



ADULT PROTOCOLS & GUIDELINES

Policy Number:
NC-TWE-CLP-1069

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Authority: Dr Geoff Ramin
Network Director Emergency Medicine
The Tweed and Murwillumbah Hospitals

Authority Initial:

PREGNANCY—SEVERE HYPERTENSION: USE OF HYDRALAZINE

INTRODUCTION

This protocol was adapted from the protocol developed by the NSW Pregnancy and Newborn Services Network's High Risk Obstetric Advisory Group.

The protocol should only be used in consultation with specialists who are familiar with the management of severe hypertension in pregnancy.

Severe hypertension, (either systolic greater than or equal to 170 mmHg and/or diastolic greater than or equal to 110 mm Hg) is an obstetric emergency which requires a multidisciplinary team approach. On presentation the following should be immediately notified

- Emergency Physician
- Obstetrician
- Paediatrician
- Anaesthetist

To prevent maternal intracerebral haemorrhage, antihypertensives should be used to lower blood pressure in the short-term pending delivery or in special circumstances such as medical retrieval. Lowering the blood pressure does not solve the underlying problems of multi-system disease.

Agents used to control severe hypertension in pregnancy include parenteral hydralazine, labetalol, diazoxide, and oral or sublingual nifedipine.

A Cochrane Systematic Review suggests that there is no evidence that one drug is better than another, and that clinicians should use the drug with which they are most familiar.

Intravenous hydralazine (Apresoline) is the drug used in this protocol as it is the most widely studied and most commonly used agent to lower severe blood pressure in pregnancy.

Prior to administration, the mother should be informed of the need to lower her blood pressure, as well as the anticipated benefits and the possible side effects of hydralazine and / or other antihypertensives in pregnancy.

INDICATIONS FOR INTRAVENOUS ANTIHYPERTENSIVES IN PREGNANCY

- If diastolic greater than or equal to 110 mmHg for two readings **OR** systolic greater than or equal to 170 mmHg for two readings
- Eclampsia
- At lower levels of blood pressure than above but where there are persistent symptoms and/or failed oral antihypertensive therapy
- In situations where rapid reduction of BP is required
- In situations where oral administration of medication is impossible or unreliable, such as in labour or the unconscious state



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IV HYDRALAZINE—PRINCIPLES AND METHOD OF ADMINISTRATION

AIM	To achieve a gradual reduction in blood pressure to safe levels (90mmHg diastolic), rather than a precipitous drop. NOTE: the risk of sudden hypotension can be greater in women with a contracted plasma volume.
TRADE NAME:	Apresoline
PRESENTATION:	20 mg ampoule
INCOMPATIBILITIES:	Aminophylline, ampicillin, hydrocortisone, sulphadiazine, dextrose diluents
DOSE:	<ul style="list-style-type: none">Hydralazine 5 mg as an intravenous bolusRepeat if necessary at 20 minuted intervals, up to a maximum of 3 doses
CONCOMITANT ANTIHYPERTENSIVE THERAPY:	<ul style="list-style-type: none">Continue existing oral antihypertensive therapy and review dose regime ORIf conscious, commence oral antihypertensive therapy (such as clonidine, labetalol or oxprenolol) in addition to the intravenous hydralazine.

PERSISTENT HYPERTENSION DESPITE 3 BOLUSES OF IV HYDRALAZINE 5 MG MAY BE DUE TO A COMPENSATORY REFLEX TACHYCARDIA:

If heart rate < 125 bpm:	<ul style="list-style-type: none">Commence hydralazine infusion of 10 mg/hrLoad 100 mg of IV hydralazine into 90 ml of normal saline (not a glucose containing solution);Run the infusion through an infusion pump at a rate of 10 ml/hr;Increase rate by 5 ml/hr every 15 minutes until blood pressure is controlled.Cease infusion if blood pressure falls below 140/90.
If heart rate > 125 bpm:	<ul style="list-style-type: none">Give oral clonidine, labetalol or oxprenolol in addition to hydralazine infusion.
MATERNAL & FOETAL OBSERVATION AND MONITORING	<ul style="list-style-type: none">Continuous CTG throughout administration of hydralazine and until BP is stable (30 minutes after the last dose);Record BP and pulse every 5 minutes after each bolus dose;Continue 5 minute BP and pulse until stable, thence measure hourly;Record BP every 15 minutes for the first hour of a continuous infusion, thence measure hourly if stable.Monitor urine output hourly.