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"Evaluation of Medial Branch Blocks for Lumbar Facet Joint Radiofrequency Ablation: What is the Role of the Second Diagnostic Block?"

Lumbar medial branch (LMB) radiofrequency ablation (RFA) is a commonly performed procedure to treat facet joint-mediated pain. One of the challenges associated with LMB RFA is appropriately selecting patients for the procedure. Currently, patient history, physical examination, and diagnostic studies inadequately select patients for RFA. Therefore, diagnostic local anesthetic blocks are often recommended, yet the type and number of blocks needed to appropriately select patients for LMB RFA are debated. Success rates have been shown to be higher when dual blocks are employed; however, there are additional costs, humanistic factors, and risks of excluding individuals that may benefit from RFA. The purpose of this study is to further understand the value of the second block to provide relevant prognostic data for appropriately selecting patients for RFA.

Following IRB approval, a retrospective chart review was conducted on 617 patients who underwent at least one lumbar medial branch block (MBB) procedure without steroids from September 2013 to June 2019. A successful block was defined as resulting in ≥50% pain relief with the patient being satisfied with the degree of pain relief provided during the block. Patient dissatisfaction was defined as when a patient received ≥50% pain relief following the MBB, but the degree and/or duration of relief was not satisfactory for the patient to proceed to the second block.

More than half (54%) of patients had a successful first block. 73% of patients had a successful second block. Among the categories of pain relief from the first block, only patients with >70% pain relief from the first block experienced significantly greater pain relief and satisfaction in the second block. Patients with <50% and 50-70% pain relief from the first block did not experience significantly greater pain relief in the second block.

A second diagnostic MBB could be deemed valuable if it significantly alters patient selection for RFA and improves clinical outcomes, but this benefit would have to be weighed against associated additional healthcare costs and the added humanistic burden of having a patient undergo a second block. In individuals experiencing >70% pain relief with the first block, a second block did not significantly alter the selection of patient for RFA (approximately 80% had a positive second block), suggesting that in this subgroup a second block may not add additional diagnostic information.