March 19, 2015

FOR IMMEDIATE RELEASE

Stellate Ganglion Block Showed No Significant Benefit for Post-Traumatic Stress Disorder in Controlled Trial

March 19, 2015, NATIONAL HARBOR, Md. – A sympathetic nerve block that has shown promise for treatment of post-traumatic stress disorder (PTSD) performed no better than sham treatment in a randomized controlled trial, new research shows. However, patients who received a repeat treatment saw greater improvement, the investigators reported today in a scientific poster at the 31st Annual Meeting of the American Academy of Pain Medicine.

“We were disappointed to find that, under more controlled conditions, we could not reproduce the positive findings that had been reported in case series and in the popular press,” said Robert McLay, M.D., Ph.D., lead author and part of the collaborative team of researchers from the University of California–San Diego, the Naval Medical Center–San Diego and the Naval Hospital of Okinawa, Japan.

Rapid, dramatic and long-lasting improvements in PTSD symptoms have been reported after stellate ganglion block (SGB) but are limited to anecdotal evidence and uncontrolled trials. The stellate ganglion is a ball of nerves in the neck, through which pass many fibers that regulate the “fight or flight response,” McLay explained. These nerve fibers also sometimes mediate pain signals, which may be blocked by injecting a local anesthetic, similar to the Novocain used in a dentist’s office. Some pain doctors noticed that afterward, patients’ psychological symptoms improved, including depression, nightmares, flashbacks and anxiety.

Though the testimonials are impressive and the use of SGB for PTSD has flourished, the hard evidence via randomized clinical trials was lacking. This study set out to formally test the efficacy of SGB for PTSD with funding through the Bureau of Medicine and Surgery, an agency that manages healthcare activities for the U.S. Navy and Marine Corps.

Of 42 military service members with PTSD, 27 were randomized to receive SGB and 15 to receive a sham injection. An independent assessor measured PTSD severity at one week after the procedure and again at one month in a double-blind study design. Patients who still met PTSD criteria could receive a second SGB or crossover from sham to active treatment. The investigators also measured pain, depression, anxiety, cognitive function and disability.

-More-
Results showed PTSD symptoms improved significantly for both groups after treatment; however, there was no statistical difference between SGB and sham. Greater improvements were seen after a second SGB treatment than after the first, the research team reported.

“The most obvious explanation would be that the previously-reported benefits for PTSD were attributable to placebo effect,” McLay said. “Alternatively, it is possible that only particular people with PTSD respond well to the SGB treatment, or that small variations in how the technique is performed result in different outcomes for PTSD.”

PTSD is a potentially debilitating condition that appears after psychological trauma. It is often perceived as a military problem, having been described by names such as “shell shock” or battle fatigue, but can occur in service members and civilians. Most symptoms of PTSD resolve; however, when the full syndrome is present and symptoms have persisted for several months, PTSD can cause impairment over a lifetime, McLay said.

Although the current results do not support SGB for PTSD, given that the treatment does have some risks, the avenue of research will continue. McLay voiced the wish to work with others who experienced or observed more positive results.

If it does work, SGB is almost the ideal treatment, he said, because it is fast, easy to perform and lacks any stigma that may still cling to psychotherapy or psychiatric medications.

“It is important to remember that whether SGB works for PTSD or not, there are other options available,” McLay emphasized. “Those who suffer from PTSD symptoms should seek treatment.”

Poster 126 – A Randomized, Double-Blind, Placebo-Controlled Trial of Stellate Ganglion Block in the Treatment of Post-Traumatic Stress Disorder

About AAPM
The American Academy of Pain Medicine is the premier medical association for pain physicians and their treatment teams with over 2,500 members. Now in its 32nd year of service, the Academy’s mission is to optimize the health of patients in pain and eliminate pain as a major public health problem by advancing the practice and specialty of pain medicine through education, training, advocacy and research. Information is available on the Academy’s website at www.painmed.org.