

Outcomes following staged bilateral total hip replacement. Does first side surgery predict the second?

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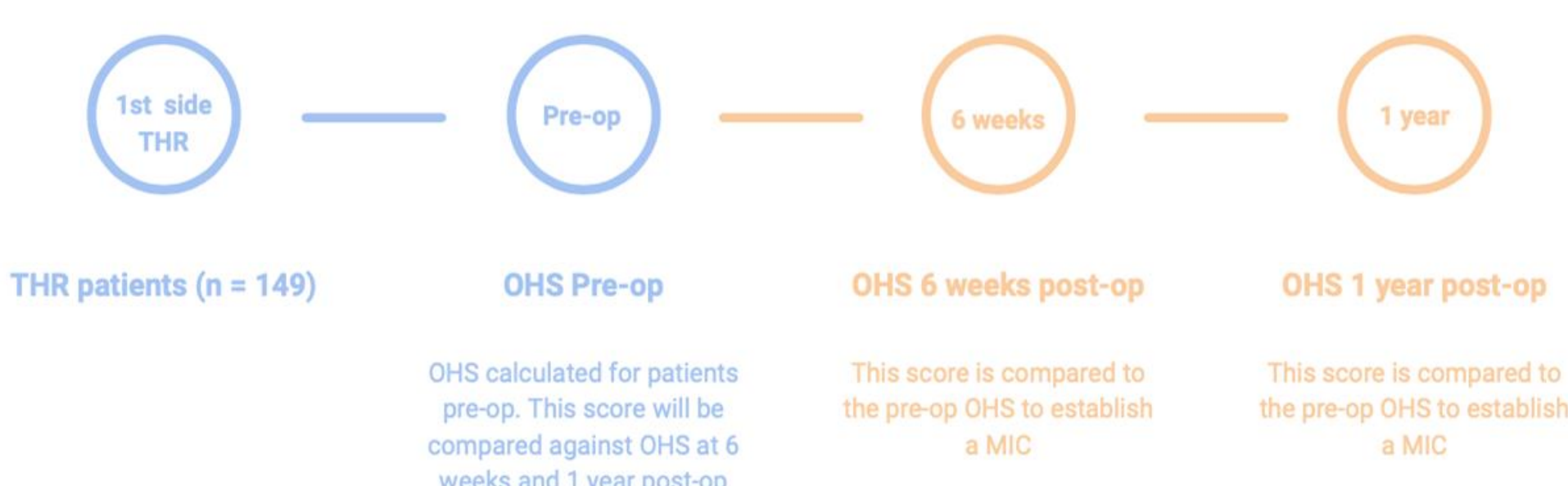


Background

- The purpose of this study was to establish Patient Reported Outcome Measures (PROMs) for bilateral staged hip arthroplasty and determine if first side outcomes predict second side outcomes.
- A minimal important change (MIC) was utilized to achieve the clinical threshold judged as consequential and is 8 points for OHS

Methods

- A retrospective review of a prospectively updated single surgeon database was undertaken evaluating a consecutive series of staged bilateral Total Hip Replacements (THR) over a 10 years period using a single implant system and standard technique.
- OHS were recorded preoperatively, postoperatively at 6 weeks and 1 year.
- Inclusion criteria set as any patient having undergone a staged bilateral THR.
- Exclusion criteria set as any patient requiring tailored implants, acetabular augments or revision surgery.
- 148 THR patients identified (a total of 296 THRs).
- Those failing to achieve a MIC in OHS following first side surgery were further scrutinized.



Results

- 1-year follow-up PROMs data was available for 96.6% (n = 143/148) and 92.5% (n = 137/148) of 1st and 2nd side surgery respectively (figure 1).
- The majority received 2nd side surgery within 6 to 12 months from the first (figure 2).
- Mean age for 1st side surgery was 63.1yrs (range 25 to 86 years) and 65.2yrs (range 27 to 87 years) for 2nd side, with 62.8% female.
- Mean BMI for 1st side THR was 31.0, increased to 31.5 by 2nd side (p = 0.248) (figure 3).
- Mean OHS improvement at 1-year following 1st side was 26.4 and for the 2nd side 25.1 (p = 0.132), with 97.9% (n=140/143) and 96.3% (n=132/137) achieving a MIC.
- Three patients failed to achieve MIC following first side surgery, but all achieved MIC for their second side.

Figure 1. THR 1 year results

THR	No. of responses	Mean improvement PROMs at 1 year	MIC achieved	MIC not achieved
1st side	96.6% (n = 143)	26.4	97.9% (n = 140)	2.1% (n = 3)
2nd side	92.5% (n = 137)	25.1	96.3% (n = 132)	3.7% (n = 5)

Figure 2. Time Interval Between Surgery for ALL patients

Time Interval between 1st and 2nd side surgery	No. of patients
Less than or equal to 6 months	12
6 months to 1 year	39
> 1 year	97

Figure 3. BMI between 1st and 2nd Side

Mean BMI 1st side	Mean BMI 2nd side
31.0	31.5

Discussion

- Since the Montgomery case in 2015, GMC introduced new consent principles to be covered in order for patients to make informed decisions about their treatment. This study addresses what expectations a patient should be informed about with regarding their staged second side THR and whether his/her first side outcome, including change in PROMs would reflect and/or predict the outcome of their second side.
- Our study showed good follow-up revealed no difference between 1st and 2nd side surgery with the majority of patients reaching an MIC.
- This demonstrates a clinically positive outcome for the vast majority patients and in fact that 1st side surgery reflects the outcomes of 2nd side surgery.
- All patients failed to achieve MIC in the first side, did achieve it for the second which can be reflected on patients' expectation in consent process.

Conclusions

- This large single surgeon prospective series identified no significant difference between 1st vs 2nd side PROMs improvement.
- Using a standardized technique, first side outcomes are a useful positive predictor for second side outcomes. Even if patients do not achieve MIC for the first side, all still reached MIC for their second surgery.

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