



## **NON-ADHESIVE ARACHNOIDITIS (ARC)** **A HIDDEN CAUSE OF PAIN**

Adhesive arachnoiditis (AA) is the fusion of cauda equina nerve roots with the arachnoid which is the membrane that is the inner lining of the spinal canal cover. This fusion can only take place when the arachnoid membrane is inflamed and produces adhesions which glue the cauda equina nerve roots to it. Non-adhesive or plain arachnoiditis (ARC) must be present before AA can take place. In fact, ARC is more common than AA.

**THE CLINICAL PICTURE:** ARC pain can be mild to severe and not respond well to the usual anti-inflammatories, topical treatments, or chiropractic measures. Sciatica commonly occurs with lumbar ARC and cervical ARC is worsened by arm and neck movements. ARC is commonly associated with herniated or degenerated discs.

**THE PROBLEM:** Plain ARC does not have a specific MRI finding like AA which is identified by clumps of nerve roots that are attached to the arachnoid. The only MRI finding of ARC is thickening of the canal cover which is a subjective call by the radiologist. In the cervical neck, ARC narrows the spinal fluid flow channel which also is a non-specific MRI finding. Many times, a person with ARC has severe pain but is told they don't have AA or another pain-causing abnormality on their MRI. Unfortunately, ARC can be a "hidden" source of great pain and disability.

**HOW IS ARC DIAGNOSED?** The pain is usually constant. It can seemingly occur "out of nowhere" or it can occur after a spinal tap, epidural, surgery, or trauma. Blood tests may show elevated inflammatory markers. A 6-day Medrol® Dose Pak will often bring some relief. An experienced radiologist may report thickening of the spinal canal cover. Importantly, when no other cause of pain can be identified, ARC should be considered.

**RELATIONSHIP TO EPSTEIN-BARR VIRUS (EBV):** Reactivation of the virus may permit it to invade the arachnoid membrane in either the cervical or lumbar spines. The autoimmunity created by the virus can also attack the arachnoid. Either way, EBV can initiate inflammation and chronic pain in the arachnoid membrane. Anyone with constant neck or lumbar pain is advised to obtain an EBV blood panel.

**TARLOV CYSTS:** ARC inside the spinal canal, usually in the lumbar-sacral region, may weaken the arachnoid and create cysts. Persons with a connective tissue/collagen disorder such as Ehlers-Danlos Syndrome are more prone to develop ARC and cysts.

**GOOD NEWS:** Persons with constant neck or back pain should attempt to diagnose ARC as soon as possible. The same 3-component medical protocol used for AA is recommended to hopefully prevent the development of AA.