Author's response to reviews

Title: Concomitant Ipsilateral Subcapital and Intertrochanteric Fractures of the Femur: a case report.

Authors:

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Author's response to reviews: see over
Dear Editor:

Per Journal instructions we are submitting a revised manuscript for the following paper: *MS 6437362543826525, ‘Concomitant Ipsilateral Subcapital and Intertrochanteric Fractures of the Femur: a case report.’* Authors: George Loupasis, Panagiotis G Ntagiopoulos and Antonios Asimakopoulos, and we hope to address the reviewers’ and the Editorial Office’s comments.

**Reviewer #1:**
I enjoyed reading this case report, which I believe, should be accepted with some minor language revisions. The authors draw attention to a rare fracture configuration (concomitant ipsilateral subcapital and intertrochanteric femoral fracture) in a new patient population (young trauma victim). The missing information which I think should be added is: additional detail on the exact mechanism of injury, most pertinently the speed of the vehicles involved in the road traffic accident - this would give insight into the energy required to produce this injury pattern.

There are some minor changes to the language and grammar used, suggested changes follow:
- Case presentation (3rd sentence) “He was unable to move his LEFT leg, which was shorter than the right and externally rotated”
- Case presentation (7th sentence) “…fracture was reduced ACCURATELY on the…”
- Case presentation (Incorrect figure references (Figures 2 to 5) etc.. - Discussion (end 1st paragraph) “…in the literature [5-8].”
- Discussion (2nd paragraph, 4th sentence) “In the other case, there WAS a combination…
- Discussion (3rd paragraph, 3rd sentence) “Fixation with dynamic hip screw supplementED with an anti rotational cannulated screw SHOULD ACHIEVE THIS.”
- Conclusion (2nd sentence) “This unusual complex hip injury has not been PREVIOUSLY categorized. CONSIDERATION SHOULD BE GIVEN TO ITS INCLUSION IN FEMORAL FRACTURE CLASSIFICATION SYSTEMS.”

In conclusion a good case report which should be published.

All comments have been properly addressed and all suggested corrections have been made to the revised manuscript. Figure references have been corrected.

**Reviewer #2:**
This article presents a case study of concomitant subcapital and intertrochanteric fractures sustained in a 36 year old male motorcyclist. The surgical fixation used to treat this particular type of fracture presentation may however not be sufficiently unique to warrant publication in the orthopaedic literature.

Page 1. Abstract
The abstract does not convey any argument regarding why this particular case study would be of significant interest to the orthopaedic community.

The abstract now includes the data that this is an extremely rare fracture pattern never been previously reported in terms of patient age, mechanism of injury and followed treatment, and that probably consideration should be given to be included in femoral fracture classifications systems.

Page 3. Introduction
Four previous cases of ipsilateral neck and intertrochanteric fractures are quoted from literature published between 1989 and 1999. The authors do not specify the year limit for the literature review and whether or not the past ten years were included.

The manuscript now includes the missing data: There have been only four reports in the literature from 1989 to the present.
Page 3. Case presentation

The first paragraph informs the reader that the segmental fracture of the femoral neck was sustained when the motorcyclist was hit by a car. It would have been more informative to explain in greater detail the exact mechanism of injury, including the direction of impact to the hip joint and speed of the vehicles involved. The authors could have expanded upon the post operative rehabilitation and progression from touch weight bearing status, to provide a complete overview of the post operative management. The reader is also informed that the patient is asymptomatic at the two year follow up, but this is not quantified with any explanation of post operative function which the patient achieved.

All comments are now addressed: a) A high-energy trauma (road traffic accident) was the cause of this injury. The patient was driving his motorcycle (>70 mph) when a car hit him from the front causing him to jump off his motorcycle and forcefully land on his outstretched left leg. b) Post operative rehabilitation protocol included immediate walking with crutches in a touch weight bearing fashion for 8 weeks. Partial to full weight bearing commenced 2 months postoperatively. c) At six months intervals, patient was clinically and radiographically assessed, while hip functional scores were obtained. Twelve and 24 months Harris hip score were 88.66 and 93.0, respectively.

Page 5. Discussion

In the discussion a hypothesis is put forward to explain why this unusual fracture pattern occurred. Earlier detail regarding the exact mechanism of the patient’s injury would have put into context the reasons why the concomitant fractures may have occurred.

The detailed explanation of the rarity of this fracture is now added in the beginning of the manuscript.

Page 6. Conclusion (First sentence)

This paper does not necessarily provide sufficient evidence to conclude that segmental fractures of the femoral neck are extremely rare. It is possible that the low incidence may simply reflect the negligible reports of this injury within the literature, as no evidence is quoted from the past decade.

Clinical experience, the small number of previously published similar cases from 1989 to 2009, the lack of such a fracture pattern in any classification scheme and the meticulous survey of orthopaedic textbook knowledge support the authors’ opinion that this is an extremely rare fracture combination, and in terms of patient age, mechanism of injury and treatment followed, it is the first report in the literature. Consideration should be probably given to be included in femoral fracture classifications systems.

The sentences and English language used in this paper are occasionally staccato in nature and some amendments would therefore be necessary to improve the readability of the paper. This paper is succinct, but greater detail may allow the reader to attain a more comprehensive clinical picture. The key point, which the paper conveys is that segmental fractures of the femoral neck are rare. The paper also demonstrates that the selected fixation method was successful in one particular patient. These messages would not change or inform clinical practice which means that they may not generate sufficient orthopaedic interest to warrant publication.

Safe results cannot be surely produced from the treatment and follow-up of one patient, as in any case-report article. The rarity of the injury makes it difficult from one trauma center to collect long-term data from similar fractures, but the publication of case-series reports may alert clinicians of this fracture and its treatment that may be easily complicated (e.g. improper reduction and fixation, osteonecrosis, etc). This paper shows that head-preserving and fixation methods should be attempted at all costs despite the combination of two fractures and the great possibility of
vascular compromise, and a head-replacing method at a young patient should be avoided.

Editorial requests:

Please restructure your abstract into the following three sections:

Introduction An introduction about why this case is important and needs to be reported. Please include information on whether this is the first report of this kind in the literature.

Abstract is now restructured and includes the required information.

Case presentation Brief details of what the patient presented with, including the patient’s age, sex and ethnic background.

Ethnic background and other demographic data are now included.

Conclusion A brief conclusion of what the reader should learn from the case report and what the clinical impact will be. Is it an original case report of interest to a particular clinical speciality of medicine or will it have a broader clinical impact across medicine? Please include information on how it will significantly advance our knowledge of a particular disease etiology or drug mechanism.

The importance of this injury and its interest in orthopaedic literature is now emphasized in the abstract.

We hope that we have addressed the reviewers’ comments and that we have answered to your questions.

We are very glad that our work is being considered for publication by your esteemed journal and we are looking forward to hearing from you.

Regards,

PG Ntagiopoulos, MD