MEDICAL NOTES POWERHOUSE

Medical Notes Powerhouse

High-Yield Flashcards for NEET SS & INI SS-ET

Rapid Recall Series
Flashcard Compendium

10 VOLUME
of 10 · Volume X · 443 pages

214	3	10
TOPICS	DECKS	VOLUME SET

DECKS IN THIS VOLUME

- Neurology & Toxicology
- Gut, Joints & Endocrine
- Cardinal Presentations

Sources Harrison's Principles of Internal Medicine, 22nd Edition

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LEARNING · GUIDANCE · SURGERY

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DECK 01

Neurology & Toxicology

Stroke, dementia, movement disorders, toxicology and environmental medicine

TOPICS SAMPLER — 39 TOPICS TOTAL

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rapid recall flashcard

01 **Subarachnoid Hemorrhage**
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01 **Vascular Dementia**
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RAPID RECALL

VOLUME I

Neurology & Toxicology

Cerebrovascular disease, neurodegeneration, demyelination, and environmental insults distilled into bedside recall.

- Stroke recognition
- Aneurysmal SAH
- Multiple sclerosis
- Dementia syndromes
- Poisonings & exposures

39 SECTIONS

1777 CARDS

001 FAST mnemonic for stroke recognition stands for?

Harrison 22e Ch.437 p.3428

Face, Arm, Speech, Time

↳ *"Time is brain" — ~1.9 million neurons lost per minute. BE-FAST adds Balance + Eyes for posterior circulation strokes. IV alteplase window: 4.5 hours.*

002 Ischemic strokes (including TIA) account for approximately _____% of all acute strokes?

Harrison 22e Ch.437 p.3428

85%

↳ *Remaining 15% are hemorrhagic: hypertensive ICH (~7%) > SAH (~4%) > other (~4%). Non-contrast CT first to exclude hemorrhage before thrombolysis.*

003 Recurrent epistaxis + mucocutaneous telangiectasias + brain/lung AVMs → mutated gene?

Harrison 22e Ch.439 p.3456

Endoglin (ENG) or ALK1 (ACVRL1)

↳ *Autosomal dominant; TGF-β pathway defect. ENG=HHT1 (pulmonary/CNS AVMs); ALK1=HHT2 (hepatic AVMs). Diagnosed by Curaçao criteria. Pulmonary AVMs cause paradoxical emboli, stroke, brain abscess.*

004 Bilateral CCA occlusion causes jaw claudication via ischemia of which artery's branches?

Harrison 22e Ch.437 p.3431

External carotid (maxillary artery)

↳ *Maxillary artery (ECA branch) supplies muscles of mastication. Classic in Takayasu's arteritis and giant cell arteritis. Mnemonic: MASSETER ← MAxillary.*

005 Postpartum woman, thunderclap headache, multifocal vessel beading on angiography, normal CSF → diagnosis?

Harrison 22e Ch.438 p.3448

Reversible cerebral vasoconstriction syndrome (RCVS)

↳ *Key differentiator from PACNS: NORMAL CSF and reversible beading. Up to 38% co-exist with PRES (bilateral occipital edema). Treat with nimodipine/verapamil; self-limited over weeks.*

006 Stroke ranks as the _____ leading cause of death globally?

Harrison 22e Ch.437 p.3428

Second (after ischemic heart disease)

↳ *~7.1 million deaths/year. Ischemic stroke ~85%, hemorrhagic ~15%. Also 2nd leading cause of disability in adults ≥50.*

007 Artery supplying posterior limb of internal capsule, at risk during ICA aneurysm clipping?

Harrison 22e Ch.437 p.3430

Anterior choroidal artery

↳ *AChA occlusion → classic triad: contralateral hemiplegia, hemianesthesia, homonymous hemianopia. Arises from supraclinoid ICA just distal to PComm origin; must be identified and preserved during ICA aneurysm surgery.*

008 Cerebellar infarct patient becomes drowsy at 48h post-event. Most urgent life-threatening mechanism?

Harrison 22e Ch.437 p.3433

4th ventricle compression → obstructive hydrocephalus

↳ *Posterior fossa edema peaks at 48–72h. Rigid compartment → rapid brainstem compression and tonsillar herniation. Emergent suboccipital craniectomy ± EVD is life-saving.*

009 Dysarthria + contralateral clumsy hand, minimal sensory loss → lacune localizes to?

Harrison 22e Ch.437 p.3429

Genu of internal capsule / basis pontis

↳ *Corticobulbar fibers at genu cause dysarthria; adjacent hand motor fibers cause clumsiness. Mnemonic: 'Clumsiness speaks GENUs.' Lacunes are <15 mm infarcts from lipohyalinosis of lenticulostriate or paramedian pontine perforators.*

010 Gold standard for quantifying cerebral arterial stenosis (NASCET/ECST grading)?

Harrison 22e Ch.437 p.3438

Catheter (conventional) cerebral angiography

↳ *Also detects <3mm aneurysms, vasculitic beading, dissections. Procedural stroke risk ~0.5–1%. First-line in acute stroke remains non-contrast CT; CTA/MRA for screening.*

011 Sudden drowsiness + vertical gaze palsy + abulia, no hemiparesis → occluded artery?

Harrison 22e Ch.437 p.3432

Artery of Percheron

↳ *Single perforator from one P1 supplying bilateral paramedian thalami ± rostral midbrain. MRI shows pathognomonic 'butterfly sign' — bilateral symmetric thalamic restricted diffusion. Absence of hemiparesis is the key clue.*

012 Young woman on OCPs with headache, papilledema, seizure, empty-delta sign on CT. First-line treatment?

Harrison 22e Ch.438 p.3447

IV heparin (even with hemorrhage)

↳ *Unlike arterial stroke, anticoagulation is SAFE and indicated in CVST even with hemorrhagic venous infarction — bleeding is from venous hypertension, not arterial rupture. Evidence: Einhäupl 1991, de Bruijn 1999 RCTs.*

013 In ~75% of individuals, both PCAs arise from _____

Harrison 22e Ch.437 p.3431

Bifurcation of the basilar artery

↳ *Classic configuration. Fetal PCA (PCA from ICA via PComm) in ~20% unilateral, ~5% bilateral — risks occipital infarct during carotid clamping/CEA.*

014 Fluent aphasia + contralateral superior quadrantanopia + NO motor deficit → occlusion of?

Harrison 22e Ch.437 p.3429

Dominant MCA inferior division

↳ *Supplies Wernicke's area + Meyer's loop ("pie in the sky"). Motor strip spared as it's fed by superior division — key distinguishing feature from complete MCA occlusion.*

015 Which TWO components of CHA2DS2-VASc score carry 2 points each?

Harrison 22e Ch.438 p.3445

Age ≥75 years (A_2) and prior Stroke/TIA (S_2)

↳ *All other components score 1 point. Anticoagulation indicated if score ≥2 in men, ≥3 in women. Subscript '2' denotes double weightage.*

016 TCD threshold MCA velocity for starting chronic exchange transfusion in HbSS children is _____ cm/s?

Harrison 22e Ch.438 p.3447

>200 cm/s

↳ *STOP trial: TCD-guided transfusion reduces first stroke risk by 92% in HbSS kids aged 2–16. Goal: keep HbS fraction <30%. STOP 2 showed velocities rebound if transfusion stopped.*

017 5-year ARR with CEA for asymptomatic carotid stenosis (ACAS/ACST) is ~_____%?

Harrison 22e Ch.438 p.3451

5–6% (≈1.2%/year)

↳ *Benefit only if perioperative stroke/death <3%. Natural history ~2%/year vs ~13%/year for symptomatic. Women benefit less (higher periop risk 3.6% vs 1.7%).*

018 Landmark trial establishing atorvastatin 80 mg for secondary stroke prevention?

Harrison 22e Ch.438 p.3449

SPARCL trial

↳ *SPARCL (NEJM 2006) showed 16% RRR in recurrent stroke with atorvastatin 80 mg in patients with recent stroke/TIA, irrespective of baseline LDL. JUPITER (rosuvastatin) = primary prevention in high CRP; TST trial supports LDL <70 mg/dL target.*

019 Symptomatic intracranial atherosclerosis (≥50% stenosis) post-stroke → secondary prevention regimen?

Harrison 22e Ch.438 p.3450

Aspirin + clopidogrel × 90 days, then aspirin

↳ *SAMMPRIS trial established aggressive medical therapy > stenting. Highest recurrence risk in first 3 months justifies short DAPT; prolonged DAPT (CHARISMA/SPS3) increases bleeding without added benefit.*

020 Contralateral hemiplegia (face/arm > leg) + global aphasia + ipsilateral gaze deviation + hyperdense vessel in sylvian fissure → occluded vessel?

Harrison 22e Ch.437 p.3429

Middle cerebral artery (MCA) stem

↳ *Hyperdense MCA sign = acute thrombus in proximal MCA on NCCT; eyes 'look toward the lesion' due to frontal eye field damage. Dominant-side involvement causes global aphasia (Broca + Wernicke).*

021 Contralateral leg>arm weakness + urinary incontinence + grasp/sucking reflexes + abulia → which artery?

Harrison 22e Ch.437 p.3431

Anterior cerebral artery (ACA)

↳ *ACA supplies medial frontal cortex including paracentral lobule (leg homunculus + bladder center) and cingulate (abulia). MCA spares leg; anterior choroidal causes triad of hemiplegia + hemianesthesia + hemianopia without cortical signs.*

022 Hemineglect + constructional apraxia localizes to which parietal lobe?

Harrison 22e Ch.437 p.3430

Non-dominant (right) parietal lobe

↳ *Gerstmann syndrome (acalculia, finger agnosia, R-L confusion, agraphia) = dominant LEFT parietal. Right parietal attends to both hemispaces; left attends mostly to right — hence left-sided neglect from right lesions.*

023 Elderly patient with atrial fibrillation develops acute focal cerebellar ataxia. Most likely cause?

Harrison 22e Ch.450 p.3533

Cerebellar infarction (cardioembolic, PICA territory)

↳ *AF → cardioembolism to posterior circulation; PICA most commonly involved. Cerebellar hemorrhage >3 cm is a neurosurgical emergency (suboccipital craniectomy) due to brainstem compression risk.*

024 Young patient with cervical ICA dissection on MRI fat-sat. Long-term therapy of choice?

Harrison 22e Ch.438 p.3446

Antiplatelet OR anticoagulation (CADISS: equivalent)

↳ *CADISS trial showed no difference between aspirin and warfarin for stroke prevention. Treat 3–6 months until vessel heals; recurrence <2%. Lifelong anticoagulation NOT indicated.*

025 Elderly hypertensive with sudden pure motor hemiparesis and small deep subcortical infarct — underlying vessel pathology?

Harrison 22e Ch.438 p.3446

Lipohyalinosis of small penetrating arteries

↳ *Chronic HTN damages 30–300 μm perforators supplying basal ganglia, IC, thalamus, pons. Contrast: amyloid angiopathy → lobar hemorrhage; GCA → large extracranial arteries.*

026 Preferred first-line DOAC for stroke prevention in nonvalvular AF (CHA_2DS_2-VASc ≥2)?

Harrison 22e Ch.438 p.3450

Apixaban 5 mg BID

↳ *ARISTOTLE trial: superior to warfarin for both stroke prevention and bleeding. Dose-reduce to 2.5 mg BID if ≥2 of: age ≥80, weight ≤60 kg, Cr ≥1.5 mg/dL. Reversal: andexanet alfa.*

027 In the ABCD2 score, the two components that carry _____ points each are unilateral weakness and duration ≥60 minutes?

Harrison 22e Ch.438 p.3448

2 points

↳ *Max score = 7. Score ≥4 warrants urgent admission/imaging. Mnemonic: Age(1), BP(1), Clinical(2/1), Duration(2/1), Diabetes(1). Focal motor deficit predicts highest short-term stroke risk.*

028 Ischemic stroke subtype with highest risk of hemorrhagic transformation?

Harrison 22e Ch.438 p.3444

Cardioembolic stroke

↳ *Spontaneous recanalization after embolus fragmentation causes reperfusion injury → petechial hemorrhages (HI-1/HI-2) usually benign; only PH-2 (>30% area, mass effect) is clinically significant and delays anticoagulation.*

029 Sudden coma + small reactive pupils + quadriparesis + hyperdense basilar artery on NCCT → diagnosis?

Harrison 22e Ch.437 p.3432

Acute basilar artery thrombosis

↳ *Hyperdense basilar artery sign = posterior circulation analog of hyperdense MCA sign. Mortality >85% untreated; thrombectomy window up to 24h (BASICS trial). Differentiates from pontine bleed (parenchymal hyperdensity, pinpoint non-reactive pupils) and CPM (subacute, hypodense pons).*

030 Malignant MCA infarct with DWI volume 300 mL + day-2 obtundation → next step?

Harrison 22e Ch.438 p.3440

Decompressive hemicraniectomy

↳ *Must be done ≤48h, before herniation. Reduces mortality ~50% (NNT=2). Evidence: pooled DECIMAL/DESTINY/HAMLET; DESTINY-II extended benefit to >60y but survivors often mRS 4.*

031 Young patient with cryptogenic stroke + DVT + large PFO → best long-term strategy?

Harrison 22e Ch.438 p.3445

Anticoagulation + percutaneous PFO closure

↳ *CLOSE, RESPECT, REDUCE trials: PFO closure reduces recurrent stroke (HR ~0.41) in young patients with large shunt and no alternative cause. Anticoagulation treats the DVT source; closure removes the conduit.*

032 Hypertensive patient with sudden global aphasia + right hemiplegia — lacunar or cortical stroke?

Harrison 22e Ch.438 p.3446

Cortical (MCA) stroke, not lacunar

↳ *Lacunar strokes spare cortex — NO aphasia, neglect, hemianopia, or seizures. Aphasia always implies cortical involvement (large-vessel MCA territory).*

033 40y, lacunar strokes + migraine with aura + subcortical dementia + symmetric anterior temporal WM lesions on MRI → diagnosis?

Harrison 22e Ch.438 p.3448

CADASIL (NOTCH3 mutation)

↳ *Anterior temporal pole + external capsule WM lesions are near-pathognomonic. Autosomal dominant; confirm by NOTCH3 testing or skin biopsy (granular osmiophilic material). Migraine with aura precedes strokes by years.*

034 Mechanism of dipyridamole as antiplatelet agent?

Harrison 22e Ch.438 p.3449

Inhibits PDE + adenosine uptake (↑cAMP)

↳ *Unique dual action raises intracellular cAMP, reducing aggregation. Combined with aspirin (Aggrenox) for secondary stroke prevention (ESPRIT, ESPS-2). Side effects: headache, hypotension from vasodilation.*

035 Asian patient on aspirin+clopidogrel DAPT after minor stroke has recurrent TIA despite adherence. Most likely reason?

Harrison 22e Ch.438 p.3449

CYP2C19 loss-of-function polymorphism

↳ *Clopidogrel is a prodrug activated by CYP2C19; 40-50% Asians carry LOF alleles (*2,*3). CHANCE-2 trial showed ticagrelor (direct-acting, CYP2C19-independent) superior in LOF carriers. FDA boxed warning exists.*

036 Young patient, cryptogenic stroke, normal echo/Holter/carotids → next step?

Harrison 22e Ch.438 p.3450

Prolonged rhythm monitoring (≥30 days/ILR)

↳ *CRYSTAL-AF & EMBRACE trials: prolonged monitoring detects paroxysmal AF in ~12–16% vs ~3% with 24–48hr Holter. Detection mandates switch from antiplatelet to anticoagulation.*

037 Most common cause of cardioembolic stroke worldwide?

Harrison 22e Ch.438 p.3444

Nonvalvular atrial fibrillation

↳ *Thrombus forms in left atrial appendage due to stasis; accounts for ~20% of all ischemic strokes. Risk stratified by CHA_2DS_2-VASc; DOACs preferred except in mechanical valves/moderate-severe MS.*

038 Greatest CEA benefit: symptomatic ICA stenosis ≥_____%, operated within _____ weeks?

Harrison 22e Ch.438 p.3450

70%; 2 weeks

↳ *NASCET: 2-yr ipsilateral stroke risk 26%→9% (ARR ~17%, NNT ~6). Perioperative stroke/death must be ≤6% (symptomatic) or ≤3% (asymptomatic). Mnemonic: '70+ within 2 saves strokes for you.'*