presentation in 2009 to the most recent x-ray taken in 2014, the thoracic Cobb angle changed from 79 to 42 degrees, and the lumbar Cobb angle changed from 67 to 43 degrees, representing a 46.8% reduction in the thoracic Cobb angle and a 35.8% reduction in the lumbar Cobb angle. (This is a conference presentation abstract and not a full work that has been published.)

Magnetic resonance imaging–measured change in intracranial flow following upper cervical chiropractic care of a migraine headache subject: A case report

H. Charles Woodfield III, D. Gordon Hasick

In an attempt to study changes in cerebral circulation, it was discovered that patients with migraine headaches exhibit an increase in intracranial compliance index (ICCI), following an intervention defined by the National Upper Cervical Chiropractic Association (NUCCA). Using phase contrast magnetic resonance imaging (PC-MRI), the primary objective of this case report was measuring changes in the intracranial compliance index (ICCI) from baseline to week 4, then again at week 8, following a NUCCA atlas intervention. This subject is 1 of 11 from an observational pilot study, exhibiting an unexpected decrease in ICCI instead of increases. This subject was recruited through a neurology-based specialist referral clinic. She signed consent forms, completed baseline migraine-specific outcomes, and then was examined by a neurologist. Presence of atlas misalignment indicated inclusion, allowing baseline PC-MRI assessment. Subjects received NUCCA care for 8 weeks. Follow-up imaging occurred at weeks 4 and 8. Neurologist exit interviews allowed for final outcomes collection. The primary outcome, ICCI unexpectedly decreased from 5.04 to 3.87. This subject reported great improvement in migraine headache symptoms while demonstrating significant improvement in migraine-specific patient-reported outcomes. A decrease in ICCI, while expected to increase, creates questions to answer through future study. (This is a conference presentation abstract and not a full work that has been published.)

Interexaminer reliability in analysis of orthogonal radiographs

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Background: An assessment for making important clinical decisions requires due diligence in investigation in reliability of its use. Little evidence appears in the indexed literature positively reporting examiner reliability of the orthogonal radiographic analysis. **Objective:** The objective was determining interexaminer reliability between 2 National Upper Cervical Chiropractic Association board-certified practitioners analyzing orthogonal films. **Methods:** Before-correction film sets, screened for acceptability, were randomly sent to 2 examiners with analysis data mailed to a data manager. Double-entered verified data were forwarded for statistical analysis. Statistical analysis allowed data interpretation through percent agreement, intraclass correlation coefficient (ICC), and Bland-Altman limits-of-agreement plots. **Results:** Percent agreement of atlas laterality was 96.1% (244/254) with 94.5% (240/254) agreement on side of rotation. ICCs for laterality were 0.907, 95% confidence interval (CI) (0.882, 0.926) (consistency model) and 0.906, 95% CI (0.881, 0.926) (agreement model) ($n = 254$). For rotation, ICCs were 0.849, 95% CI (0.811, 0.880) (consistency model) and 0.850, 95%CI (0.812, 0.881) (agreement model) ($n = 254$). Bland-Altman plots revealed 5.9% (14/254) of paired observations outside 95% agreement limits for laterality and, for rotation, 6.2% (15/254) of measurements. **Discussion:** Frequent consensus training possibly improves reliability. The convenience sample of radiographs used could create possible bias in overestimating ICCs. **Conclusion:** Based on statistical analysis, excellent (near perfect) reliability was found between 2 NUCCA board-certified practitioners analyzing orthogonal films. (This is a conference presentation abstract and not a full work that has been published.)