

Safety and Efficacy of Image Guided Radiofrequency Ablation of The Articular Sensory Nerves for Pain Management in Patients with Moderate to Severe Osteoarthritis of the Shoulder and Hip: Initial Single Institutional Experience

MK-1A-73 | Poster

PURPOSE

To evaluate the safety and efficacy of cooled radiofrequency ablation (C-RFA) of the sensory nerve fibers supplying the hip and shoulder joints for the treatment of pain in the setting of moderate to severe osteoarthritis (OA).

METHOD AND MATERIALS

In this IRB approved prospective study, patients with pain from moderate to severe shoulder (n=12) and hip (n=11) OA recalcitrant to anti-inflammatory pain control and intraarticular lidocaine-steroid injections were included. The patients with shoulder joint pain originally had anesthetic blocks of the suprascapular, lateral pectoral and axillary sensory articular nerves while the patients with hip pain had obturator and femoral sensory articular nerves blocks. C-RFA of the same nerve branches were performed 1-2 weeks after the nerve blocks. Efficacy of the treatment was evaluated using the American Shoulder and Elbow Surgeons (ASES) and Hip Disability and Osteoarthritis Outcome Score (HOOS) to assess overall symptoms, stiffness, pain and functional daily living prior to and after the intervention. Statistical analysis included paired t test with p-value adjustment using Stepdown Bonferroni method.

RESULTS

A total of 12 shoulders and 11 hips were treated. Mean follow up time was approximately 3 months post intervention. No procedure-related complications were identified. The average ages of the patients treated for hip and shoulder pain were 61 +/- 7.4 years and 62.3 +/- 8.2 years respectively. Hip: The 3 mean total HOOS scores (out of 100) improved significantly from baseline at 17 to 52.9 3- months post-treatment (p<0.0001). Sub-analysis of the pain component of the HOOS questionnaire demonstrated significant improvement in mean overall symptoms score from 16.1 to 53.4 (p<0.0001). Shoulder: Significant improvement in the total ASES 3 mean total score from baseline (17.2 ± 6.6 to 65.7 ± 5.9; p<0.0001). Sub analysis of the pain component of the ASES questionnaire showed statistically significant improvement (5.8 ± 3.6 to 35.0 ± 3.7; p<0.0001).

CONCLUSION

In patients with chronic hip and shoulder joint pain, preliminary data at our institution demonstrates a statistically significant decrease in joint pain and increase in function following image-guided C-RFA of the respective articular sensory nerve fibers.