitly obtained opioids refer to the SPC for Naloxone Injection.

Introduction: Naloxone is available in all areas where strong opioids (e.g. morphine, diamorphine) are used parenterally. Naloxone is a potent opioid antagonist; it reverses the effect of opioids by dose related displacement from receptors. Partial antagonism may be obtained by using small doses. It is essential to titrate dose against respiratory function and not level of consciousness, as complete reversal of opioid will cause return of severe pain and agitation. Naloxone will only reverse opioid effects; other drugs, or progressive disease, may contribute to sedation.

Excessive dosing may occur in the administration of bolus doses for acute pain, particularly in opioid naïve patients, or where there is an error in the use of syringe pumps leading to an overinfusion of opioid.

For patients in the terminal phase of their illness (death expected within 48 hours) the use of Naloxone is inappropriate, in such patients the syringe driver should be stopped and the patient monitored.

All incidents involving over infusion or accidental overdose should be reported via the Trust's clinical incident procedure.

Patients administered bolus doses

1. Naloxone should be administered if respiratory rate is less than 10 breaths per minute.
2. Naloxone may be given intravenously (preferred route), or by intramuscular or subcutaneous routes if this is not possible.
3. To avoid complete reversal dose should be titrated against respiratory rate.
4. 100 – 200 micrograms at 2-3 minute intervals until the required degree of reversal is achieved.
5. Patients should be monitored regularly thereafter. In some cases further doses of Naloxone may be required, particularly if strong opioids with a long half life have been administered.

Patients using opioid infusions

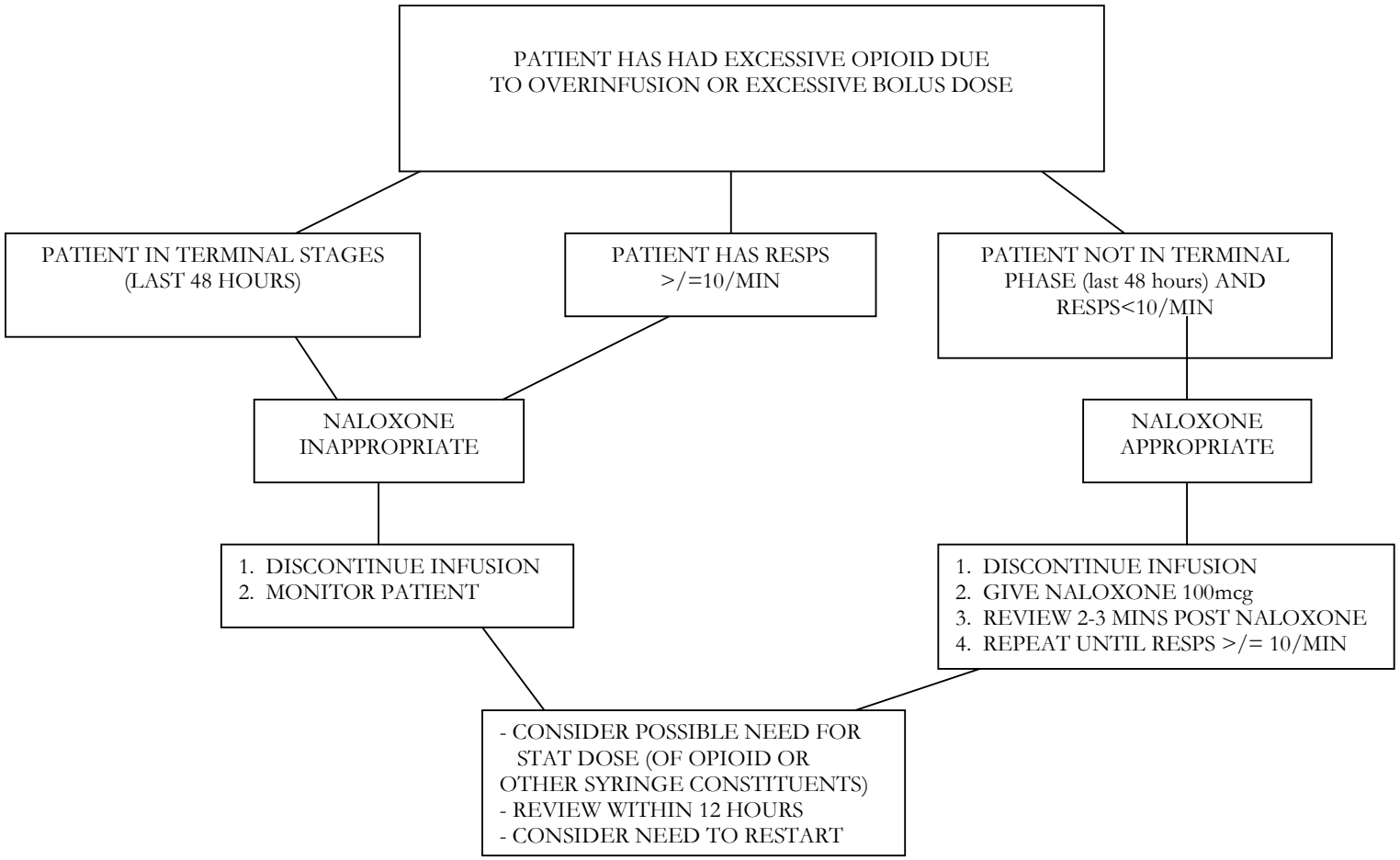
1. Stop opioid infusion.
2. Naloxone will only reverse symptoms due to opioids, bear in mind that other constituents of the syringe driver may also contribute to sedation.
3. Naloxone may be given intravenously, subcutaneously or intramuscularly.
4. Dose must be titrated against desired respiratory rate not sedation.
5. Give 100 micrograms at 2- 3 minute intervals titrated against required respiratory rate. (Respiratory rate >/= 10/minute)
6. Consider possibility of need for breakthrough doses of analgesic(or other syringe driver constituents) as the drug levels fall and prescribe these for later administration on a PRN basis.
7. Consider the need to restart the infusion after reassessment of the patient

Bibliography

SPC Naloxone hydrochloride 400micrograms/ml Mayne Pharmaceuticals. Dec 2005 (accessed via www.medicines.org.uk 3/5/06)

PCF2 Twycross, Wilcock, Charlesworth and Dickman Radcliffe Medical Press 2002.

FM Dorrington Macmillan Pharmacist August 2006



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