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## An IgG marker of tuberculous meningitis detected with the indirect immunofluorescence assays for AQP4-IgG

**Yanqing Feng**

Department of Neurology, The First Affiliated Hospital of Sun Yat-sen University, China

IgG/anti-aquaporin 4 (AQP4) antibodies are present in patients with tuberculous meningitis (TBM) and to compare different assays for assessing the prevalence of anti-AQP4 antibodies in patients with TBM and NMO spectrum disorders.

**Methods:** Both the conventional NMO-IgG assay, based on tissue-based indirect immunofluorescence assay (tissue-based IIFA), and an AQP4-transfected cell-based assay were used in parallel to test masked serum and cerebrospinal fluid (CSF) samples from patients with NMO spectrum disorders and TBM.

**Results:** Serum and CSF NMO-IgG were not exclusively found in patients with NMO spectrum disorders. The antibody was also detected in most of the serum samples from TBM patients, and titers of NMO-IgG in TBM patients were higher than that in those with confirmed NMO and longitudinally extensive transverse myelitis (LETM). Seropositivity rates for NMO-IgG were 76.1% (35/46) for TBM patients, 62.5% (15/24) for NMO patients, and 59.1% (13/22) for LETM. cell-based assay revealed TBM sera yielded a same immunotaining patterns of binding with anti-AQP4 antibody when tested by HEK293 cells with AQP4 expression. While TBM sera demonstrate different staining patterns with NMO sera when measured by the cell lines with GFP-AQP4 expression in this study, showing no binding and weaker binding when performing the assay in nonpermeabilized cell conditions.

**Interpretation:** An IgG marker with structure same or similar to anti-AQP4 antibody was found in TBM patients. This IgG may reflect a CNS mycobacteria-initiated immune response.

### Biography

Yanqing Feng received his PhD in 2002 at SUN Yat-sen University, China. His research academic activity is mainly on infection and immunity. He made several achievements in prospective clinical trials. Prof. Yanqing Feng has more than 20 publications.

fyqgz@vip.sina.com