



CYTOKINE ELEVATIONS IN ADHESIVE ARACHNOIDITIS (AA)

A cytokine is a protein produced by white blood cells when there is inflammation in the body. Elevations of cytokines in the blood represent serious inflammation and autoimmunity. If a person is in a treatment designed to reduce inflammation such as is the case with adhesive arachnoiditis, elevated cytokines mean the treatment is not totally effective, and that the disease is producing inflammation, tissue degeneration and pain.

Our Study: We have recently analyzed the cytokine blood levels in 29 patients with AA. All patients were in active treatment and had normal levels of C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR). All had elevated Epstein-Barr virus antibodies indicative of previous infection (reactivation) and autoimmune potential.

Results: The majority, twenty of the 29 (689%), had one or more elevated cytokines. The most common were interleukins 10, 6, and receptor 2.

Significance of This Study: This study supports the long-held view that AA is a serious chronic inflammatory disease that needs aggressive treatment. It also suggests that autoimmunity may be a key factor in producing the chronic inflammation of AA. All the patients in this study had elevated EBV antibodies, so it is likely that the virus played a key role. These patients all had normal values for the common inflammation markers, ESR and CRP. This means that a cytokine blood panel is far more accurate in determining if chronic, uncontrolled inflammation is present in AA.

Should AA Patients Have a Cytokine Blood Panel? Not necessarily, but it is an option. The test is expensive, and few laboratories do their own testing. This study was done to support the protocols now being used to treat AA which are based on suppression of inflammation and autoimmunity.

Summary: This cytokine study confirms the long-held belief that AA is a serious chronic inflammatory disease, and that treatment of AA must be targeted at suppression and control of inflammation and autoimmunity.

Reference: Hsu, et al. Expression of interleukin-10 activity by Epstein-Barr virus protein BCRF1. *Science* 1990;250:830-832.