Reviewer's report

Title: A Biomechanical Study Comparing Two Fixation Methods in Depression Fractures of the Lateral Tibial Plateau in Porcine Bone

Version: 1 Date: 15 November 2012

Reviewer number: 2

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General comments
The authors reported the biomechanical properties of the traditional screw fixation and the interference screw fixation for depressed tibial plateau fracture. The displacement of fixed articular fragment after the cyclic loading and ultimate load to failure were provided. The study design is very simple and the manuscript is concisely written and easy to understand. However, there are several questions to be fixed before the manuscript is accepted for publication in the Sports Medicine, Arthroscopy, Rehabilitation, Therapy and Technology.

Specific comments
Introduction
The research motivation is unclear. Are there any clinical problems in the traditional screw fixation or the interference screw fixation to treat depressed tibial plateau fracture? Can this study provide the clue to the problem?

Materials and Methods
Page 2, line 2-3: The authors should state that this was a laboratory study using an animal knee model.

Page 2, line 35-37: The size and depth of depression fracture should be provided.

Page 3, line 40-42: X-ray control or CT is required to exclude any possibility of cortical fracture.

Page 3, line 51-52: In the traditional technique, what kind of screw was used? Bicortical or cancellous? Stainless steel or titanium? Also, please provide the products name and company name of the screws.

Page 3, line 51-57: The schemes showing 2 fixation techniques help the reader's understanding.

Page 3, line 55-57: Is it mean that an interference screw having 6mm of diameter was used?

Page 4, line 62-64: Please justify that the loading condition is appropriate for this animal study, based on scientific rationale.
Discussion

Page 7, line 159-160: From the results, the reviewer cannot find any reason to select the interference screw fixation instead of the traditional screw fixation for depressed tibial plateau fracture.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.