

Kayani B, Konan S, Tahmassebi J, Pietrzak JRT, Haddad FS. Robotic-arm assisted total knee arthroplasty is associated with improved early functional recovery and reduced time to hospital discharge compared with conventional jig-based total knee arthroplasty: a prospective cohort study. *Bone Joint J* 2018;100-B:930-937.

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Authors' reply:

19 September 2018

Sir,

We thank Dr Newbern for his letter and very insightful comments.

The lack of blinding is a weakness of this study¹ and we discussed this in the limitations section of the manuscript. There was no attempt to build up the patient's expectations of enhanced technology, and there are no existing data to suggest robotic technology enhances early rehabilitation in knee arthroplasty. Although patients were not blinded in this study, both treatment groups received the same surgical approach, identical implant designs, surgery from the same surgeon, and a standardized rehabilitation programme by the same postoperative care team.

This study describes our initial experience in moving from conventional to robotic-arm assisted knee arthroplasty. We have specified that the robotic total knee arthroplasty (TKA) group represents the first set of robotic-arm assisted TKA procedures carried out by the operating surgeon. We are currently undertaking a prospective randomized control trial (RCT) to compare conventional and robotic-arm assisted TKA to assess these outcomes in more detail, and hope to have the data from this study within a couple of years.

The use of sham incisions to deceive patients deliberately is associated with several psychological and ethical concerns. We discussed these with ethics committees before starting our RCT, and intentionally decided not to include sham incisions in the control group. Instead, we modified the study design to ensure that all observers who recorded study outcomes remained blinded to the treatment group of the patient.

We also agree that length of stay can be dramatically reduced after TKA surgery. The norm in the UK has not been 36 hours but I am sure we will move in that direction. Our findings suggest that robotic-arm assisted TKA may help to achieve this.

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1. **Kayani B, Konan S, Tahmassebi J, Pietrzak JRT, Haddad FS.** Robotic-arm assisted total knee arthroplasty is associated with improved early functional recovery and reduced time to hospital discharge compared with conventional jig-based total knee arthroplasty: a prospective cohort study. *Bone Joint J* 2018;100-B:930-937.