Reviewer's report

**Title:** The in vivo location of a primary wear scar in metal-on-metal hip replacements: a novel technique

**Version:** 3  **Date:** 22 February 2015

**Reviewer:** José Lamo-Espinosa

**Reviewer's report:**

An interesting and novel technique is described. The value of the technique could be to develop the knowledge of orthopedic surgeon about behavior of the prosthesis implants used in daily practice.

It is a short, clear and correct text. The aim is achieved.

**Major Compulsory Revisions:**

The short mean period of implant failure (4 years) may be explained because a selection bias. Could you explain more? Affects the bias to the size of the primary wear scar?

**Minor Essential Revisions:**

It would be interesting to explain in discussion the clinical value of the information obtained with the technique and why it is different as other systems published until today. Although it is cited in the conclusion, I think it would be convenient in the discussion.

In 8 of the 13 cases the authors did not report the reason because the implant was removed. The importance of the manuscript lies in the technique presented. I think the authors could simplify the table, removing that column if the reasons can not be identified. Similarly, the table can be simplified by eliminating the column defined as side. It does not provides a relevant information.

It could be interesting to add references about the "edge loading theory" cited in the discussion. The remaining references are current and appropriate to the text.

In summary it is an interesting study but it leaves us expectantly for further studies that explain the clinical value of the technique.

**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