

Really Super Terrifying...

Stroke Mimics

Debbie Yi Madhok, MD

Associate Professor of Clinical Emergency Medicine and
Neurology, University of California San Francisco

Disclosures

- Funded by Abbott Laboratories to advance development of Abbott's TBI test for diagnosis and determination of severity of brain injury in adults and children

Agenda

- Stroke localization in 5 minutes
- Stroke definitions
- Mimics, clues, and caveats
 - Seizure
 - Migraine
 - Peripheral weakness
 - Functional disorder

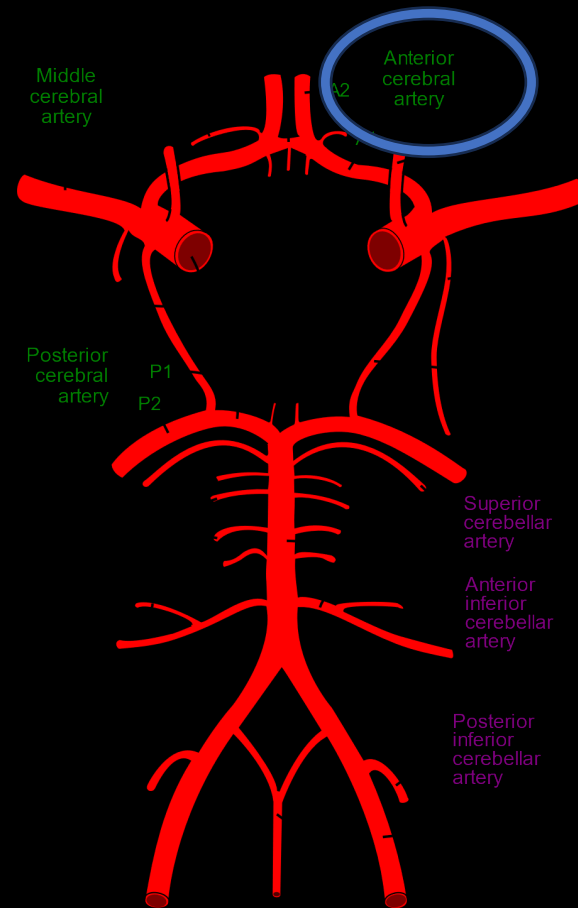
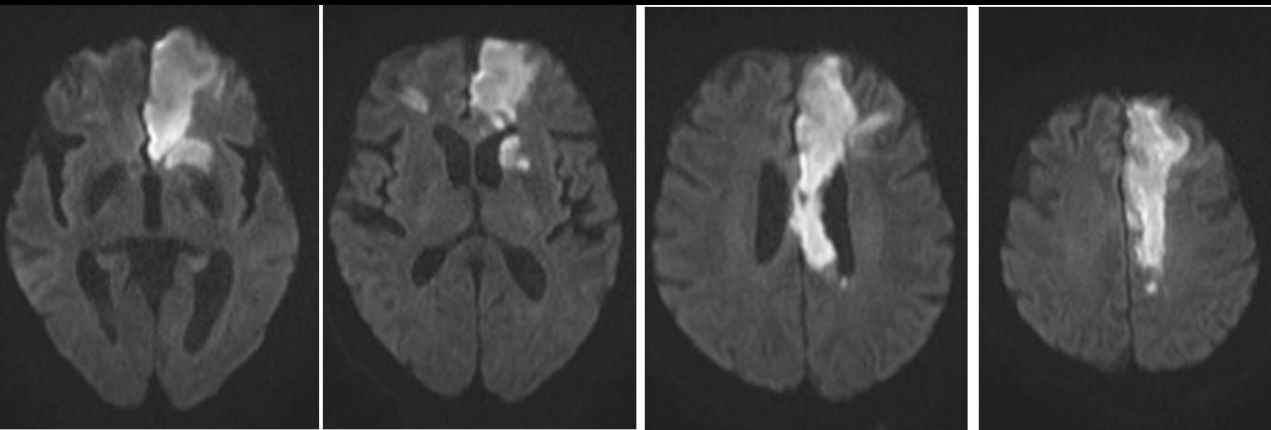
MIMIC

CLUE

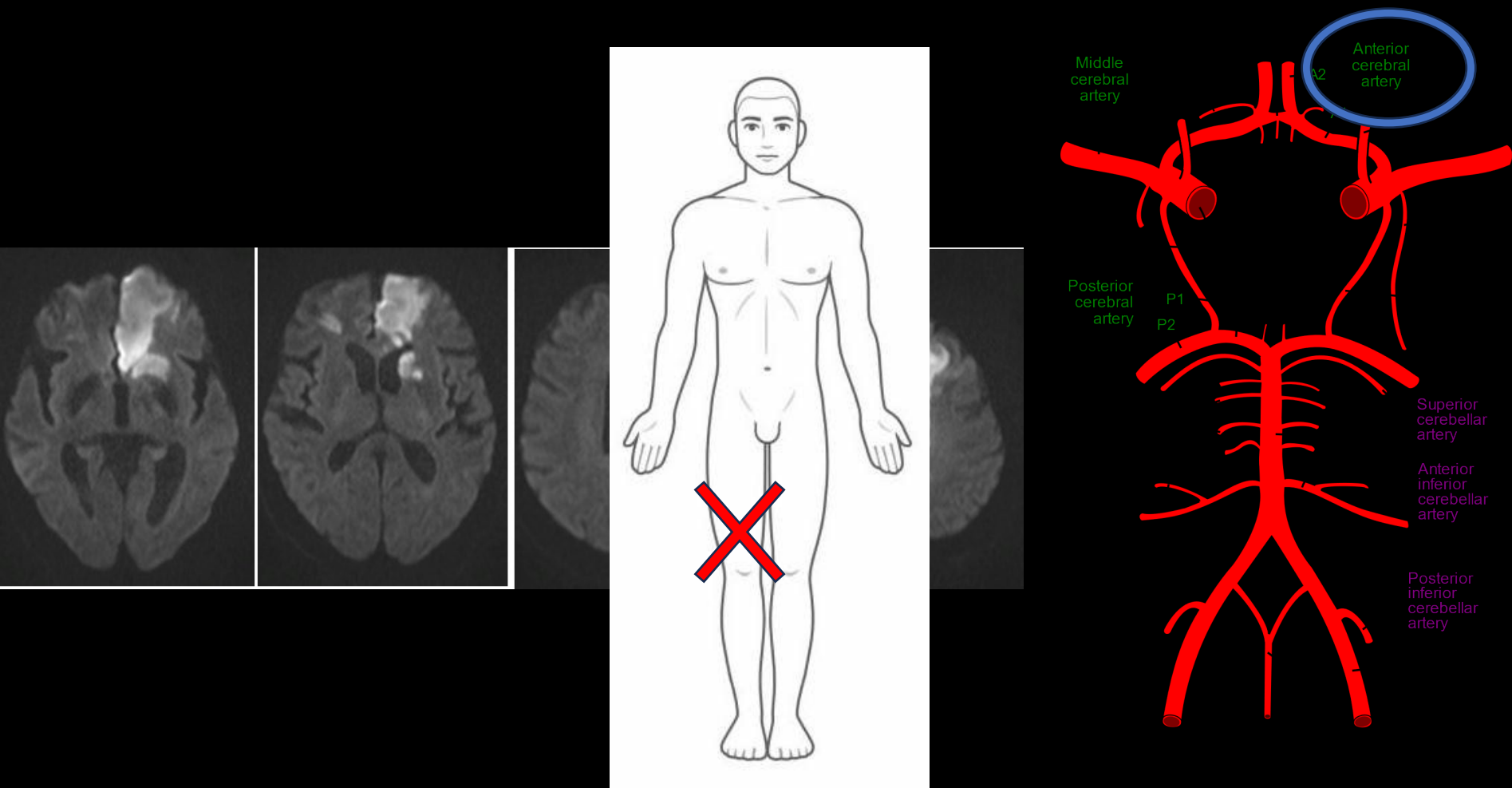
CAVEAT

Stroke Localization in 5 Minutes

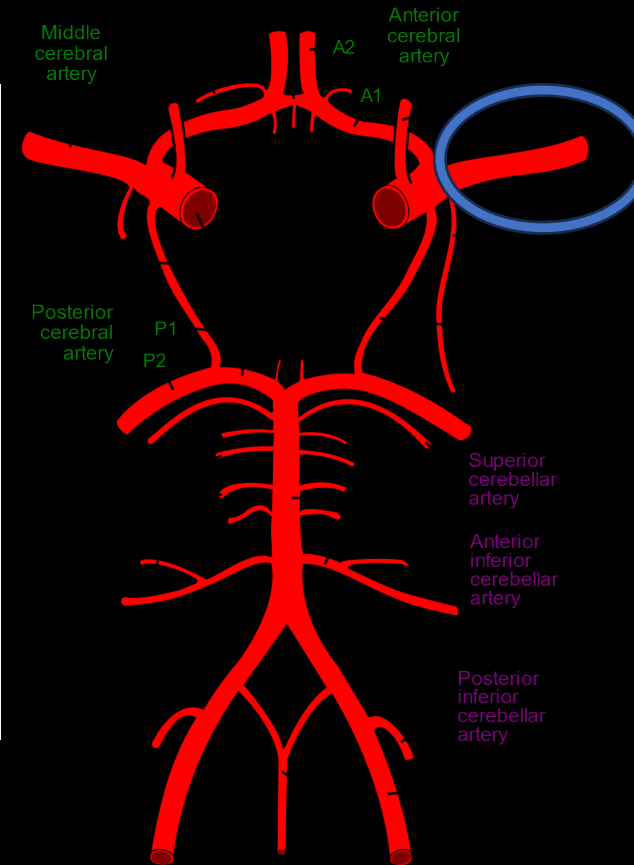
Anterior Cerebral Artery Stroke



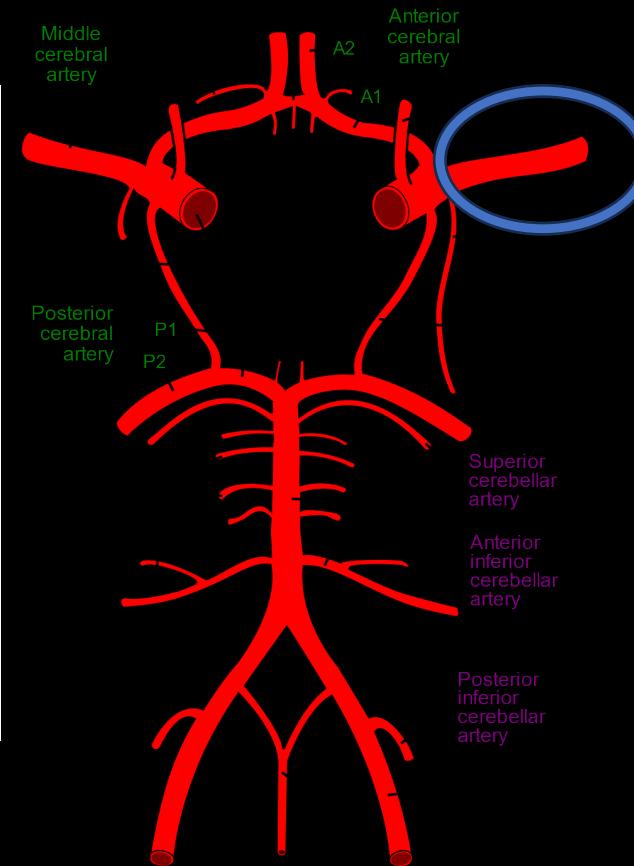
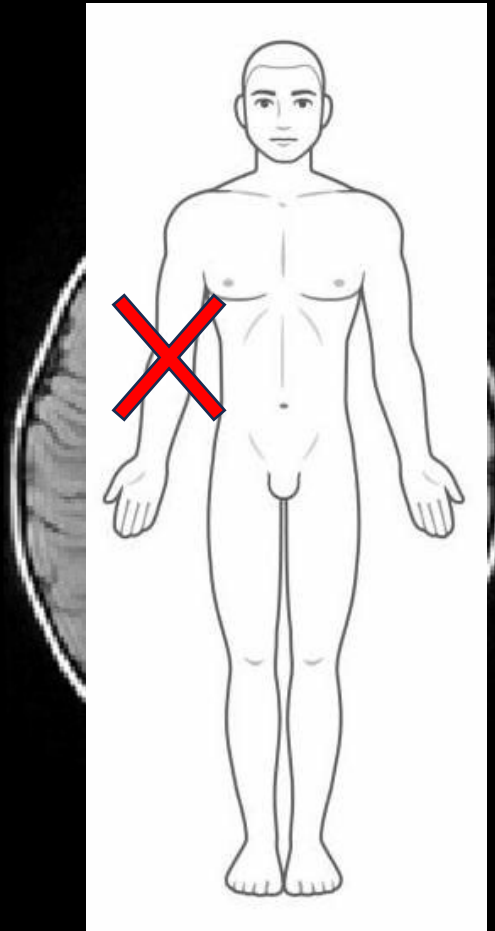
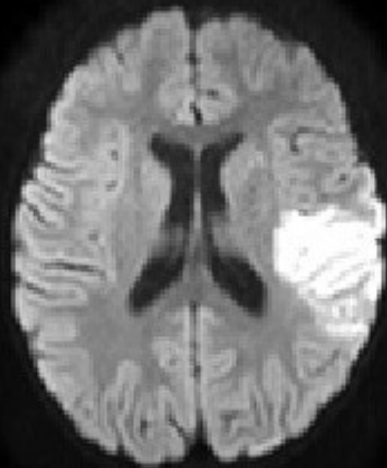
Anterior Cerebral Artery Stroke



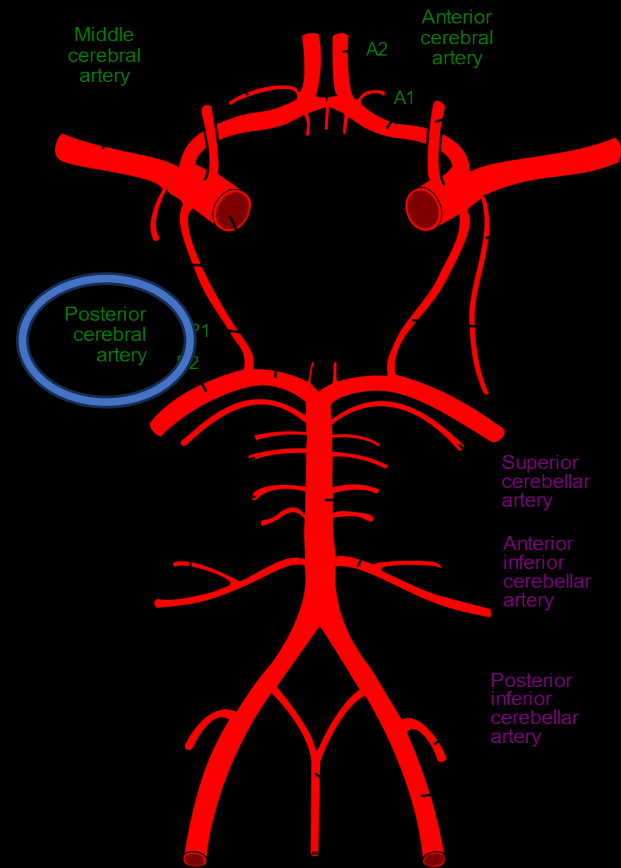
Middle Cerebral Artery Stroke



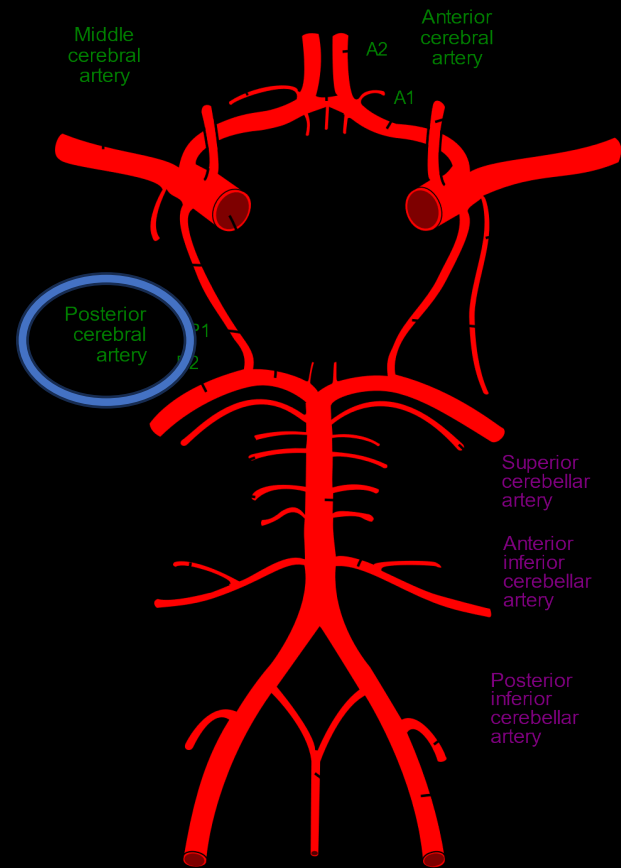
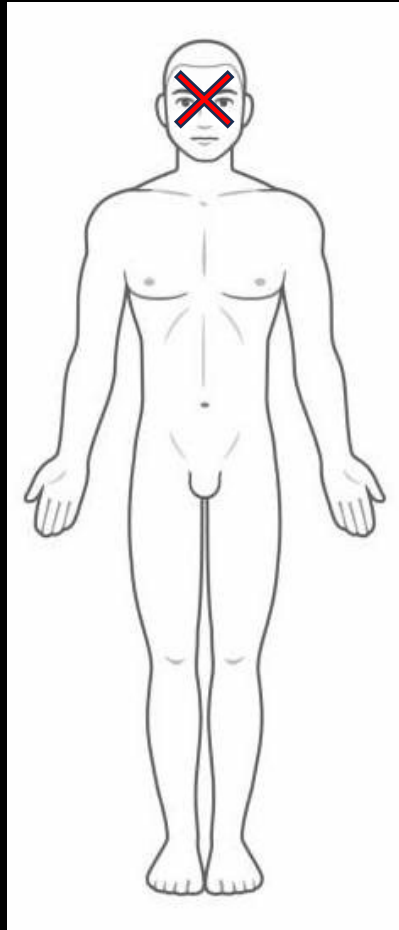
Middle Cerebral Artery Stroke



Posterior Cerebral Artery Stroke



Posterior Cerebral Artery Stroke





Lacunar Strokes



PURE MOTOR

PURE SENSORY

BOTH

Brainstem Strokes

- Just remember: **CROSSED SIGNS**

What is an Acute Stroke?

- Sudden
- Focal neuro symptoms
- Referable to a vascular territory
- Maximal intensity at onset

Seizure

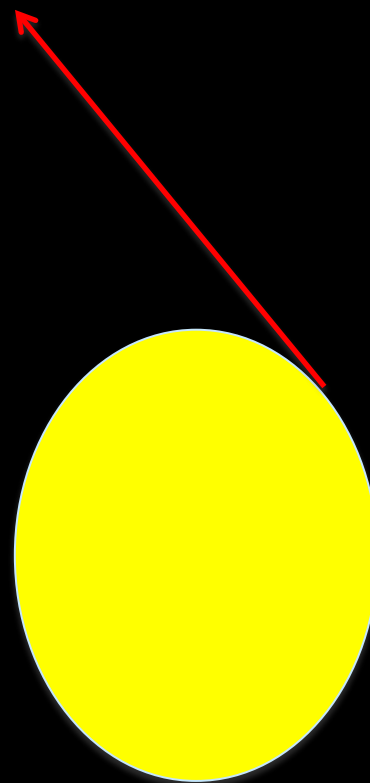
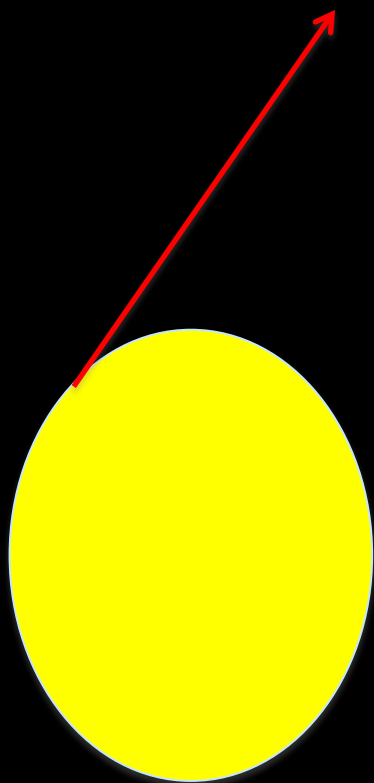
Helpful clues

- Known h/o seizures
- Positive symptoms
- Recurrent ED presentations
- Rapidly improving

How can we tell the difference

- MRI
- EEG

Clue



But...

- Acute stroke can have seizure at onset (3%)

Migraine

Clues

- Aura = negative symptoms
- Migraine focus starts small
- Marches outwards (progressive onset)

Migraines

Clues:

- Young patients
- No risk factors
- Marching onset
- Stroke symptoms followed by headache

But...

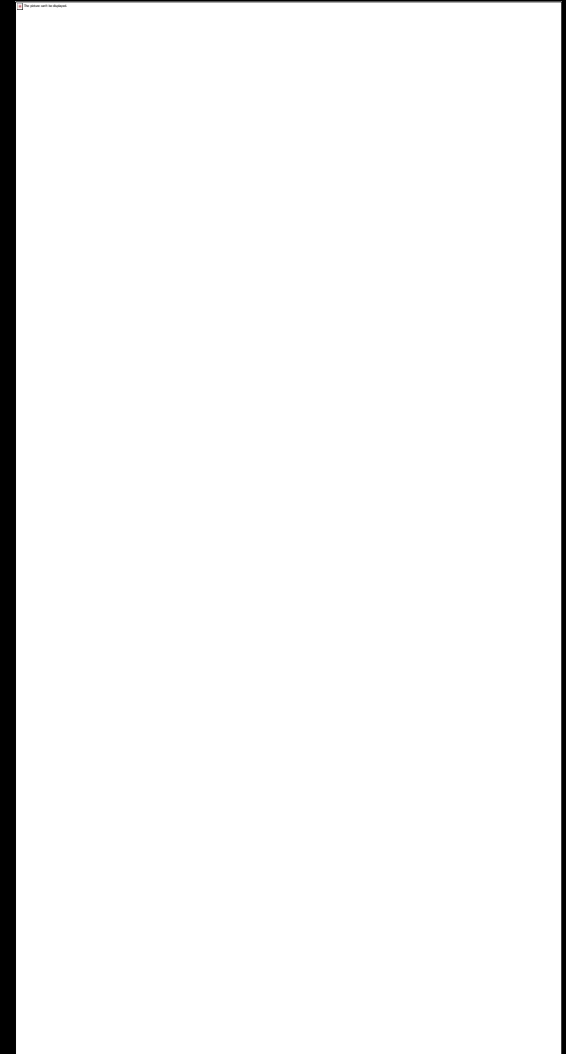
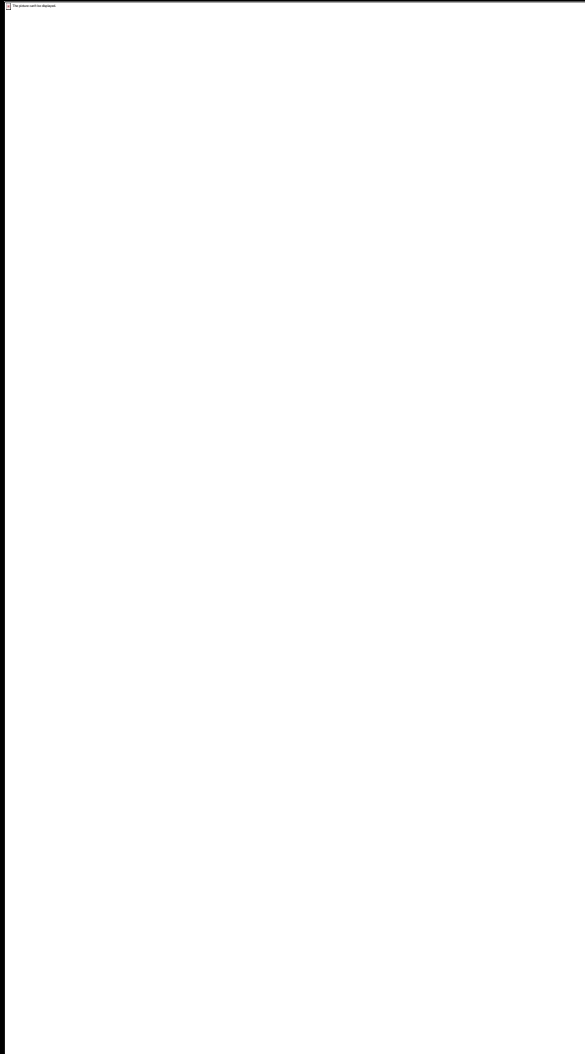
- Headache in stroke (6-44%)
- Bad things that can cause a stroke: dissection, RCVS, PRES, CVST

Migraine

Diagnosis:

- MRI

Bell's Palsy



Hand weakness

Radial neuropathy:

- Sensory loss over dorsal hand, maybe up to posterior forearm

Ulnar neuropathy:

- Sensory loss & paresthesias over digits 4 & 5
- Might have elbow pain
- Could have weakness with finger & wrist flexion

Functional Disorder

Clues:

- Stuttering speech
- Inability to speak but preserved writing/texting

Functional Disorder

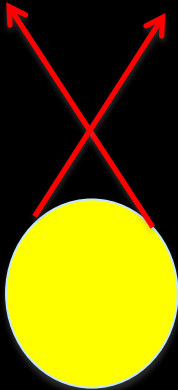
Clues:

- Poorly localized weakness:
 - Hemibody but including upper face
 - Arm and leg but no facial weakness
 - Monocular vision loss with ipsilateral weakness
 - Complete anesthesia of limb or limbs

Tricky Tips

- Give-away weakness: oppose in motor testing
- Arm drift without pronation
- Hoover's sign: if you flex hip, opposite leg needs to extend at same time – put hand under opposite heel
- Bring thighs together: can't adduct one leg but not other
- Vibratory splitting: frontal bone is continuous, need to have vibratory sense on both sides of forehead

Summary

- Strokes are sudden, focal, (usually) referable to vascular territory and (usually) maximal intensity at onset
 - Seizures
- 
- Migraine: marching onset, loss of function then headache

Summary

- Bell's palsy:



- Functional disorder: try Hoover's sign!

Thank you!

Questions?

Debbie.Madhok@ucsf.edu

