Functional Outcomes & Dislocation Rate after Primary & Revision Hip Surgery: Does Approach Matter?

R Lawton¹, J Lim², D Ridley³, B Clift¹

¹Department of Trauma & Orthopaedic Surgery, Ninewells Hospital, ²University of Dundee Medical School, ³Tayside Arthroplasty Audit Group

Background

The posterior approach has the theoretical advantage of avoiding violation of the abductors, but higher dislocation rates have been reported.

The anterolateral approach and variations have lower dislocation rates, but a higher risk of causing abductor damage/dysfunction which can be difficult to treat.

Current evidence has not demonstrated clear superiority of either approach¹⁻².

Aim

Define the relationship between surgical approach, dislocation rate & Harris Hip Score/Function at 1 year post-op in our region.

Methods

- Tayside Arthroplasty Audit Group Database
- 4038 arthroplasties > 5y follow-up
- 737 Resurfacings excluded
- Approach not recorded 27 patients
- 3274 Primary THRs 2000-08
  - Follow-up 5-13 y
  - 66 first time revisions
  - 15 second revisions
- Outcome measures
  - Dislocation
  - Revision for dislocation
  - Harris Hip Score 1 year
  - Harris Hip Function 1 year

Results

Primary THR

| (n = 3274) |
|---|---|---|
| n | AL | P |
| Age | 2082 | 192 |
| M/F | 1145/1129 (91.4%) | 542/152 (79.1%) |
| Dislocation | 257/3274 (7.8%) |
| Revision for Dislocation | 28/257 (10.9%) |
| 1y Function | 37 | 40 | p = 0.000 |
| 3y HHS | 88 | 91 | p = 0.000 |

Revisions

Looking in more detail at the revisions, patients who had posterior approach for both primary and revision had the best scores overall.

The difference in HHS & function for each approach increased with each revision.

For patients who had two revisions the difference between 3 x AL approaches and 3 x Posterior approaches was 6 points in function and 12 points in HHS in favour of posterior approach.

Conclusions

Primary surgical approach may not have a clinically significant impact on primary functional outcome, but may have as a bearing on HHS and HH Function after revision. This may influence choice of surgical approach for younger patients likely to require future revision.

Dislocation rates were 4.4% for posterior approach and 1.9% for Anterolateral over 5-13y. 2/3 of dislocations did not require revision. Revision rates were 1.4% revision rate and 0.5% respectively.

References