

White Matter Disorders

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Objectives

- Following this session the participant:
 - Will have a pattern-based approach to adult white matter disorders
 - Will recognized classic and important appearances of white matter disorders
 - Will be able to differentiate multiple sclerosis and small vessel disease from their mimics

Disclosures

- None.

Pattern Approach

- Distribution/Location
 - Diffuse vs focal vs multifocal, (a)symmetric
 - Periventricular, juxtacortical, sparing U-fibres
 - Involving BG, GM, brainstem, CC
- Ancillary findings
 - Enhancement, restricted diffusion, hemorrhage, response to steroids, progression/natural history

Pattern Recognition

- Classic patterns
- Common pathologies and mimics
 - MS and mimics
 - SVD and mimics

Diffuse

- Symmetric
- Asymmetric

Focal

Multifocal

Periventricular

- MS
- SVD
- HIVE
- ALD

Juxtacortical

- MS
- PML
- Venous congestive encephalopathy
 - Hemorrhage, also GM

Sparing U-fibres

- SVD

Anterior Temporal

- CADASIL
- Myotonic Dystrophy
- MS

Basal Ganglia

- Mitochondrial?
- ADEM

Gray Matter

- CVA
- Venous congestive encephalopathy
- PRES
- Encephalitis/HSV

Brainstem

- MS
- LGG
- CLIPPERS
- CPM/OD
- HOD
- Behcet
- Listeria rhombencephalitis
- WNV

Corpus Callosum

- Reversible Splenial Lesion
 - MERS, EBV
 - Anti-epileptic medication
- Machiafava-Bignami
- PCNSL, GBM

Ancillary Findings

- Enhancement
 - ALD, MS, Lyme
- Restricted Diffusion
 - MS, OD/CPM, RSL
- Hemorrhage – CAA
- Mass Effect – LGG, HOD
- Response to Steroids – PCNSL, TDL
- Progress/Natural History

Classic Patterns

- CADASIL
- MS
- PML
- HSV
- PRES
- ALD
- Chasing the Dragon

SVD vs Mimics

- Vasculitis
- CAA
- MELAS

MS vs Mimics

- Lyme
- Sarcoidosis
- SVD
- ADEM
- DAI