

## Poster presentations

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### CLINICORADIOLOGICAL DIAGNOSIS OF CEREBRAL AMYLOID ANGIOPATHY-RELATED INFLAMMATION (CAA-ri) - A NON-INVASIVE APPROACH TO DIAGNOSIS AND MANAGEMENT

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**Background:** Cerebral Amyloid Angiopathy (CAA) is an age-related disorder characterised by deposition of beta-amyloid protein in the walls of small and medium cortical vessels leading to increased risk of intracranial bleeding. CAA-Related Inflammation (CAA-ri) is an under recognised subtype of CAA potentially responsive to immunosuppression and traditionally diagnosed by invasive brain biopsy. CAA-ri is associated with rapid cognitive decline but shows reversibility for some when treated with immunosuppression. We present the case of an 82 year old lady who presented with first seizure, a history of notable cognitive change and neuroimaging consistent with probable CAA-ri.

**Methods:** Validated clinicoradiological diagnostic criteria for CAA-ri were applied to MRI T2 FLAIR and SWI sequences. CSF, APOE genotyping, EEG and cognitive testing were performed. Interdisciplinary perspectives were sought from Neurology, Neurosurgery and Infectious Diseases colleagues. Consensus opinion opposed brain biopsy on strength of imaging evidence and pulsed intravenous steroid treatment was initiated. BP, anti-convulsant and bone protection were optimised and anti-thrombotics avoided. Repeat imaging and cognitive testing were repeated after four months.

**Results:** MRI T2-FLAIR revealed an asymmetric multifocal distribution of cortical and subcortical white matter hyperintensities (WMH) with leptomeningeal enhancement while SWI showed extensive multifocal microhaemorrhages with confluent haemorrhage in the right frontal and temporal regions. EEG demonstrated right frontal theta slowing and absence of epileptiform activity. CSF analysis reported raised protein at 53mg/dl. Normal WCC. Formal cognitive testing with ACEIII revealed a score of 79/100. EPOA was advised.

**Conclusion:** Clinicoradiological diagnosis of CAA-ri permits early initiation of immunosuppressive therapy and avoids invasive brain biopsy. In the absence of clinical suspicion and blood sensitive imaging sequences CAA-ri may be misdiagnosed as Acute Ischaemic Stroke or TIA where the addition of anti-thrombotic therapy could cause harm while early medical management offers potential reversibility.