

Robotic-assisted total hip arthroplasty: clinical outcomes and complication rate

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Background

The purpose of this study was to report minimum 2-year outcomes and complications for robotic-arm-assisted total hip arthroplasty (THA).

Methods

Data were prospectively collected and retrospectively reviewed between June 2011 and April 2014. Inclusion criteria were primary robotic-arm-assisted THAs treating idiopathic osteoarthritis with ≥ 2-year follow-up. Demographics, operating time, complications, 2-year outcome scores and satisfaction, and subsequent surgeries were recorded.

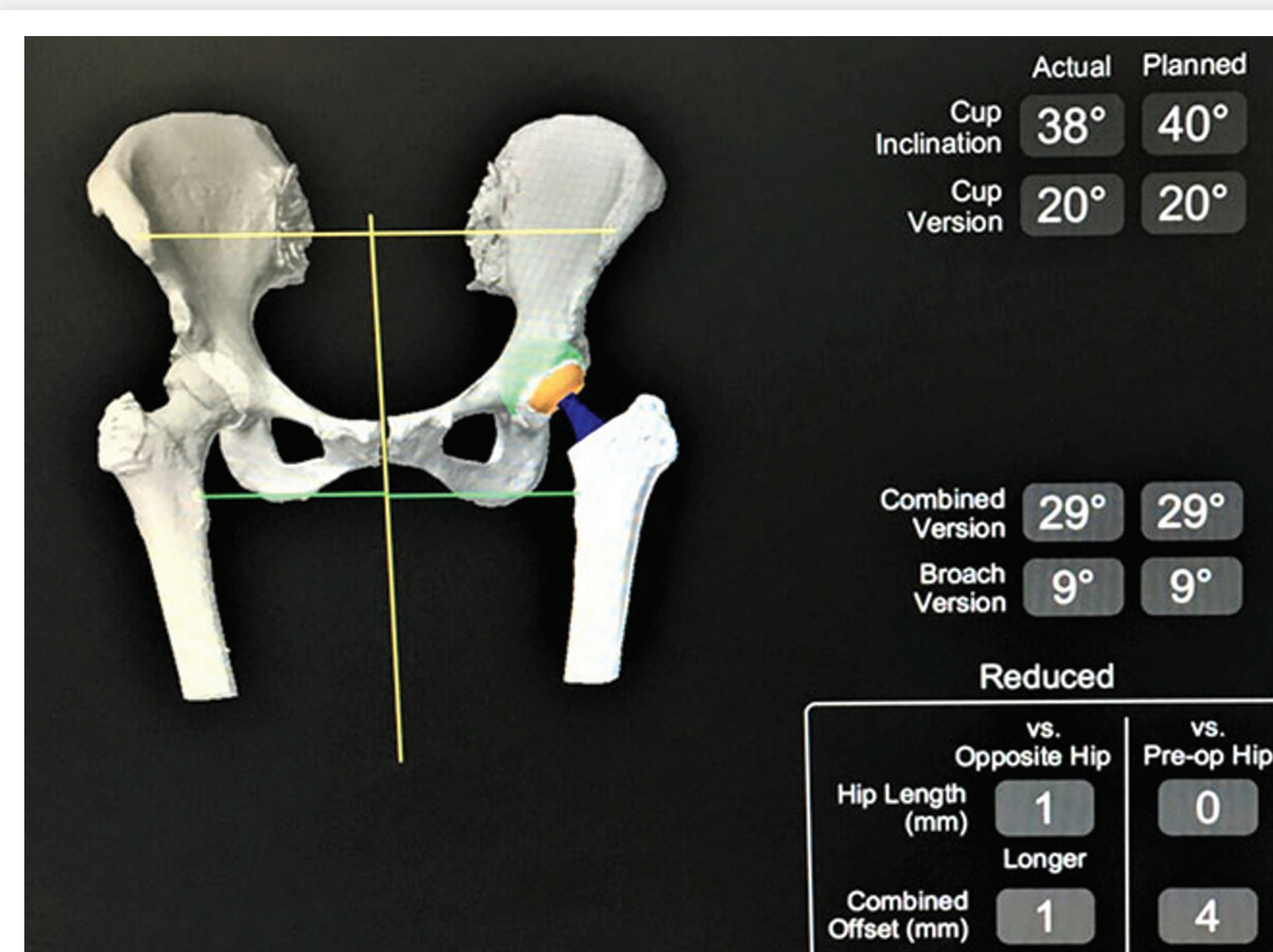


Fig. 1

Final screen after reduction showing all values for positioning compared to preoperative and planned values

Table 1. Patient reported outcomes (PROs) and future surgery information

Outcomes	n (%), mean (± SD)
Revision THA	1 (0.6%)
Time to revision (months)	8.7
I&D	2 (1.2%)
Follow-up time	34.9 (± 9.9)
HHS	91.1 (± 12.5)
FJS-12	83.1 (± 21.2)
VAS	0.7 (± 1.6)
Satisfaction	9.3 (± 1.8)

Results

There were 181 cases eligible for inclusion, of which 162 (89.5%) had minimum 2-year follow-up. At the latest follow-up, the mean visual analogue scale was 0.7, satisfaction was 9.3, Harris hip score was 91.1 and forgotten joint score was 83.1. Six (3.7%) intraoperative complications and six (3.7%) postoperative complications were reported. No leg length discrepancies (LLDs) or dislocations were reported.

Conclusions

Robotic-arm-assisted THA demonstrated favorable short-term outcomes and did not result in a higher complication rate compared to non-robotic THA.

Reference:
 Perets I, Walsh JP, Close MR, Mu B, Yuen L, Domb BG. Robotic-arm assisted total hip arthroplasty: clinical outcomes and complication rate. Int J Med Robotics Comput Assis Surg. 2018; 1-8.
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