CLONIDINE – FOR PAIN MANAGEMENT

Dosing, Administration and Monitoring Guidelines

Clinical documents related to this guideline

- Intensive Care Unit – Clonidine Guideline

Prescribing requirements and restrictions

- Epidural Clonidine: should only be prescribed and the first dose by an Anaesthetist or the Acute Pain Service (APS). Maintenance dosing may be administered by nurses.
- Oral/IV administration: There are no restrictions on who can prescribe, caution with IV dosing in non-monitored environment.

Pharmacokinetics and Pharmacodynamics

- Clonidine is an alpha-2 adrenoreceptor agonist.
- IV/ Epidural: hypotensive effect occurs within 5mins achieving a peak effect within 30mins and may last 3 to 6 hours (1).
- Up to 50% of Clonidine is metabolised in the liver to inactive metabolites. Mainly renal excretion as unchanged drug (2).
- Half-life in normal renal function is 12 to 20 hours. Half-life is prolonged to 41 hours in end stage renal failure (3).

Indications

- Clonidine may be used for neuropathic, postoperative or chronic pain, however is generally an inadequate analgesic when used alone.
- As an additive to standard epidural analgesia solutions to improve the quality of analgesia when:
  - There is breakthrough pain despite high doses of standard epidural infusion solution(local anaesthetic +opioid)
  - There is intolerance to fentanyl, morphine or other opioids
  - Incomplete sensory block across dermatomes (patchy)
  - Adjunct analgesic particularly with coexisting anxiety or opioid abuse/withdrawal. Can reduce severity of opioid withdrawal symptoms

Contraindications

- Hypersensitivity to clonidine
- Severe bradycardia or hypotension

Precautions

- Caution when ceasing after prolonged treatment with high doses: Abrupt withdrawal may cause rebound hypertension. Symptoms include agitation, nervousness anxiety, restlessness and headache. Patients discharged on clonidine should be warned to not discontinue abruptly.
- Clonidine should be tapered over 2-4 days
Dosage and Administration

Epidural dose:

- **Loading dose**: 150 microg + 5 mL local anaesthetic – only to be administered by an anaesthetist.
- **Maintenance dose**: 300 microg to 450 microg in a 200 mL epidural infusion bag (i.e. Clonidine 1.5 to 2.25 microg /mL infused at normal epidural infusion rates of 4 to 18 mL/hour).
- **Compatible Solutions for epidural administration**: Standard epidural analgesia infusion solutions (i.e. local anaesthetic (ropivacaine or bupivacaine) +/- opioid (e.g. fentanyl, morphine))(4,5)

**Note**: The Pharmacy Department will make, on request, any epidural analgesia solutions containing clonidine, provided the order is received during working hours. Outside Pharmacy Department hours, contact the on-call anaesthetist who will prepare the solution.

Oral/IV:

- Usual starting dose 50 microg TDS. The dose may be titrated to 75 microg TDS OR 1 microg/kg TDS
- Do not give if systolic BP < 100
- IV injection is unlikely to be necessary for chronic pain relief. When administering by IV Infusion: add dose to a convenient amount of sodium chloride 0.9% or glucose 5% (normally 50-100mL) and infuse over 10-15 minutes.

Compatible solutions for IV administration: sodium chloride 0.9% (6) or glucose 5% (7).

Monitoring

- Epidural – See Special Analgesia Nursing Observations Policy

Adverse Effects

- Sedation, hypotension, bradycardia, dry mouth, dizziness, constipation, weakness and fatigue (1)
- Avoid using clonidine in haemodynamically unstable patients
- Caution when using 12 to 18 hours post – operatively because hypotension can be more marked due to hypovolaemia

Drug Interactions (8)

- CNS depressants - may enhance sedation bradycardia and hypotension – monitor and titrate dose carefully.
- TCA's - may reduce hypotensive effect of clonidine. Avoid or monitor BP and titrate clonidine dose carefully.
- Beta-blockers - may enhance bradycardia and hypotension. May rarely cause paradoxical increase in blood pressure.
- Sympathomimetics - increased risk of hypertension

Use in pregnancy and lactation (9)

- Clonidine crosses the placenta however maternal use of clonidine does not appear to be associated with an increased risk of birth defects or adverse pregnancy outcomes. Discuss use with the Medicines information Pharmacist ext 4359.
- Clonidine is excreted into breast milk, but is considered safe to use in nursing mothers at the lowest effective dose, Observe the breastfed infant for adverse effects and avoid use in the early postpartum period as the reduction in prolactin secretion may reduce breast milk production.

Presentation and Storage (1)

- Clonidine hydrochloride (Catapres®) 150 microg per 1 mL ampoule
- Catapres® 100microg and 150microg tablets (100 tablets per box)
- Store Catapres® ampoules below 30°C and tablets below 25°C
REFERENCES
2. Micromedex.com, Clonidine hydrochloride. Truven Health Analytics Inc. 2015 accessed online on 24/07/15 at www.micromedexsolutions.com

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