Post-operative management for
Carotid Endarterectomy

Dr S Biggart / Dr I Young / Vascular Surgical Consultant Group. Published May 2023. Review May 2028.

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- High risk of both thrombosis and bleeding post operatively. Stroke or airway obstruction may result.
- These are time critical emergencies requiring urgent senior medical input.
- Chart observations every 15 minutes for 1 hour then every 30 minutes for 1 hour then hourly for 24 hours post op.

- Vascular Theatre (08:00 - 17:00 Mon-Fri). Extension 23240.
- Vascular Registrar (24/7) 07814302880.
- Anaesthetic consultant on-call (24/7) Bleep 2200.

CARDIOVASCULAR RISK

Issue

- Pre-existing coronary artery disease is common.
- Haemodynamic change, especially tachycardia, may result in coronary plaque rupture.
- Vasculopaths tolerate hypovolaemia poorly.
- A hypercoagulable state usually develops post-operatively.
- Hypertension and hypotension are common after surgery and predispose to complications.

Targets

- **5-lead ECG** monitor with ST segment alarms on (alarm range -1.0 mm to +1.0 mm for II and V5).
- **12 lead ECG** if ST segment alarm on monitor or patient complains of chest pain.
- BP usually measured via arterial line. If no arterial line, measure **BP at least hourly for 24 hours after surgery.**

- Aim **HR <80**. If patient is on a beta-blocker, maintain beta-blockade.
- Aim **systolic BP 110 - 170 mmHg** unless otherwise stipulated by anaesthetist.
  - Refer to next page for specific guidance on blood pressure control.
  - Critical care referral via bleep 2306 if systolic BP targets are not achieved with this guideline.
- Keep **Hb >70 g.L^{-1}** (or >80 g.L^{-1} in patients with coronary artery disease).

- Continue **statin** therapy to stabilise coronary plaques.
- Normalise electrolytes, particularly **potassium** & **magnesium** to reduce risk of arrhythmias.

RESPIRATORY

Issue

- Bleeding can lead to a neck haematoma, airway obstruction and cardiovascular collapse.

Targets

- Aim **SpO2 94-98%**.
- If there is concern regarding airway compromise:
  - Alert on-call anaesthetist on bleep 2200 urgently. Consider 2222 call "Anaesthetist to ward".
  - Sit patient forward. Ensure surgical drain is open. Apply facemask Oxygen. Get arrest trolley.
- Transfer to theatre for airway management if time permits. (CEPOD coordinator 07790826007)

NEUROLGOICAL

Issue

- Haemorrhagic stroke can result from hypertension.
- Ischaemic stroke can result from hypotension, thrombosis at, or embolism from endarterectomy site.
- Cerebral hyperperfusion syndrome can lead to headache, convulsions or coma.
- Postoperative stroke is potentially treatable if detected early.

- Cranial nerve deficits may result from anaesthetic nerve blockade or surgical compression, stretch or division.
- Duration of deficit is highly variable.

Targets

- Regular neurological observations every 15mins for 1hr then every 30mins for 1hr then hourly for 24hrs post op.
- Neurological deficit should be urgently discussed with on-call vascular registrar and clearly documented.
- Urgently discuss with thrombectomy service if suspicion of stroke (On-call-stroke team 07872415589).

COAGULATION

Issue

- Most patients require perioperative management of antiplatelet agents.
- There is balance of risk between preventing thrombosis and risk of neck haematoma.

Targets

- Review antiplatelet therapy on a daily basis.
- Post operatively most patients will receive single agent antiplatelet therapy, typically 75mg clopidogrel once daily from post op day 1 following surgical review.

VTE

Targets

- **Prophylactic low molecular weight heparin** (dose as per 'Vascular Surgery Unit Handbook' available on Intranet).
- 1st dose 6 hours post op unless significant bleeding suspected.
- **No TEDS or calf compression boots**, unless explicitly stated by anaesthetist or operating surgeon.

WOUNDS

Targets

- **Wound dressing**: Usually changed on post operative day 1.
- If strike through more than a very small amount change dressing & inform surgeon.
- Daily observation for haematoma/infection.
- **Wound drain**: If output >50mls/hr for more than two hours or there is an expanding neck haematoma, inform surgeon. Drain usually removed on post operative day 1.

Post-operative management of blood pressure after Carotid Endarterectomy

Use this in conjunction with Post-operative management after Carotid Endarterectomy Guideline

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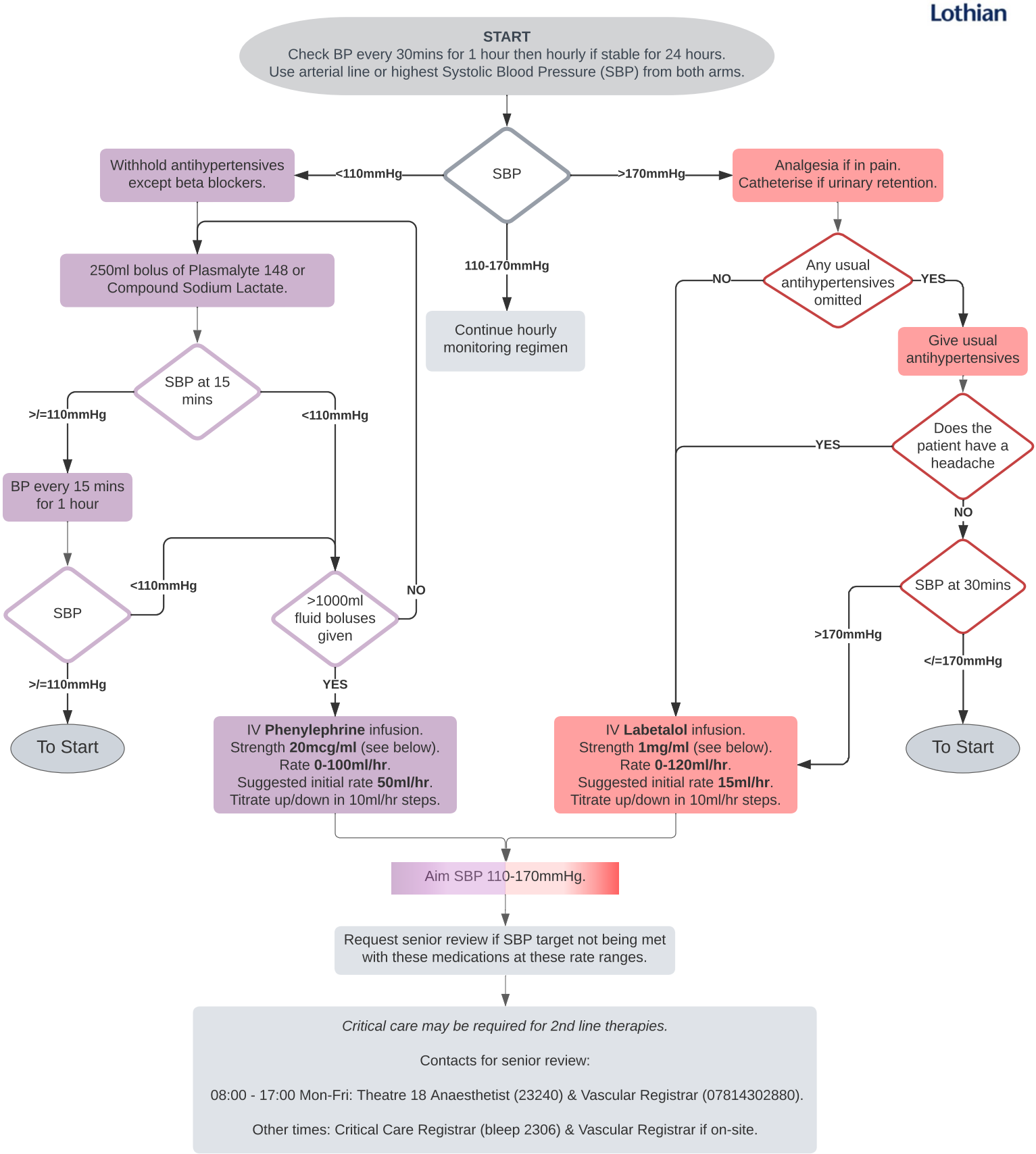

DRUG INFUSION PRESCRIBING INFORMATION

To create a final concentration of 20mcg/ml Phenylephrine.
1. Draw up 10mg (One 1ml vial of 10mg/ml Phenylephrine) in a 2ml syringe.
2. Add the 10mg (1ml) of Phenylephrine to a 500ml bag of 0.9% NaCl.

To create a final concentration of 1mg/ml Labetalol.
1. Draw up 500mg (Five 20ml vials of 5mg/ml Labetalol).
2. Remove 100ml from a 500ml bag of 0.9% NaCl.
3. Add the 500mg (100ml) of labetalol to the remaining 400ml of 0.9% NaCl.