Cerebrospinal Fluid Eosinophils in Pediatric Myelin Oligodendrocyte Glycoprotein Antibody-Associated Disease (MOGAD)

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BACKGROUND

- Eosinophils in CSF are uncommon
  - Associated with parasitic infections
- Eosinophils present in 10 – 15% of acute CSF samples from patients with AQP4+ NMO
- Eosinophilic granulocytes are seen in acute NMO lesions
- Eosinophilic infiltration is not thought to be typical of MOGAD
- Only seen in up to 7% of samples in prior studies

METHODS

- Retrospective chart review
- 46 pediatric patients at Children’s National Hospital
- Patients with positive serum MOG-IgG
- Analyzed with descriptive statistics

RESULTS

Demographics

- Mean age: 11.7 years
- Sex: Male: 39/44 (43%) Female: 25/44 (57%)
- Racial Group: White/Caucasian: 25/39 (64%) Black/African: 13/39 (33%) Asian: 1/39 (3%)

MOGAD Phenotype

- 46 pediatric patients with positive serum MOG-IgG analyzed
- 2 patients excluded due to MS diagnosis
- 44 patients included in analysis

CSF Eosinophils

- Eosinophils present: 12/36 (33%)
  - Mean: 2.25%
  - Median: 2%
  - Mode: 1%
  - Range: 1 – 18%

CONCLUSIONS

- Eosinophils were found in 1/3 of pediatric MOGAD patients in this retrospective cohort
- Rate of CSF eosinophil positivity is significantly higher than previous cohorts
- May be higher than rates reported in AQP4+ NMO
- Findings may facilitate more prompt diagnosis and treatment for MOGAD

REFERENCES