


BIOKINEMETRICS

ALIGNING CHIROPRACTIC AND TECHNOLOGY

AOMSI Radiology Report Layout – Default Information

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Report Preview



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Radiology Report for Cervical Spine AOMSI Evaluation and Ligament Injury Analysis

Patient: Polly PI Sex: Female DOB: Apr 1, 1994 (31y) Views: Cervical Flexion, Cervical Extension, Cervical Neutral	Referring Physician: Unprovided Injury Date: Aug 13, 2020 Report Date: Apr 28, 2025	Study Date: Aug 13, 2020 SID: 100 cm DPI: 117 dpi
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The patient's appropriate radiographs of the cervical spine were analyzed using quantitative analysis of the lateral views including flexion and extension. This biomechanical evidence-based practice evaluation was focused on determining if Alteration of Motion Segment Integrity (AOMSI) is present using the most scientific methods as described by the American Medical Association's Guides to the Evaluation of Permanent Impairment.¹⁻⁸ Additional biomechanical analysis and measurements of the cervical spine radiographs were also evaluated for evidence of ligament injury and spinal structural integrity using scientific methodologies from the published literature.⁹⁻²⁰ The findings described in this report require clinical correlation with the patient's functional history, mechanism of injury, symptoms, physical examination findings, and applicable clinical studies. The radiographs in this study are adequate for the image quality requirements and technical factors expected.¹⁻⁸ Any permanent impairment declarations require that the images utilized in this study are at or after maximum medical improvement (MMI) for the patient.^{5,6} The AMA Guides® describe translation and angulation methods to determine if AOMSI is present by measuring the cervical spine vertebral alignment biomechanics including vertebral motion segment displacement that can demonstrate evidence of ligamentous injury. Further explanation of impairment determination and the measurements and corresponding calculations are described below, in the tables, and in the figures, on subsequent pages of this report.

Discussion of Findings:

Impressions

Mary Smith
Mary Smith,
Electronically Signed, Signature on File

References:

References

1. Cocchiarella L, Andersson GBJ. *AMA Guides® to the Evaluation of Permanent Impairment, Fifth Edition, 2001th*. American Medical Association; 2001. (Errata)
2. Rondonelli RD, Genovese E, Katz RT, Ranavaya, MI, eds, et al. *AMA Guides® to the Evaluation of Permanent Impairment, 6th Edition (2008)th*. American Medical Association; 2008. (Errata)
3. American Medical Association. Cocchiarella L, Andersson GBJ. *AMA Guides® to the Evaluation of Permanent Impairment, Fifth Edition, 2001th*. (Errata) Figure 15-3c page 379, Errata; Figure 15-3a, 378, 383, 392-395, Table 15-5 DRE Cervical Category I-V Criteria for Rating Impairment Due to Cervical Disorders; 1-20, 373-404.
4. Rondonelli RD, Genovese E, Katz RT, Ranavaya, MI, eds, et al. *AMA Guides® to the Evaluation of Permanent Impairment, 6th Edition (2008)th*. American Medical Association; 2008.
5. Luers P. *Spinal Alteration of Motion Segment Integrity*. *AMA Guides Newsletter*, Volume 12: Issue 2; March-April 2007:1.
6. Luers P. *Spinal Alteration of Motion Segment Integrity Using the Sixth Edition*. *AMA Guides Newsletter*, Volume 24: Issue 3; May 2019.
7. White AA, Panjabi MM. *Clinical Biomechanics of the Spine*. 2nd ed. Philadelphia, PA: Lippincott, Williams & Wilkins; 1990, 285-316.
8. White, Augustus A. III; Johnson, Rollin M.; Panjabi, Manohar M.; Southwick, Wayne O.D. *Biomechanical Analysis of Clinical Stability in the Cervical Spine*. *Clinical Orthopaedics and Related Research* 1975; (109):85-96.
9. Wu SK, Kuo LC, Lan HC, et al. *The quantitative measurements of the intervertebral angulation and translation during cervical flexion and extension*; *Eur. Spine J* 2007, 16:1435-44.
10. Lin, Ruey-Mo; Tsai, Kuen-Horng; Chu, Lee-Ping; Chang, Po-Quang. *Characteristics of Sagittal Vertebral Alignment in Flexion Determined by Dynamic Radiographs of the Cervical Spine*. *Spine* 26(3):p 256-261, February 1, 2001.
11. Xiong C, Suzuki A, Daubs MD, Scott T, Phan K, Wang J. *The evaluation of cervical spine mobility without significant spondylosis by kMRI*. *Eur Spine J*. 2015 Dec; 24(12):2799-806.
12. Reitman CA, Mauro KM, Nguyen L, Ziegler JM, Hipp, JA. *Intervertebral motion between flexion and extension in asymptomatic individuals*. *Spine*. 2004;29:2832-2843.
13. Dvorak J, Panjabi MM. *Clinical Validation of Functional Flexion/Extension Radiographs of Cervical Spine*; *Spine* 1993, 18(1).
14. Dvorak, J; Froehlich, D; Penning, L MD; Panjabi, MM, et al. *Functional Radiographic Diagnosis of the Cervical Spine: Flexion/Extension*. *Spine* 13(7):p 748-755, July 1988.
15. Ivancic PC, Ito S, Tominaga Y, Rubin W, Coe MP, Ndu AB, Carlson EJ, Panjabi MM. *Whiplash causes increased laxity of cervical capsular ligament*. *Clinical Biomechanics (Bristol, Avon)*. 2008 Feb;23(2):159-65.
16. Muggleton JM, Allen R. *Insights into measurement of vertebral translation in the sagittal plane*. *Med Eng Phys*. 1998 Jan; 20(1):21-32.
17. Foreman SM, Croft AC. *Whiplash Injuries - The Cervical Acceleration/Deceleration Syndrome*, 3rd Edition; Lippincott Williams and Wilkins, 2002:50-53, 214-237, 286-294.
18. Frobin F, Leivseth G, Biggemann M: *Sagittal Plane Segmental Motion of the Cervical Spine*. New Precision Measurement Protocol and Normal Motion Data of Healthy Adults; *Clinical Biomechanics (Bristol, Avon)*. 2002 Jan., 17(1):21-31.
19. Yochum TR, Rowe LJ. *Essentials of Skeletal Radiology*, Vol. 1. Baltimore, MD: Williams & Wilkins; Third Ed. 2005: 207.
20. Vrtovec T, Pernus F, Likar B. *A review of methods for quantitative evaluation of spinal curvature*. *Eur Spine J*. 2009 May;18(5):593-607.
21. WHO. *International Classification of Functioning, Disability and Health: ICF*. Geneva, Switzerland: World Health Organization; 2001.
22. Ivancic PC, Pearson AM, Panjabi MM, Ito S. *Injury of the anterior longitudinal ligament during whiplash simulation*. *Eur Spine J*. 2004 Feb;13(1):61-8.
23. Helgeson, Melvin D., Adam J. Bevevino, and Alan S. Hilibrand. *Update on the evidence for adjacent segment degeneration and disease*. *The Spine Journal* 13.3 (2013): 342-351.
24. Cervical Spine Impairment. In: Martin DW, Melhorn JM. *AMA Guides® to the Evaluation of Permanent Impairment, Sixth Edition, 2024th*. American Medical Association; 2024.