

WHY ADHESIVE ARACHNOIDITIS (AA) CAUSES SPINAL FLUID LEAKS

In 1927, Dr. Byron Stookey, a New York neurosurgeon, reviewed all reported cases of AA. His major finding was that adhesions which originated in the arachnoid layer of the spinal canal covering may also entrap the dural layer as well as nerve roots and/or spinal cord. This process develops a mass inside the spinal canal which may extend into the epidural space.

GROSS MISUNDERSTANDING: Adhesions are fibrous bands or structures which abnormally adhere body tissues to one another. AA of the lumbar-sacral spinal canal is a disease in which adhesions abnormally glue cauda equina nerve roots to the arachnoid-dura covering of the spinal canal. Although AA is named for the inner layer (arachnoid) of the spinal canal cover, its adhesive mass may also involve the outer layer, the dura. Adhesions and inflammation damage the arachnoid-dural covering and makes it porous and permeable so that spinal fluid can leak out and, conversely, any fluid in the epidural space can enter the spinal canal.

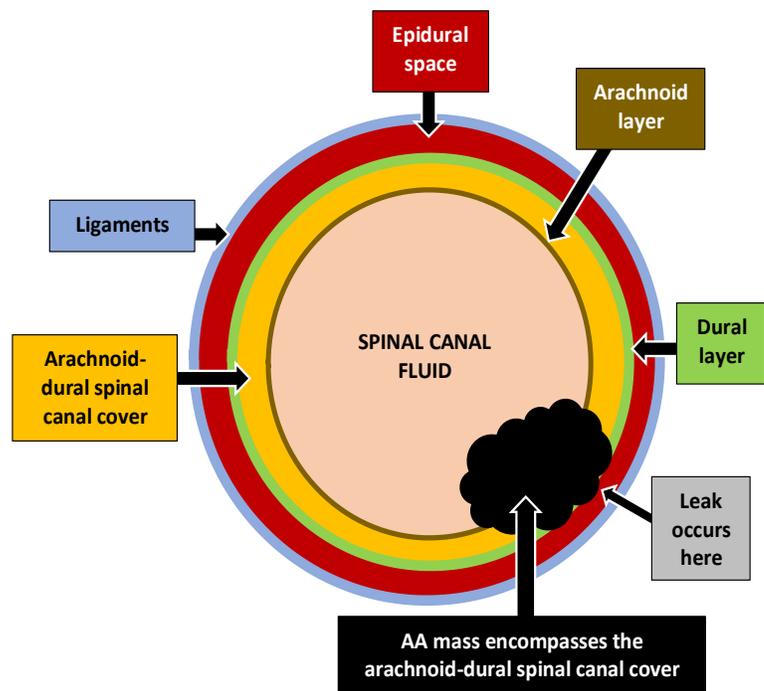
INFLAMMATION NOT WELL UNDERSTOOD IN 1927: Stookey and his colleagues believed the adhesions were solely caused by infections. The infections blamed were gonorrhea, typhoid, influenza, encephalitis, and meningitis. Today we know that inflammation may occur from many non-infectious causes including autoimmunity, collagen deterioration, friction or compression, and traumatic injury.

MRI CONFIRMATION: Our research confirms the findings of Dr. Stookey. If AA involves the dural layer, spinal fluid leakage, if significant, can be seen on the new contrast MRI. Old leakage trapped in tissues outside the spinal canal can often be seen.

AA LEAKAGE DIAGRAM OF SPINAL CANAL

The AA mass may enlarge thru the dura and even into the epidural space. Leaks may occur at this point.

NOTE: The actual size of the spinal canal is about the size of one's index finger.



Reference: Stookey B. Adhesive spinal arachnoiditis simulating spinal cord tumor. *Arch Neurol and Psych* 1927;17:151-164.

Published as a public service by the Arachnoiditis Research & Education Project of the Tennant Foundation
336-338 S. Glendora Ave., West Covina, CA 91790-3043
Phone: 626-716-2689 Fax: 626-919-7497
E-mail: tennantfoundation92@gmail.com www.arachnoiditishope.com

This information is not intended to diagnose, treat, cure, or prevent any disease, as this information is for educational purposes only, and is not a substitute for medical advice, diagnosis, or treatment. Please refer to your local qualified health practitioner for all medical concerns.