Poster 431

Mid-term Outcomes of a Prospective Randomized Controlled Trial of Interspinous Spacer Treatment for Moderate Lumbar Spinal Stenosis.

Thomas Haley, DO (Performance Spine and Sports Physicians, Pottstown, PA, United States); Larry E. Miller, PhD; Jon E. Block, PhD.

Disclosures: T. Haley, Consulting fees or other remuneration (payment), Vertos Medical, Vertiflex; Speakers bureau, Eli Lilly and Co, Pricara; Research grants, St. Jude Neuromodulation

Objective: To evaluate mid-term clinical outcomes of interspinous spacer treatment in patients with intermittent neurogenic claudication secondary to radiographically confirmed moderate LSS.

Design: Prospective, randomized, controlled, investigational device exemption (IDE) trial.

Setting: 23 hospitals in the United States.

Participants: 145 patients with intermittent neurogenic claudication secondary to moderate LSS and unresponsive to conservative care.

Interventions: Patients were randomly treated with interspinous spacer implant (Superion 75; X-Stop 70) and followed for 18 months.

Main Outcome Measures: Zurich Claudication Questionnaire (ZCQ), axial and extremity pain on a 0 to 100 scale, and Oswestry Disability Index (ODI).

Results or Clinical Course: ZCQ symptom severity and physical function scores improved 33% to 36% in both groups through 18 months (all $p<.001$). ZCQ patient satisfaction scores at 18 months were 1.7 ± 0.8 with Superion and 1.6 ± 0.7 with X-STOP. Axial pain decreased from 55 ± 28 mm at pre-treatment to 23 ± 26 mm at 18 months in the Superion group ($p<.001$) and from 55 ± 27 mm to 26 ± 28 mm with X-STOP ($p<.001$) ($p=0.28$ between groups). Extremity pain decreased from 67 ± 24 mm at pre-treatment to 20 ± 28 mm at 18 months with Superion ($p<.001$) and from 68 ± 24 mm to 22 ± 28 mm with X-STOP ($p<.001$) ($p=.71$ between groups). Back function similarly improved with Superion ($39\pm13\%$ to $19\pm15\%$; $p<.001$) vs. X-STOP ($40\pm12\%$ to $20\pm17\%$; $p<.001$) ($p=.46$ between groups).

Conclusions: Clinical improvements in axial and extremity pain and function are similarly maintained through 18 months post-treatment with the Superion and X-Stop interspinous spacers.

Poster 432

Relationships Between Clinical Predictors and the Medical Interventions Provided to Patients with Low Back Pain in the Emergency Department.

David J. Kohns, DO (University of Michigan, Ann Arbor, MI, United States); Mary Catherine Spires, MD.

Disclosures: D. J. Kohns, No Disclosures: I Have Nothing To Disclose.

Objective: The purpose of this study is to identify relationships between clinical predictors and medical interventions utilized for patients admitted to the emergency department with a complaint of low back pain.

Design: This is a prospective analysis of the medical records for 400 total patients admitted to an emergency department with a diagnosis with low back pain.

Setting: A level-one university trauma center and a large community hospital emergency department.

Participants: Medical records from 200 consecutive patients ages 18-80 admitted through the two participating emergency departments with a diagnosis code consistent for low back pain.

Interventions: Secondary data collection with medical chart review and data abstraction from existing records.

Main Outcome Measures: Analysis of patient demographics, nature of pain complaints and the diagnosis were correlated for relationships to the diagnostic tests ordered, medications prescribed and the discharge recommendations.

Results or Clinical Course: Medical record analysis of the 369 total patients that met inclusion criteria demonstrated a mean age of 42.73 years old with female 56.08% and Caucasian 65.58%. The insurance coverage for these patients included commercial 39.83%, Medicaid 21.12%, none 20.6%, Medicare 13.0% and personal injury 5.42%. In 81.61% of patients the symptoms started within one week. Patients reported severe pain in 23.17% and radicular symptoms in 26.45%. Red flags were identified in 57.68% with yellow flags in 77.08%. The physical examination showed 12.09% of patients demonstrated any neurologic signs. Imaging studies were ordered in 47.61% of the patients with plain x-rays 36.73%, CT 10.33% and MRI 6.55%. Patients were discharged with opiates 53.15%, NSAIDs 36.27%, muscle relaxers 24.69%, acetaminophen 18.64%, activity restrictions 12.09% and educational handouts in 47.36%. Pending regression and post-hoc analysis.

Conclusions: Anticipated Conclusion: Emergency department physicians generally do not utilize evidence-based guidelines in the evaluation and management of low back pain.

Poster 433

Fluoroscopy Times During Interlaminar Cervical Epidural Steroid Injections as a Measure of Trainee Competency.

Michelle Poliak (UCLA, Los Angeles, CA, United States); David E. Fish, MD, MPH.

Disclosures: M. Poliak, No Disclosures: I Have Nothing To Disclose.

Objective: To establish the minimum number of interlaminar cervical epidural steroid injections needed for inexperienced pain fellowship trainees to obtain professional competency through the utilization of fluoroscopy procedural times as the primary benchmark.

Design: A prospective descriptive study.

Setting: Major research University based outpatient procedure clinic.

Participants: 4 experienced and 4 inexperienced PM&R Pain Fellows with attending supervision.

Interventions: Fluoroscopy procedural exposure time (FT) was determined and analyzed for interlaminar cervical epidural steroid injections (ICESI). Procedures were grouped by spinal level and the trainee's experience level.

Main Outcome Measures: Trainees were stratified according to experience level: fellows completing year-long training (T1) and fellows beginning year-long training (T2). T1 FT was used as the benchmark with a single attending FT as a control group. T1