

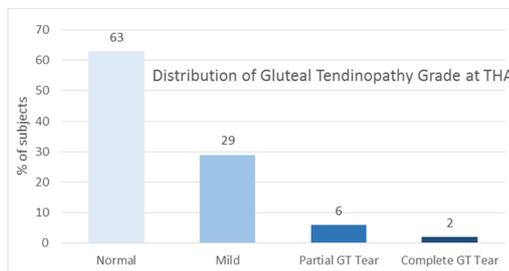
Gluteal Tendinopathy Negatively Impacts Outcomes of Total Hip Arthroplasty

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Introduction: A common cause of hip pain is tendinosis or tear of the gluteus medius and minimus tendons of the hip. While it is inferred by many authors that gluteal tendinopathy (GT) may exacerbate the symptoms of hip osteoarthritis (OA), there is no current evidence supporting the notion. The aim of this study was to examine the relationship between GT and patient reported outcomes (PROM) before and after total hip arthroplasty (THA). The hypothesis was that subjects undergoing THA with GT would have worse Hip dysfunction and Osteoarthritis Outcome Score (HOOS), compared to those without GT.

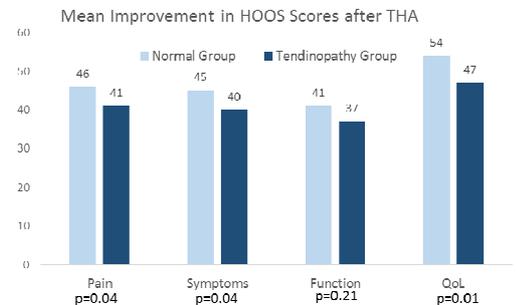
Methods: From a prospective database we identified 310 participants who underwent primary THA for OA over 12 months. At the time of THA surgeons graded the gluteal tendons for tendinosis on a 4 point scale (1-Normal, 2-mild tendinosis, 3-partial rupture or delamination, or 4-bare greater trochanter). Outcomes were compared between the "Normal" group (Grade 1) and the "GT" group (Grade 2-4).



Results: PROMs were completed by 303 subjects before surgery (98%), and 276 subjects at 1 year (89%). GT subjects were older ($p=0.001$) and more commonly female ($p=0.032$), than Normal subjects.

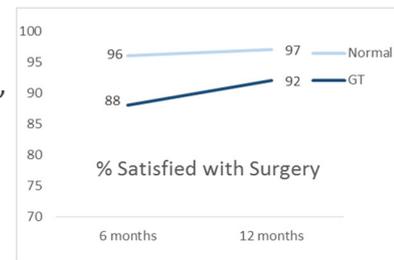
There was no significant difference between the Normal and GT groups for mean PROMS before surgery. At 12 months after surgery the GT Group had significantly worse mean HOOS Pain ($p=0.01$), Symptom ($p=0.03$) and Function scores ($p=0.03$), and a trend towards lower Oxford Hip Score ($p=0.05$) and Quality of Life Scores ($p=0.08$), compared to the Normal Group. The GT group also had a significantly smaller improvement in HOOS Pain ($p=0.04$), Symptom ($p=0.04$), and Quality of Life

Score ($p=0.02$), compared to the Normal group. The magnitude of the effect was small (effect size Cohen's d 0.23 to 0.34). On regression analysis GT was significantly associated with lower HOOS and Oxford Knee Scores, even



when controlled for age and gender.

GT increased the risk of dissatisfaction by 3x at 6 months ($p=0.009$), and 2.3x at 12 months ($p=0.102$)



Conclusions: Tendinopathy of the gluteal tendons was commonly observed, occurring in more than 1 in 3 hip arthroplasty subjects. The presence of GT had a significant negative effect on the 12 month patient reported outcomes after THA, however the magnitude of the effect was small. Those with GT had both lower mean 12 month PROM scores, and smaller change in scores after surgery, compared to those without GT. The presence of GT significantly increased the rate of dissatisfaction with surgery at 6 months by a factor of 3x, but the difference at 12 months was not statistically significant.

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