

Accepted Manuscript

Title: The magnitude of angular and translational displacement of dens fractures is dependent on the sagittal alignment of the cervical spine rather than the force of injury

Author: Sabina R Blizzard, Bala Krishnamoorthy, Matthew Shinseki, Marcel Betsch, Jung Yoo

PII: S1529-9430(17)30289-9
DOI: <http://dx.doi.org/doi: 10.1016/j.spinee.2017.06.021>
Reference: SPINEE 57361

To appear in: *The Spine Journal*

Received date: 6-3-2017
Revised date: 24-5-2017
Accepted date: 16-6-2017

Please cite this article as: Sabina R Blizzard, Bala Krishnamoorthy, Matthew Shinseki, Marcel Betsch, Jung Yoo, The magnitude of angular and translational displacement of dens fractures is dependent on the sagittal alignment of the cervical spine rather than the force of injury, *The Spine Journal* (2017), <http://dx.doi.org/doi: 10.1016/j.spinee.2017.06.021>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



The Magnitude of Angular and Translational Displacement of Dens Fractures is Dependent on the Sagittal Alignment of the Cervical Spine rather than the Force of Injury

Sabina R Blizzard, BA^a, Bala Krishnamoorthy, PhD^b, Matthew Shinseki, BS^a, Marcel Betsch, MD^{a,1}, Jung Yoo, MD^a – corresponding author

^a Oregon Health & Science University

3181 SW Sam Jackson Park Road

Portland, OR 97239

blizzars@ohsu.edu; marcel.betsch@gmx.de; yooj@ohsu.edu; matt.shinseki@gmail.com

^b Washington State University

Department of Mathematics

Vancouver, WA 98686

bkrishna@math.wsu.edu

Abstract

Background Context: Although it is generally believed that the magnitude of dens fracture displacement is proportional to the amount of force applied to the cervical spine during injury, the factors responsible for displacement have not been studied.

Purpose: Our aim was to determine factors which contribute to horizontal and angular displacement of dens fractures.

Study Design/Setting: We conducted a retrospective review of adult patients who were admitted to our level one trauma center between 1/1/2008 and 12/31/2013.

Patient Sample: Angular and horizontal displacements of the fractured dens in 57 patients were measured. Subjects were grouped based on mechanism of fracture: motor vehicle accident, ground level fall, and higher falls.

Download English Version:

<https://daneshyari.com/en/article/8804662>

Download Persian Version:

<https://daneshyari.com/article/8804662>

[Daneshyari.com](https://daneshyari.com)