GUIDELINE FOR HYPERTENSIVE EMERGENCY TREATMENT

Hypertensive Emergency	Target Blood Pressure	Drugs of Choice	To Avoid
Hypertensive Encephalopathy	MAP lowered by maximum 20% or to DBP 100-110 mm Hg within first hour then gradual reduction in BP to normal range over 48-72 h	Labetalol intravenous infusion*	Centrally acting agents: clonidine, methyldopa. Nitrates may decrease cerebral blood flow and increase ICP.
Ischemic stroke	CHEP 2014: if eligible for thrombolysis, treat if BP greater than 185/110mmHg. During and after thrombolysis: Monitor BP Q15 minutes during treatment and for an additional 2 hours, then every 30 minutes for 6 hours, then every hour for 16 hours. Treat BP if greater than 180/105. If no thrombolysis, consider treating only if very elevated (SBP greater than 220 mm Hg or DBP greater than 120 mm Hg). If BP lowering treatment initiated, aim to gradually lower by 15-25% over 24 h.	Prior to thrombolysis: Labetalol bolus** During and after thrombolysis: Labetalol bolus** then infusion only if necessary (often boluses are enough) Nitroprusside intravenous infusion if blood pressure not controlled with labetalol	Caution with nitrates: Nitroprusside recommended in stroke guidelines but requires careful monitoring. Nitrates may decrease cerebral blood flow and increase ICP.
Intracerebral hemorrhage	If SBP 150-220 mmHg, target SBP 140 mmHg. Monitor BP every 5 minutes and aim for target within 1 h.	Labetalol intravenous infusion* Esmolol intravenous infusion*	Nitrates may decrease cerebral blood flow and increase ICP
Subarachnoid hemorrhage	SBP less than 160 mm Hg but no lower than 120 mm Hg or MAP less than 130 mm Hg	Labetalol intravenous infusion* Esmolol intravenous infusion* Nimodipine PO used as adjunct for reducing vasospasm but not specifically for lowering BP.	Nitrates may decrease cerebral blood flow and increase ICP

GUIDELINE FOR HYPERTENSIVE EMERGENCY TREATMENT

Hypertensive Emergency	Target Blood Pressure	Drugs of Choice	To Avoid
Aortic Dissection	SBP 100-120 mm Hg, HR less than 60 within 20 minutes	Labetalol intravenous infusion* or esmolol*/metoprolol IV-intermittent* PLUS nitroprusside intravenous infusion Beta blockade must be established before introducing vasodilators.	Vasodilator monotherapy due to reflex tachycardia.
Left ventricular failure	MAP lowered to 60–100 mmHg or by 20-25% and symptomatic improvement	Nitroglycerin intravenous infusion Enalaprilat IV-intermittent Nitroprusside intravenous infusion	Beta blockers if decompensated heart failure
Acute renal insufficiency	MAP lowered by 20-25%	Labetolol intravenous**	Avoid nitroprusside Avoid ACE inhibitors acutely
Myocardial ischemia/infarct	MAP lowered to 60–100 mm Hg or by 20-30% and reduction of ischemia	Nitroglycerin intravenous infusion Beta blockers such as intravenous labetolol and esmolol, metoprolol	Nitroprusside Hydralazine
Postoperative hypertension	MAP lowered by 20%–25% (not based on published guidelines) Less than 180/110 mmHg is a general guideline	Labetolol intravenous bolus and infusion Esmolol intravenous bolus and infusion	

*May consider diltiazem IV where beta blockers are contraindicated or not tolerated due to bronchospasm.

**Labetalol bolus to be given by physician. Not approved for nursing administration at UHN.

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GUIDELINE FOR HYPERTENSIVE EMERGENCY TREATMENT

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GUIDELINE FOR HYPERTENSIVE EMERGENCY TREATMENT

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