

Anterior THA Learning Curve In 2022- Comparison Of First 50 DAA THAs After Graduating Fellowship Compared to an Experienced Surgeon

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Disclosures

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Introduction

- The direct anterior hip approach has traditionally been associated with a steep learning curve.
- Increasing popularity of the technique is reflected by its increasing adoption among hip surgeons each year, reaching over 50% in US surgeons in recent years.
- Because of this adoption, DAA teaching is also increasingly more prevalent in teaching institutions for residents and fellows to be trained in the technique prior to starting practice.
- This is in contrast to most of the surgeons in previous years who learned the technique after being established in practice with traditional hip approaches.
- Contemporary anterior hip surgical training now includes many options from web-based, video, cadaver training, teaching courses, and advanced technologies.



Objective

- The purpose of this study is to evaluate the outcomes of a newly graduated fellow trained in DAA to an experienced surgeon already in practice.



Methods

- The first 50 consecutive direct anterior hip replacement cases performed by a newly graduated fellow (Group 1) were compared to a consecutive cohort of anterior approach cases performed by an experience surgeon (Group 2) during the same time period.
- All procedures were performed on a specialized OR table with intraoperative fluoroscopy.
- The same supporting staff and implant brand were used in all cases.
- Outcomes recorded included surgical time, ambulation distance day of surgery, pain with walking, pain at discharge.



Results

- The anterior hip cases in Group 1 took longer than in Group 2, 117 vs 65 minutes ($p < 0.001$).
- Surgical time decreased over time for the newly graduated surgeon, while the experienced surgeon's cases were relatively constant in time.
- There was one femoral perforation with broaching in both groups, and both were identified early and bypassed with the planned stem and healed uneventfully.
- There were no hip dislocations in either group at latest followup.



Results

- There were no episodes of stem subsidence or periprosthetic fracture.
- There were no medical complications or readmissions in either group.
- Hematocrit values were similar in the two groups before surgery, with a trend to be higher in Group 2 after surgery ($p>0.2$, $p<0.07$).
- Group 2 walked farther, 321 vs 257 feet the day of surgery, and with less pain, 2.3 vs 2.8 ($p<0.05$, $p<0.1$).
- Length of stay was less for Group 1, 0.8 vs 1.3 days ($p<0.05$).
- At the first postoperative visit, fewer assist devices were used in Group 1 ($p<0.08$).



Discussion

- ✓ The historical learning curve for adopting direct anterior hip replacement has been steep.
- ✓ However, the increasing prevalence of resident and fellow training and availability of teaching resources may reduce the learning curve for newly graduated surgeons.
- ✓ In this study, in comparison to an experienced surgeon, a fellowship-trained DAA surgeon had rare complications, comparable to the comparison group.
- ✓ Clinical outcomes were similar, with some benefits seen in the experienced surgeon group, and with operative time being the largest difference between the two groups.
- ✓ Operative time shortened with experience for the newly graduated surgeon.
- ✓ Newly trained DAA graduates should be aware that appropriate resident and fellow training may shorten their learning curve starting practice, and that longer operative times are expected with the benefit of experiencing good clinical outcomes and rare complications.

