Objective: To determine if lumbosacral transforaminal epidural steroid injection (LTFESI) is as effective in treating lumbosacral radicular pain in obese (body mass index [BMI] >30) and overweight (25<BMI<30) population compared with the nonoverweight (18.5<BMI<25) population, because BMI has not been described as a prognostic indicator with regard to LTFESI outcomes.
Design: Retrospective, case control pilot study.
Setting: Major metropolitan urban academic spine and sports clinic.
Participants: Patients who were not overweight (n=9), overweight (n=9), and obese (n=6) presented with lumbosacral radicular pain and received a LTFESI.
Interventions: Fluoroscopically guided contrast-enhanced LTFESI.
Main Outcome Measures: 11-point pain intensity numeric rating scale scores were recorded before LTFESI and at an average follow-up interval of 4 weeks. We determined the mean percentage reduction in pain and the proportion of individuals with a 50% or greater reduction in pain in the 3 BMI groups.
Results: No significant differences were found between the normal BMI group and higher BMI groups with regard to percentage improvement in pain (P=.7154, P=.4566) or in the proportion of each group with a 50% or greater reduction in pain (P=.4566, P=.1520).
Conclusions: This preliminary data does not show that LTFESI is less effective for the higher BMI groups compared with normal BMI cohorts for the treatment of lumbosacral radicular pain. However, our sample size was not large enough to find a significant difference at a power of 80%. A larger study is needed to confirm whether BMI is a prognostic indicator for outcomes of LTFESI for lumbosacral radicular pain.

Poster 311

A Correlative Study of the Self-reported Ratings Determining Impairment Associated With Pain, From the AMA Guides 5th Edition, and the Clinician-derived Physical Performance Tests on Individuals With Polytrauma History and With Chronic Pain: Case Series.

Armando S. Miciano, MD (Nevada Rehabilitation Institute, Las Vegas, NV, United States); Jacqueline Derhousoff, Chad Cross, PhD.

Disclosures: A. S. Miciano, none.
Objective: To quantify pain-related impairments (PRI) of individuals with Polytrauma history >2 years and chronic nonmalignant pain (CNP) by using the self-reported Ratings Determining Impairment Associated with Pain (RDIP), obtained from the AMA Guides 5th Edition and to investigate the correlation between PRI and clinician-derived Physical Performance Test (PPT) scores.
Design: Retrospective cross-sectional study.
Setting: Medicare-accredited Comprehensive Outpatient Rehabilitation Facility (CORF).
Participants: 33 participants with polytrauma reporting CNP (ages, 22-78 years).
Interventions: None.
Main Outcome Measures: The Self-Administered Co-Morbidity Questionnaire identified individuals afflicted with CNP. The RDIP identified PRI via 5 subscales: Pain Severity; Activity Interference; Mood Effect; Global Pain Behavior; and, Credibility; it was categorized as: no PRI (0-6), mild (7-24), moderate (25-42), moderately severe (43-60), and severe PRI (61-80). The PPTs were 6-Minute Walk (6MWT), Berg Balance Scale (BBS), and Dynamic Gait Index (DGI). Pearson correlation coefficients (r) examined associations between RDIP and PPT. An α of .10 was used for statistical tests.
Results: Total RDIP resulted in 0% mild PRI, 21% moderate, 33.33% moderately severe, and 45.45% severe PRI. Neither age (F=1.619, P=.168) nor gender (F=0.717, P=.710) were significant factors. A statistically significant negative correlation was found between total RDIP versus BBS (r = –.480, P=.005), DGI (r = –.573, P<.001), 6MWT distance (r = –.506, P=.003), and 6MWT Metabolic Equivalents (r = –.511, P=.002).
Conclusions: The majority scored in moderately severe to severe PRI categories. The PRI severity had statistically significant negative effects on PPT scores. These findings suggest that the self-reported RDIP is a reliable indicator of physical performance and valuable as an alternative to PPT in a busy clinical practice.

Poster 312

Efficacy of Combined Intra-articular Facet Joint and Transforaminal Epidural Steroid Injection in the Management of Symptomatic Lumbosacral Lateral Recess Stenosis: A Retrospective Analysis.

Michael J. Louwers, MD (University of Michigan, Ann Arbor, MI, United States); Anthony E. Chiodo, MD, Jared S. Greenberg, MD, Kori Rothman, DO.

Disclosures: M. J. Louwers, none.
Objective: The purpose of this study is to evaluate the efficacy of combining a transforaminal epidural steroid injection (TFESI) with intra-articular facet injection to improve pain and functional outcomes. We hypothesize a synergistic effect on reduction of pain and dysfunction when using this interventional approach, because lateral recess stenosis is most often caused by facet hypertrophic changes.
Design: This is a retrospective analysis of a preexisting data set of 1050 patients. Among inclusion criteria, subjects must have undergone a lumbosacral TFESI for which they completed a pre- and postinjection questionnaire. Our 2 cohorts include those who received lumbosacral TFESI alone and those that received a simultaneous intra-articular facet joint injection at the same level. Cohorts are further categorized based on their severity of lateral recess stenosis.
Setting: Tertiary care center.
Participants: Preexisting data set from the Spine Program Injections Quality Improvement database at the University of Michigan.
Interventions: This is a retrospective review, with no new intervention. Participants in the data set received various spine interventions that were clinically indicated.
Main Outcome Measures: The database includes responses to pre- and postinjection questionnaires from patients who received injections at the University of Michigan Spine Center from 2006-2009. The preinjection data include demographic data, work status, functional activities, and VAS pain scores. The postinjection data include those questions asked in the preinjection questionnaire along with injection satisfaction.
Results: To date, we have preliminary data; however, initial review shows promising results for improved pain and functional outcomes when combining transforaminal epidural steroid and intra-articular facet injections for patients with symptomatic lumbosacral radicular pain.

Conclusions: Combined transforaminal epidural steroid injections and facet joint injections may be more beneficial in patients with symptomatic lumbosacral radiculopathy than TFESI alone, particularly in those with lateral recess stenosis caused by facet hypertrophy.

Poster 313

A Retrodiskal Approach of Lumbar Transforaminal Epidural Block in a Case of Severe Foraminal Stenosis.

Chang J. Moon (Sanggye Paik Hospital, Inje University Medical College, Seoul, Korea, Korea, Republic of); Jaeki Ahn, Sung H. Kang, MD, Chul Kim, MD, PhD.

Disclosures: C. J. Moon, none.
Objective: To compare the accessibility and the effect of retrodiskal (RD) approach of lumbar transforaminal epidural block with conventional subpediular (SP) approach in severe foraminal stenosis.
Design: Case control study.
Setting: Tertiary hospital.
Participants: Patients with L5 radiculopathy who were planned to receive transforaminal epidural block were consecutively included as subjects and were randomly divided into the RD group and the SP group.
Interventions: A mixture of triamcinolone 20 mg and 0.5% lidocaine 1.5 mL was injected in both groups after confirming a contrast spread by retrodiskal approach through L5-S1 foramen at intervertebral disk level on prone position 40°-45° off the AP axis.
Main Outcome Measures: The diffusion pattern of contrast dye, easiness of needle's target attainment, and visual analog scale (VAS), which had been recorded before and after 2 weeks of the treatment, of the 2 groups.
Results: There were no differences in subjects' demographic data and early VAS of the RD (n=13) and SP (n=8) groups, which were 6.9±0.8 and 6.6±0.7, respectively. After 2 weeks of treatment, VAS of the RD group was 2.4±0.9, much lower than 3.8±0.7 of the SP group ($P<.05$). We failed to insert the needle tip into the target point in 3 patients of the SP group due to severe foraminal stenosis. In the SP group, 2 patients had nerve root irritation symptoms during the procedure. In 10 cases of the RD group and 4 cases of the SP group, contrast dye diffused to the proximal nerve root, and, in 5 cases of the RD group and 3 cases of SP group, contrast dye diffused to the distal nerve root, but there was no significant difference between the 2 groups except for failed approach.
Conclusions: The RD approach of lumbar transforaminal epidural block might be a useful technique, especially in the case of severe foraminal stenosis.

Poster 314

Complex Regional Pain Syndrome Severity Score: Development of A Clinical Tool For Monitoring Disease Evolution.

Anjum Sayyad, MD (Northwestern University: Rehabilitation Institute of Chicago, Chicago, IL, United States); Joseph R. Graciosa, R. N. Harden, MD, Geneva Jacobs, MD, Maxine M. Kuroda, PhD, MPH, Mark Osborne.

Disclosures: A. Sayyad, none.
Objective: The purpose of this study is to test the effectiveness of a bedside clinical tool known as the Complex Regional Pain Syndrome (CRPS) Severity Score (CSS) as a means of tracking disease progression of CRPS.
Design: Prospective study.
Setting: Urban outpatient pain research center.
Participants: 9 subjects.
Interventions: The CSS describes symptoms (4 items) and signs (4 items), based on the IASP "Budapest" diagnostic criteria for CRPS, and was used to evaluate subjects over 2 visits (2-4 months apart). Subjects provided written consent and completed questionnaires to detail their pain, emotional state and functional status. A physician evaluated each patient by using the CSS.
Main Outcome Measures: Patient Global Impression of Change (PGIC), McGill Pain Questionnaire-Short Form (MPQ-SF), Visual Analog Scale (VAS), Numerical Rating Scale (NRS), Center for Epidemiologic Studies Depression Scale (CES-D), Pain Disability Index (PDI), Pain Anxiety Symptoms Scale (PASS-20), and Occupational Status Questionnaire (OSQ).
Results: Data were analyzed by using the Spearman correlation to identify relationships between changes in the CSS and changes in the outcome measures. The following were found to be strong correlations with significance: Positive relationship of ΔCSS and ΔSigns of CSS, positive relationship of ΔCSS and ΔCES-D. The following were found to be strong correlations that approached significance: positive relationship of ΔCSS and ΔSymptoms of CSS, positive relationship of ΔSigns of CSS and ΔVAS, positive relationship of ΔSigns of CSS and ΔCES-D, positive relationship of ΔSymptoms of CSS and ΔCES-D.
Conclusions: The CSS may prove to be a quick and effective clinical bedside tool for monitoring the subtleties of CRPS status and evolution, as a complement to dichotomous diagnostic criteria. Future validation research will involve additional measures (such as the Short Form 36 for quality of life), larger subject pool from international sites (eg, Canada, United Kingdom, Germany, Japan, Israel, The Netherlands), and to evaluate the utility of CSS for responsiveness to change and treatment of CRPS.

Poster 315

Iatrogenic Cushing Syndrome After Epidural Steroid Injections for Low Back Pain in a Patient Infected With HIV and Treated With Ritonavir: A Case Report.

Matthew J. Grierson, MD (University of Washington, Seattle, WA, United States); Mark Harrast, MD.

Disclosures: M. J. Grierson, none.
Patients or Programs: A 47-year-old woman with a history of C3 human immunodeficiency virus (HIV) and chronic low back pain.
Program Description: The patient presented to clinic with a history of chronic low back pain and radiation into the posterior leg and toes with magnetic resonance imaging evidence of a lumbar disk extrusion. She had undetectable HIV RNA levels on a regimen that included a protease inhibitor boosted with ritonavir and 2 nucleoside reverse transcriptase inhibitors. After failing more conservative options, the patient received 3 epidural steroid injections with triamcinolone (80 mg) at 5-month intervals. During routine follow-up, she was found to have a prominent buffalo hump, supraclavicular fat pads, facial swelling, violaceous abdominal striae, and elevated glucose levels. An endocrine workup revealed very low urine and serum cortisol levels (<1.1 mcg per 24 hours,