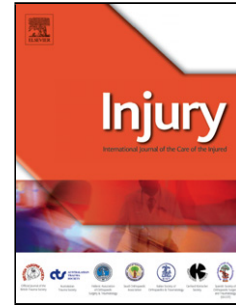


Accepted Manuscript

Title: MINIMALLY INVASIVE FIXATION IN TIBIAL PLATEAU FRACTURES USING AN PRE-OPERATIVE AND INTRA-OPERATIVE REAL SIZE 3D PRINTING.

Author: Silvio Giannetti Nicola Bizzotto Andrea Stancati Attilio Santucci



PII: S0020-1383(16)30753-7
DOI: <http://dx.doi.org/doi:10.1016/j.injury.2016.11.015>
Reference: JINJ 6986

To appear in: *Injury, Int. J. Care Injured*

Accepted date: 16-11-2016

Please cite this article as: Giannetti Silvio, Bizzotto Nicola, Stancati Andrea, Santucci Attilio. MINIMALLY INVASIVE FIXATION IN TIBIAL PLATEAU FRACTURES USING AN PRE-OPERATIVE AND INTRA-OPERATIVE REAL SIZE 3D PRINTING. *Injury* <http://dx.doi.org/10.1016/j.injury.2016.11.015>

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.

MINIMALLY INVASIVE FIXATION IN TIBIAL PLATEAU FRACTURES USING AN PRE-OPERATIVE AND INTRA-OPERATIVE REAL SIZE 3D PRINTING.

Silvio Giannetti, MD, Orthopedic Surgeon, Casa di Cura “Villa Stuart”, Roma

Nicola Bizzotto, MD, Orthopedic Surgeon, Hand Surgery Department, University Hospital of Verona, Italy

Andrea Stancati, MD, Orthopedic Surgeon, Casa di Cura “Villa Stuart”, Roma

Attilio Santucci, MD, Orthopedic Surgeon, Casa di Cura “Villa Stuart”, Roma

Corresponding Author,

Nicola Bizzotto, MD, Orthopedic Surgeon,

Hand Surgery Department, University Hospital of Verona, Italy

Policlinico GB Rossi, Piazzale Scuro, 37129, Verona, Italy

nicolabizzotto83@gmail.com

ABSTRACT

The purpose of our study was to compare the outcome after minimally invasive reconstruction and internal fixation with and without the use of pre- and intra-operative real size 3D printing for patients with displaced tibial plateau fractures (TPFs). We prospectively followed up 40 consecutive adult patients with closed TPF who underwent surgical treatment of reconstruction of the tibial plateau with the use of minimally invasive fixation. Sixteen patients (group 1) were operated using a pre-operative and intra-operative real size 3D-model, while 24 patients (group 2) were operated without 3D-model printing, but using only pre-operative and intra-operative 3D Tc-scan images. The mean operating time was 148.2 ± 15.9 minutes for group 1 and 174.5 ± 22.2 minutes for group 2 ($p=0.041$). In addition, the mean intraoperative blood loss was less in group 1 (520 mL) than in group 2 (546 mL) ($p = 0.534$). After discharge, all patients were followed up at 6 weeks, 12 weeks, 6 months, 1 year and then every year post surgically and radiographic evaluation was carried out each time using clinical and radiological Rasmussen’s score, with no significant differences

Download English Version:

<https://daneshyari.com/en/article/5652678>

Download Persian Version:

<https://daneshyari.com/article/5652678>

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