SOUTHWEST
Spine & Sports

The Incidence of Intravascular Needle Placement While Performing Medial Branch Nerve Blocks in the Lumbar Spine

A significant percentage of patients experiencing chronic cervical and/or low back pain may be secondary to facet joint (zygapophsial joints or z-joints) etiology. This percentage has been reported to be up to 52%. This mechanical low back pain may be caused by either degenerative changes or whiplash injuries, such as a MVA. This source of back/neck pain is often overlooked by many physicians. A medial branch nerve block (MBB) is a diagnostic test used to rule out if z-joints are the pain generators. This simple outpatient procedure is performed in an ambulatory surgery center. This test is used to anesthetize the facet joint nerves and observe if there is pain relief during the diagnostic period.

Recently, some providers have started to use ultrasound guidance to perform MBBs. However, the physicians at Southwest Spine and Sports (SWS) believe this method lacks the ability to verify exact safe needle placement. Without an accurate needle placement this procedure runs the risk of the anesthetic agent missing its intended target and thereby producing inaccurate results.

The providers at SWS use x-ray-like guidance known as fluoroscopy to perform all MBB procedures as it has been shown to increase safety and accuracy. This was a result of a recent study performed by several of our providers. This trial documented the incidence of intravascular needle placement by recording the vascular uptake of contrast, during fluoroscopically guided MBBs in the lumbar spine. This trial involved contrast being injected under live fluoroscopy during 662 MBB procedures. The anesthetic agent was only administered when vascular flow was not seen. The results showed the overall rate of intravascular needle placement was 11.6% in the lumbar spine. Without the verification of the needle placement using contrast and fluoroscopy the rate of intravascular needle placement could have been significantly greater. The study therefore concluded that performing MBBs without fluoroscopic confirmation of contrast flow and needle placement would lead to incorrect diagnostic data including false negatives.

For this reason, Southwest Spine and Sports only performs fluoroscopic guided MBB with contrast to ensure patient safety and accuracy.

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