Reviewer's report

Title: Biomechanical symmetry in elite rugby union players during dynamic tasks: an investigation using discrete and continuous data analysis techniques

Version: 2 Date: 2 February 2015

Reviewer: Nick Owen

Reviewer's report:

General
The study provides a comprehensive analysis of bilateral asymmetries, lower and upper body, in rugby union players. Kinematic (3 dimensional) and kinetic data were collected and two types of data analysis techniques were applied: discrete point analysis (DPA) and analysis of characterising phases (ACP). The use of ACP was justified on the basis that continuous data needs more than a single point in time to adequately derive useful information. The study investigated 69 different variables. The statistics used in the study were appropriate. Rugby union has a high injury rate with approximately 25% of a senior professional squad injured at any one time and I feel that this study has the potential to assist in determining a basis for future screening procedures for rugby union players. Overall I think that this is an interesting and worthwhile study.

Major Compulsory Revisions

Measures of the reliabilities of the 69 variables collected in the study need to be reported.

Minor Essential Revisions

1. The description of the participants needs to be clearer. Participants are described as "elite international rugby union players". Does this mean they were academy players or senior squad players or a mixture of both?

2. Regarding the force platform description, it is necessary to report the force ranges of the platform and the procedure to calibrate / check calibration prior to testing.

Discretionary Revisions

1. I feel the term "pilot normative values" should be used rather than "normative values" as the sample size is small, assuming that the population is European international rugby union players.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests