Management of Blood Pressure in Acute Ischaemic Stroke QRG

Management

All patients presenting via the acute stroke pathway will have their BP measured by nursing/medical staff on arrival in the Emergency Department (ED). Ambulance BP recordings will not be used to make treatment decisions as part of this protocol.

If a single BP recording is above the threshold for acute treatment (systolic >220mmHg or diastolic >120mmHg), the BP should be repeated again after 15 min. If 2 or more recordings are above the threshold for treatment the medical staff must be informed immediately and treatment commenced without delay.

Intravenous antihypertensive should be continued until enteral treatment has been established. Until the target BP has been achieved, blood pressure should be checked every 15 min. Once achieved, BP should be checked at least every 15min for 1 hr., then hourly until intravenous antihypertensive treatment is stopped.

Pharmacological lowering of BP is recommended in ischaemic stroke patients with the following [1,2]

a) sustained systolic BP >220mmHg or diastolic >120mmHg
b) hypertensive encephalopathy
c) hypertensive nephropathy
d) hypertensive cardiac failure/myocardial infarction
e) aortic dissection
f) pre-eclampsia/eclampsia
g) those considered for intravenous thrombolysis

The management protocol will be similar to that of Blood Pressure management of non-aneurysmal ICH but with a treatment threshold target of 220/120mmHg in ischaemic stroke patients with sustained elevation of BP (Appendix 1).

Key Practice Points

- Ischaemic stroke patients should have regular blood pressure checks.
- Non-dysphagic patients admitted on antihypertensive medication should continue oral treatment unless there is a contraindication or they are being included in a trial of blood-pressure control[1].
- Pharmacological lowering of BP is recommended in ischaemic stroke patients with the following [1,2] -
  a) sustained systolic BP >220mmHg or diastolic >120mmHg
  b) hypertensive encephalopathy
  c) hypertensive nephropathy
  d) hypertensive cardiac failure/myocardial infarction
  e) aortic dissection
  f) pre-eclampsia/eclampsia
  g) those considered for intravenous thrombolysis

Background/ Scope/ Definitions

In acute ischaemic stroke the ideal blood pressure range is not yet scientifically determined. Moderate hypertension could be advantageous to improve cerebral perfusion of ischaemic tissue; however extreme hypertension is detrimental[2.]

See appropriate documents on the intranet for BP management in -

- Ischaemic stroke patients considered for IV thrombolysis. http://intranet/policies-resources/trust-policy-documents/trust-wide-clinical/gen/tc1010/?locale=en
- Stroke patients with non-aneurysmal intracerebral bleed. http://intranet/policies-resources/trust-policy-documents/trust-wide-clinical/gen/twcg4012/?locale=en

Standards

1) All patients presenting with ischaemic stroke will have their blood pressure monitored.
2) Urgent treatment will be commenced for all patients who fall within the treatment criteria

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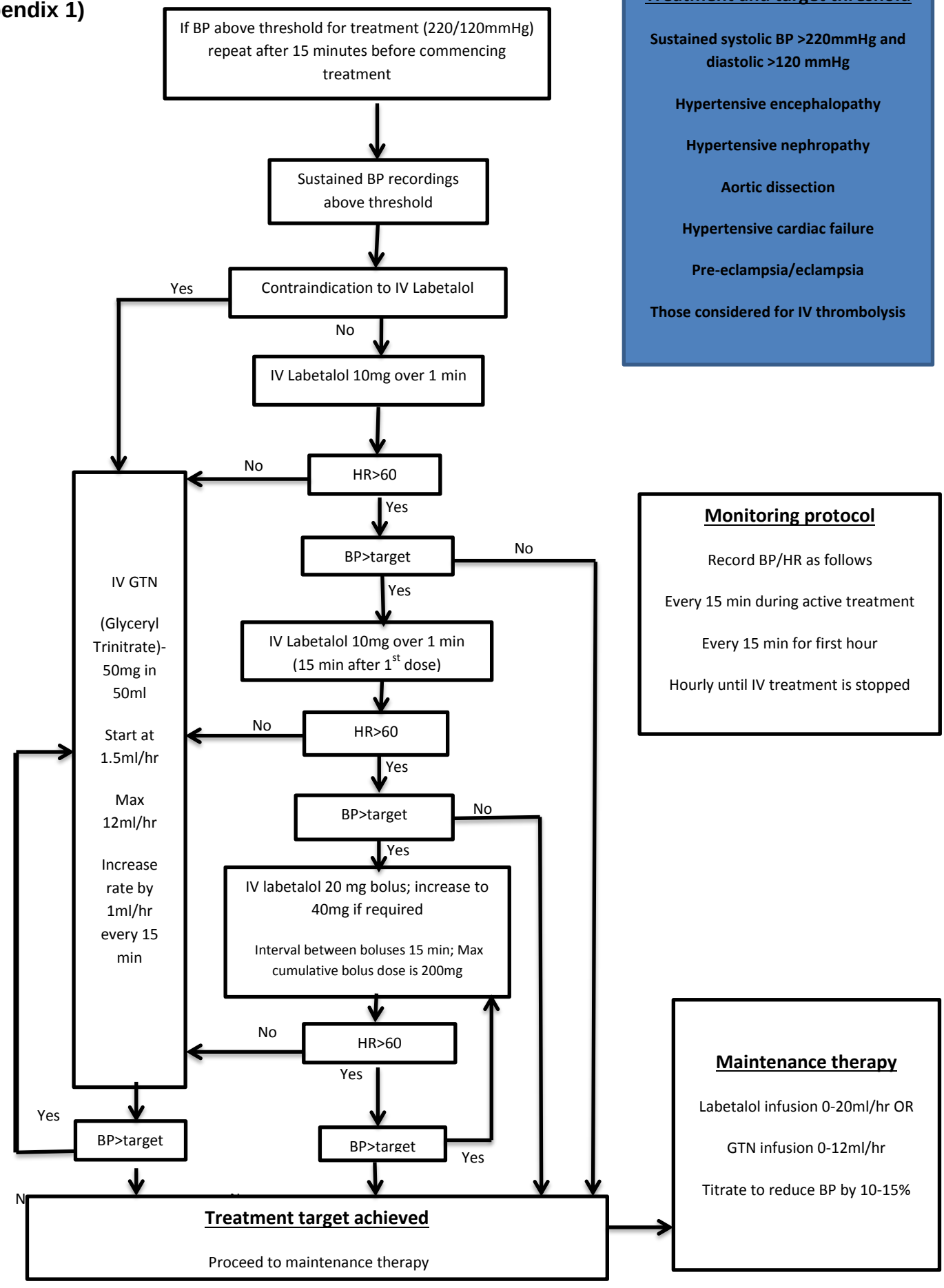
3) Non-dysphagic patients admitted on antihypertensive medication should continue oral treatment unless there is a contraindication or they are being included in a trial of blood-pressure control.

(Appendix 1)


If BP above threshold for treatment (220/120mmHg) repeat after 15 minutes before commencing treatment
Sustained BP recordings above threshold
Contraindication to IV Labetalol
Yes
No
IV Labetalol 10mg over 1 min
HR>60
No
Yes
BP>target
No
Yes
IV Labetalol 10mg over 1 min (15 min after 1st dose)
HR>60
No
Yes
BP>target
No
Yes
IV labetalol 20 mg bolus; increase to 40mg if required
Interval between boluses 15 min; Max cumulative bolus dose is 200mg
HR>60
No
Yes
BP>target
Yes
BP>target
Yes
IV GTN
(Glyceryl Trinitrate)-50mg in 50ml
Start at 1.5ml/hr
Max 12ml/hr
Increase rate by 1ml/hr every 15 min
Treatment target achieved
Proceed to maintenance therapy
Treatment and target threshold
Sustained systolic BP >220mmHg and diastolic >120 mmHg
Hypertensive encephalopathy
Hypertensive nephropathy
Aortic dissection
Hypertensive cardiac failure
Pre-eclampsia/eclampsia
Those considered for IV thrombolysis
Monitoring protocol
Record BP/HR as follows
Every 15 min during active treatment
Every 15 min for first hour
Hourly until IV treatment is stopped
Maintenance therapy
Labetalol infusion 0-20ml/hr OR
GTN infusion 0-12ml/hr
Titrate to reduce BP by 10-15%

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Salford Royal NHS Foundation Trust

University Teaching Trust

safe • clean • personal

Parent Document: N/A

Scope: All staff involved with stroke care

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