## Letters to the Editor

## **Comparison of Thoracic versus Lumbar Gray Ramus Communicans Nerve Block in the Treatment of Painful Osteoporotic Vertebral Compression Fracture**

To the Editor:

At the Specialty Clinics of Georgia we have been evaluating the comparative efficacy of the Gray Ramus Communicans Nerve Block for the treatment of painful osteoporotic vertebral compression fracture. The relative frequency of Thoracic and Lumbar fractures being equal, we began to ask the question why was the utilization of the Gray Ramus Communicans Nerve Block more frequent for a lumbar vertebral compression fracture. The obvious answer was the risks associated with Thoracic placement and the resultant clinical bias. To empirically evaluate the efficacy and safety of the Gray Ramus Communicans Nerve Block in both thoracic and lumbar compression fracture we performed a retrospective analysis of 31 lumbar and 15 thoracic Gray Ramus Communicans Nerve Blocks.

This center's pain management department has routinely performed the Gray Ramus Communicans Nerve Block to treat refractory, painful osteoporotic vertebral compression fracture (OVCF). This approach is often the last option for these patients who have failed to respond to conservative therapy, and the procedure has proven to be efficacious with no significant complications having occurred to date. Although lumbar OVCF is more common, thoracic OVCF is generally just as debilitating. There exists however the potential for pneumothorax complicating the thoracic approach that brings into question the risk vs. benefit ratio. We performed our retrospective analysis on 31 lumbar and 15 thoracic Gray Ramus Comunicans Nerve Block's chosen randomly from our database of procedure recipients. All subjects had been referred to a pain management center, and had failed to respond to conservative analgesic therapy. The average follow up time was 9 months. Three outcome parameters

were evaluated: patient and MD reported pain scores (scale 1-10), and overall patient satisfaction (low, medium, high). Average patient reported pain score improvements with Gray Ramus Communicans Nerve Block were 5.13 and 4.73 for lumbar and thoracic procedures respectively. Average MD reported pain score improvements were 5.21 and 4.67. Patient satisfaction was high in 18/31 (58%), medium in 9/31 (31%), and low in 4/30 (13%) in the lumbar group and 7/15 (47%), 5/15 (33%), 3/15 (20%) in the thoracic group. No procedural complications occurred. The comparable responses in both groups would appear to justify the increased complication potential in the thoracic approach. The ability to perform the Gray Ramus Communicans Nerve Block at sites above the lumbar region greatly increases the overall utility of this procedure, and expands the options available in treatment of this challenging disease process.

As a result of our findings we have begun a prospective randomized placebo controlled project to further evaluate the use of the Gray Ramus Communicans Nerve Block in painful osteoporotic vertebral compression fracture. We welcome any comments and discussion of other centers experience with the treatment of painful osteoporotic vertebral compression fracture.

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