Results: The patient suffered no complications from the procedure.
Discussion: Reports of serious complications related to inadvertent intra-arterial injection during cervical transforaminal epidurals have piqued interest in methods to reduce or eliminate this risk. The incidence of inadvertent vascular penetration during cervical transforaminals is between 19-26% using sharp-beveled needles. Because sharp-beveled needles have the ability to cut thru tissues, some have recommended use of blunt tip and pencil point needles to reduce the odds of vascular penetration. To our knowledge, this case is the first documented instance of inadvertent cervical radicular artery injection using a pencil point (Whitacre) needle.
Conclusions: This case demonstrates that use of pencil-point (Whitacre) needles does not eliminate the risk of inadvertent arterial injection during cervical transforaminal epidurals. Further investigation is required to determine if the incidence of inadvertent vascular injection is reduced with pencil-point needles relative to sharp-beveled needles.
Keywords: Rehabilitation, Epidural, Injection, Cervical.

Poster 261

Increased Functional Connectivity between Pain-Affect and Body-Perception Brain Regions in Fibromyalgia.

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Disclosures: M. C. Hsu, None.
Objective: To determine regions with significant resting-state functional connectivity to a well-known pain-affect region (anterior insular cortex, AIns) in fibromyalgia (FM) patients compared to healthy controls, using functional connectivity MRI (fcMRI).
Design: Cross-sectional design embedded within a clinical trial.
Setting: Research laboratory within an academic institution.
Participants: 29 FM patients (ages 23-59) and 17 healthy controls (HC; ages 22-57), all right-handed women.
Interventions: Subjects were scanned in a 3T MRI scanner (GE Signa LX). Each subject was instructed to lie quietly for 6 minutes while viewing a fixation cross, during which 144 whole-brain images were acquired.
Main Outcome Measures: Functional connectivity to the AIns, determined as follows: Images were normalized to a standard template, smoothed with a 5mm kernel, and filtered to allow only the 0 - 0.08 Hz band. BOLD signal time-series were extracted from left and right AIns seed regions and correlated with time-series from all voxels of the brain. The resulting voxel-wise r maps were transformed to Z-maps, which were entered into one- and two-sample T-tests (height threshold $P < .0025$, corrected cluster threshold $P < .05$).
Results: For both FM patients and HC, one-sample t-tests revealed significant connectivity between bilateral AIns, and between each AIns and bilateral inferior parietal lobules (IPL) ($P < .01$ corrected, for all regions). Two-sample t-tests revealed significantly greater functional connectivity in FM patients between right AIns and left IPL (peak coordinates {-60,-33,36}, 38 voxels, $P = .048$ corrected), compared to HC.
Conclusions: This is the first study to compare functional connectivity to the insular cortex between FM and HC. Given the role of the IPL in self-awareness and own-body perception, the increased connectivity seen in FM between AIns and IPL is consistent with enhanced negative affect in association with body self-awareness. This altered sensory-affective relationship may play a role in the perpetuation of chronic pain in FM, and may serve as a future target for brain-based biofeedback in the rehabilitation of FM. Further studies are needed to explore the relationship between altered AIns connectivity and dysfunctional pain processing in FM.
Keywords: Fibromyalgia, fMRI, Functional connectivity, Insular cortex.

Poster 262

Influence of Ethnicity and Gender on Lumbar Epidural Steroid Injection Outcomes.

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Disclosures: G. Cyril, None.
Objective: To explore the association between ethnicity, gender and back pain treatment outcomes as measured by the 21-item Hospital Anxiety and Depression Scale (HADS) and Visual Analog Scale (VAS) for pain.
Design: Retrospective study of secondary data.
Setting: Outpatient comprehensive spine center.
Participants: 45 patients who underwent epidural steroid injections for back pain between September 2001 and October 2008.
Interventions: Epidural steroid injections.
Main Outcome Measures: HADS and VAS scores pre-injection and post-injection.
Results: 55.6% of patients were female and 44.4% were male. 51% of the patients were ethnic minorities (non-Caucasian). The mean age was 55.5 years old. 60% scored in the abnormal range for mood disorder as measured by HADS pre-injection. This went down to 53.3% post-injection which was not statistically significant. 60% scored in the moderate to severe category of pain (VAS greater than 5) pre-injection compared to 40% post-injection, which was statistically significant. There was no difference across gender and ethnicity for either scales. However, there was a trend of more females reporting moderate to severe pain during both pre (72.0 vs. 50.0%) and post (60.0 vs. 50.0%) assessment. There was also a trend of more minority patients reporting moderate to severe pain during both pre (69.0 vs. 52.7%) and post (62.0 vs. 32.4%) assessment and a trend towards Caucasian pa-