



Alfentanil

Pharmacology

Alfentanil is a synthetic derivative of fentanyl. It has a more rapid onset of action, shorter duration of action and a potency of about 20 times more than parenteral morphine. It is metabolised in the liver to inactive metabolites that are excreted in the urine. Alfentanil can accumulate where clearance is reduced e.g. the elderly or patient with hepatic impairment. Although dose reductions may be necessary in patients with severe hepatic impairment this is not necessary in renal impairment.

Cautions

- Levels increased by inhibitors of CYP3A4 e.g. Cimetidine, Erythromycin, Fluconazole, Itraconazole, Ketoconazole, Ritonavir
- Levels decreased by inducers of CYP3A4 e.g. Rifampicin

Indications

- Used mostly for patients with renal failure, where there is neurotoxicity with morphine
- Procedure related pain
- Breakthrough / episodic pain

Formulations

Injection 500microgram/ml, 2ml ampoule, 10ml ampoule
Nasal spray (with attachment for sublingual use) 5mg/5ml bottle. This delivers 140micrograms/0.14ml spray. Unlicensed, available as special order from Torbay hospital. Orders must be faxed to manufacturing unit on 01803 664354. The solution is stable for 1 year unopened and 28 days after opening.

1. Use in a syringe driver SC

The following are safe conversion ratios:

- **PO morphine to SC alfentanil**, give 1/30 of the 24 hour dose . e.g. morphine 60mg/24hrsPO = alfentanil 2mg/24hrs SC
- **SC morphine to SC alfentanil**, give 1/15 of the 24 hour dose e.g. morphine 30mg/24hrs SC = alfentanil 2mg/24 hrs SC
- Prescribe p.r.n. breakthrough dose of 1/6th of the 24hour SC dose

Alfentanil is compatible with clonazepam, dexamethasone, glycopyrronium, haloperidol, hyoscine butylbromide, levomepromazine, metoclopramide, midazolam, octreotide and ondansetron as 2-drug combination in syringe driver using water as diluent.

2. Procedure related pain

250-500micrograms SL or SC 10 minutes prior to procedure being performed

3. Breakthrough pain SL administration

There is a poor relationship between the effective p.r.n. dose and the regular background opioid dose
Individual dose titration is necessary starting at 280micrograms SL (2 sprays)

Most patients experience relief with doses between 560-1680micrograms alfentanil (4-12 sprays)

Pain relief is seen within 10 minutes



References

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