Hydralazine IV for Hypertensive Disorders of Pregnancy Protocol MATY077b	
Type: Protocol	HDSS Certification Standard:
Issued by: Maternity PPG Group	**Version:** 1.2
Applicable to: Hutt Valley DHB	**Contact person:** CHOD O&G
Lead DHB: Hutt Valley DHB	**Level:**

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

To be read in conjunction with Hypertensive Disorders of Pregnancy (HDP) including Pre-eclampsia 2020 (MATY077)

Purpose:

The purpose of this protocol is to:

- Provide safe and effective care for women/pregnant people
- Establish a local approach to care that is evidence based and consistent
- Inform good decision making

Scope:

For the purposes of this document, staff will refer to:

All staff within Hutt Valley DHB. This includes staff not working in direct contact with patients/consumers. Staff are taken to include anyone engaged in working to the Hutt Valley DHB. This may include but is not limited to:

- Employees irrespective of their length of service
- Agency workers
- Self-employed workers
- Volunteers
- Consultants
- Third party service providers, and any other individual or suppliers working in Hutt Maternity, including Lead Maternity Carers, personnel affiliated with third parties, contractors, temporary workers and volunteers
- Students

Abbreviations and Definitions:

BP Blood pressure

IV Intra-venous

RMO Registered Medical Officer

SMO Senior Medical Officer

Hydralazine IV for Hypertensive Disorders Content

Hydralazine - Intravenous Administration Procedure

⚠ One-on-one midwifery care required

Indication

- Emergency management of severe hypertension uncontrolled by oral anti-hypertensives.

Contraindications: (see policy)

- Maternal cardiac disease
- Known hypersensitivity

Equipment

- 5 ampoules of Hydralazine - 20mg powder in a 2ml ampoule.
- 5mls of sterile water for injection.
- 100mls of intravenous normal saline.
- 10ml syringe.
- 2 intravenous giving sets.
- 1 electronic infusion device.

Procedure

- Transfer to Birthing Suite
- Commence Electronic Fetal Monitoring
- Obstetric RMO / SMO review of person
- If indicated, in discussion with the Obstetric SMO, repeat the loading dose and/or commence a hydralazine infusion

Loading Dose

- A loading dose of 2.5 - 5mg (2.5 - 5ml) as a slow manual push
    - If there is suspected pre-eclampsia related hypovolaemia, the lower dose is recommended.
    - Repeated IV bolus can be given every 20 mins maximum of 30 mg (SOMANZ 2012)
- This may be the only treatment required to control the blood pressure.

Preparation of loading dose (1 mg/ml)

- Inject 1ml of sterile water into a 20mg ampoule of Hydralazine.
- Draw up the mixed Hydralazine 20mg into a 20ml syringe. Total volume 1ml.
- Dilute to 20ml by adding 19ml of normal saline.
- Concentration is now 20mg in 20ml.
- Attach a completed 'medication added' label to the syringe.

Administration

- RMO administers the initial loading dose of 2.5 – 5mg (2.5 – 5ml) of Hydralazine by slow intravenous injection over a period of 5 minutes, to avoid a sudden decrease in maternal (and thus fetal) blood pressure.
- Inform the person that they may experience headache, palpitations and flushing.

Monitoring

- A complete set of baseline observations should be taken, then every 15 minutes or as clinically indicated
- A **MEWS exception** may be used during the IV administration due to the number of blood pressure checks. Continue to document BPs on MEWS chart.
- BP to be taken on manual sphygmomanometer: repeat every 5 minutes for 20 minutes, then reduce to 30 minutes until stable
    - Restart MEWS total score once BP stable
- Continuous electronic fetal monitoring is maintained throughout

Continuous Infusion

- If further treatment is required a continuous Hydralazine infusion may be prescribed following discussion with Obstetric SMO.

Preparation of continuous infusion

- Withdraw 5mls of Normal saline from a 100ml bag.
- Discard the 5ml
- Dilute 100mg of Hydralazine (5 ampoules) with 5ml of sterile water for injection.
- Draw up the 100mg (5ml) of Hydralazine and inject into the 95ml of normal saline in the bag. Total volume 100mg in 100ml.
- The IV infusion MUST be double-checked by a senior midwife prior to being connected to the woman/person, with specific attention to the '5 rights'.

Administration of Hydralazine Infusion

- A normal saline mainline infusion is commenced.
- Using an electronic pump, the Hydralazine infusion is connected to the side arm of the normal saline infusion.
- The infusion is then started at a rate of 5mg (5ml) per hour
- Increase the rate of the infusion by 1mg (1ml) every 15 minutes (maximum 20mg/hour) according to the response of the blood pressure. The aim is to decrease the diastolic blood pressure to 100mmHg or less.
- If the total hourly dosage is going to exceed 20mg, consult with the registrar or consultant on further treatment options.
- When the blood pressure has stabilised, i.e. a decrease in diastolic blood pressure to 100mmHg or less, sustained for 15minutes, reduce the Hydralazine every 15 minutes by 1mg (1ml).

Monitoring

- Blood pressure and pulse every 15minutes and record on MEWS or pre-eclampsia vital sign chart
- Insert an indwelling catheter with an hourly urine bag attached.
- Strict fluid input and output is recorded on the fluid balance chart.

- Report any changes in the woman's/person's condition immediately to the registrar.
    - Do not use an automated device if blood pressure recordings are very high or very low as they tend to under estimate blood pressure recordings.
    - An automated device is only recommended if the blood pressure is within normal limits.
- Ensure continuous fetal monitoring while the IV Hydralazine is being given.

Once the diastolic blood pressure is stabilised, i.e. <100 mmHg reduce the level of monitoring following consultation with the medical team

Related Documents:

- Hypertensive Disorders of Pregnancy (HDP) – including Pre-eclampsia MATY077
- Hydralazine Intravenous policy MATY034
- Acute Management of Eclampsia MATY053

Keywords for searching:

1. Hydralazine
2. Hypertension
3. Eclampsia
4. MATY077b

Informed Consent:

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).

Tangata Whenua Statement:

The Women's Health Service recognises the rights and responsibilities of Māori as tangata whenua and Treaty Partners. This allows and acknowledges the importance of cultural diversity in all aspects of our care and practice in Aotearoa New Zealand.

As stated in Te Pae Amorangi (Hutt Valley DHB Māori Health Strategy) 2018-2027, Hutt DHB as a Crown agency is committed to our role in maintaining active relationships with iwi, under Te Tiriti o Waitangi. This strategy recognises the established principles of Partnership, Participation and Protection and recognises steps towards the reviewed interpretation of Te Tiriti principles to date (from the Wai 2575 claim into health). These are tino rangatiratanga, equity, active protection, partnership and options.

Attention in particular is drawn to:

- **Article one – Kāwanatanga**: actively engaging and working alongside with local iwi through the Hutt Valley Māori Health Unit

- **Article two – Tino Rangatiratanga**: Self-autonomy, self-determination; the responsibility to enable Māori to exercise their authority over their own health, determinants and definition of health
- **Article three – Ōritetanga**: equal health outcomes of peoples; ensuring that policy, guidelines or programmes do not further perpetuate any inequity
- **Article four (the 'oral clause') – Wairuatanga**: spirituality; thriving as Māori and the importance of health providers understanding health in te ao Māori (the Māori world), acknowledging the interconnectedness and inter-relationship of all living and non-living things.