METARAMINOL

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- To safely prescribe and administer Metaraminol

2. PATIENT

- Women requiring treatment of hypotension occurring with spinal anaesthesia, haemorrhage, reactions to medications, surgical complications and shock associated with brain damage due to tumour or trauma.

3. STAFF

- Medical, midwifery and nursing staff

4. SETTING

- Only administer in the Acute Care Centre, Recovery and Operating Theatres.

5. EQUIPMENT

- Metaraminol 10 mg/mL ampoule

6. CLINICAL PRACTICE

Prescribing:

Initial treatment is usually with a bolus.
Note, only medical staff with prior training in the administration of Metaraminol in the context of anaesthesia or critical care

- Dilute 10mg Metaraminol with 20 mL sterile 0.9% sodium chloride, to give a concentration of 0.5mg/mL.
- Administer 1mL (0.5mg) as a push, followed with a flush of 10-20 ml of IV saline.
- Assess blood pressure after 2 – 3 minutes, if nil response, administer a further 1ml and again re-assess the BP, additional doses may be given.

Infusion
If ongoing Metaraminol is required, load and prescribe as outlined below:

- Prescribe 50mg Metaraminol in 45mL sterile 0.9% sodium chloride onto the NSW Health Fluid Order Chart in consultation with an Anaesthetic Registrar.
- Prescription
- Commence the infusion at 1mL/hr (1mg/hr), and titrate by 1ml/hr every15 -30 minutes to a maximum rate of 5 mL per hour, to achieve the set blood pressure parameters.
- Consider additional boluses, as they may be given during the infusion, if prescribed. An indicative bolus would be 0.5ml.
- Document the parameters by which nursing staff are permitted to titrate the rate of infusion.

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METARAMINOL cont'd

Administration:

- Draw up 50mg Metaraminol and mix with 45ml of sterile 0.9% Sodium Chloride to create 1mg/mL concentration.
- Deliver through a syringe driver to maintain a constant delivery.
- Infuse via a dedicated non reflux line where the Metaraminol is attached directly to the cannula or lumen of a central venous catheter. Do not attach a two way infusion as an inadvertent bolus may be delivered.
- Ensure an arterial line is inserted to observe blood pressure closely.
- Titrate the infusion (either increasing or decreasing) by 1 mL every 20 minutes to meet the prescribed parameters

Monitoring:

- Monitor patients requiring Metaraminol infusions in the Acute Care Centre.
- Ensure patient is placed on continuous ECG and oxygen saturation monitor.
- Monitor Blood Pressure (BP) every 15 minutes until stable and then monitor BP every hour.

7. DOCUMENTATION

- Integrated Clinical Notes
- Observation Chart
- NSW Health fluid order chart

8. EDUCATIONAL NOTES

Metaraminol

Action:

- A potent sympathomimetic amine that increases both systolic and diastolic blood pressure due its peripheral vasoconstrictor action.
- The pressor effect begins one to two minutes after intravenous injection and lasts about 20 minutes to one hour.

Contraindications:

- Hypersensitivity

Precautions:

- Avoid abrupt withdrawal.
- Use cautiously in patients with asthma due to risk of allergy to sulphides.
- Used with caution in digitalised patients, since the combination of digitalis and sympathomimetic amines is capable of causing ectopic arrhythmic activity.
- Monoamine oxidase inhibitors (MAOIs) and tricyclic antidepressants (TCAs) have been reported to potentiate the action of sympathomimetic amines.

Adverse reactions:

- Avoid excessive blood pressure response causing acute pulmonary oedema, cardiac arrhythmias or arrest.
- Prolonged usage may cause excessive vasopressor response with elevated blood pressure even when therapy is discontinued.
- Because of the vasoconstrictor effect it should be used with caution in the presence of heart or thyroid disease, hypertension or diabetes.
- Tissue necrosis if extravasation occurs.
- Long periods of usage which may cause perpetuation of shock state due to vasoconstriction. Therefore blood or plasma volume expanders should be used when the principle reason for hypotension or shock is decreased circulating volume.

METARAMINOL cont'd

9. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Medication- Administration
- Labelling of injectable medicines, lines, fluids
- Acute Care – Patient Acuity Guide

10. RISK RATING

- High

11. NATIONAL STANDARD

- MS - Medication Safety

12. REFERENCES

- Australian Injectable Drugs Handbook, 7th Edition, Society of Hospital Pharmacists of Australia 2018.
- MIMS online accessed via CIAP on 13/7/18

REVISION & APPROVAL HISTORY

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