Intravenous Glyceryl Trinitrate (GTN)

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Purpose

To ensure the accurate/safe administration for continuous infusions of intravenous Glyceryl Trinitrate by authorised personnel.

Scope

CDHB IV Certificated staff/approved persons with cardiac monitoring experience, Medical practitioners.

Associated documents

- Cardiology IV Medication & IV Infusion Protocols, 3rd Edition 2014
- Notes on Injectable Drugs 6th Edition 2010

Important Information

- Patients on a GTN infusion require strict bed rest to decrease the myocardial workload.
- Continuous cardiac monitoring is required during GTN infusion. Medical staff must document any exception to this in the patient's clinical notes.
- Use non-PVC 5% Glucose bags and low sorbing PE/PVC tubing (blue) infusion line.

- The infusion must be administered via an electronic infusion pump.

Medical Officers Responsibilities

- Obtain verbal consent from the patient and document this within the clinical record.
- Document in patients clinical notes where cardiac monitoring is not required
- Identify blood pressure parameters on prescription/clinical notes
- Identify titration intervals on prescription
- Discuss with the nurse as to the stage they wish to be notified, ie. if there is no improvement in the patient's condition.

Infusion Considerations

- GTN infusion is commenced at a rate of 3 mL/hr and titrated up by 3mL every five minutes until the patient is pain free or the patients BP is <90mmHg systolic.
- Once a blood pressure response is noted, the dose increase should be reduced and the interval between increases is lengthened according to medical orders. Use documented pain scale recordings.

Procedural considerations

Ensure the patient has

- Continuous cardiac monitoring
- A baseline 12-Lead ECG is performed (inform Medical Officer)
- Repeat the ECG and notify the doctor again in the following circumstances:
  - If there is any increase in their chest discomfort.
  - The patient's pain is unrelieved following several increases of the hourly rate as per prescription.
  - If there is any other deterioration in the patient's condition during administration of the medication, e.g. the patient becomes pale, grey, dizzy, diaphoretic and/or vomiting
- Hourly peripheral IV site checks/phlebitis scoring must be performed
- Baseline observations are documented (especially BP and pulse) and observations are monitored every:
  - 5 minutes while titration occurs

During/Post Monitoring

- When the patient is pain free, the infusion continues at that rate per hour unless it is causing side effects or the rate is decreased on medical orders.
- Advise the patient of the side effects. These include hypotension, headache (sometimes throbbing), flushing, dizziness, weakness, tachycardia, palpitations, fainting, nausea, vomiting, cutaneous vasodilatation and rash.
- When patient is free of chest discomfort, vital signs can be taken four hourly or more frequently as the patient's condition dictates.
- The infusion is weaned on medical instructions, usually by 3mL increments every five to 15 minutes. Watch for a significant rise in blood pressure or return of symptoms during the weaning process.
- Remember that IV GTN infusion for more than 24 hours may result in Nitrate tolerance.

Measurement/Evaluation

Incident management system, Canterbury and West Coast IV Link Clinical practice observation programme

References

- Notes on Injectable Drugs 6th Edition 2010, Published by New Zealand Hospital Pharmacists' Association (Inc), Wellington
  Editors : Broughton, L.Kendall, P., Livesey, J. Dean, N. Harden, Beven. Durrant, H.,Egan, A. McRae, G., Chalmers, G.
- DBL @Glyceryl Trinitrate for Injections - Data Sheet(date 2008)
  Published by New Zealand Medicines and Medical Devices Safety Authority.
- DBL @Glyceryl Trinitrate for Injections drug information sheet, Hospira NZ Limited, Wellington

Procedure Owner	Cardiology Clinical Nurse Educator
Procedure Authoriser	Chief Medical Officer & Executive Director of Nursing
Date of Authorisation	