



Manual Therapy on Recovery from FAI and Hip Labral Tear

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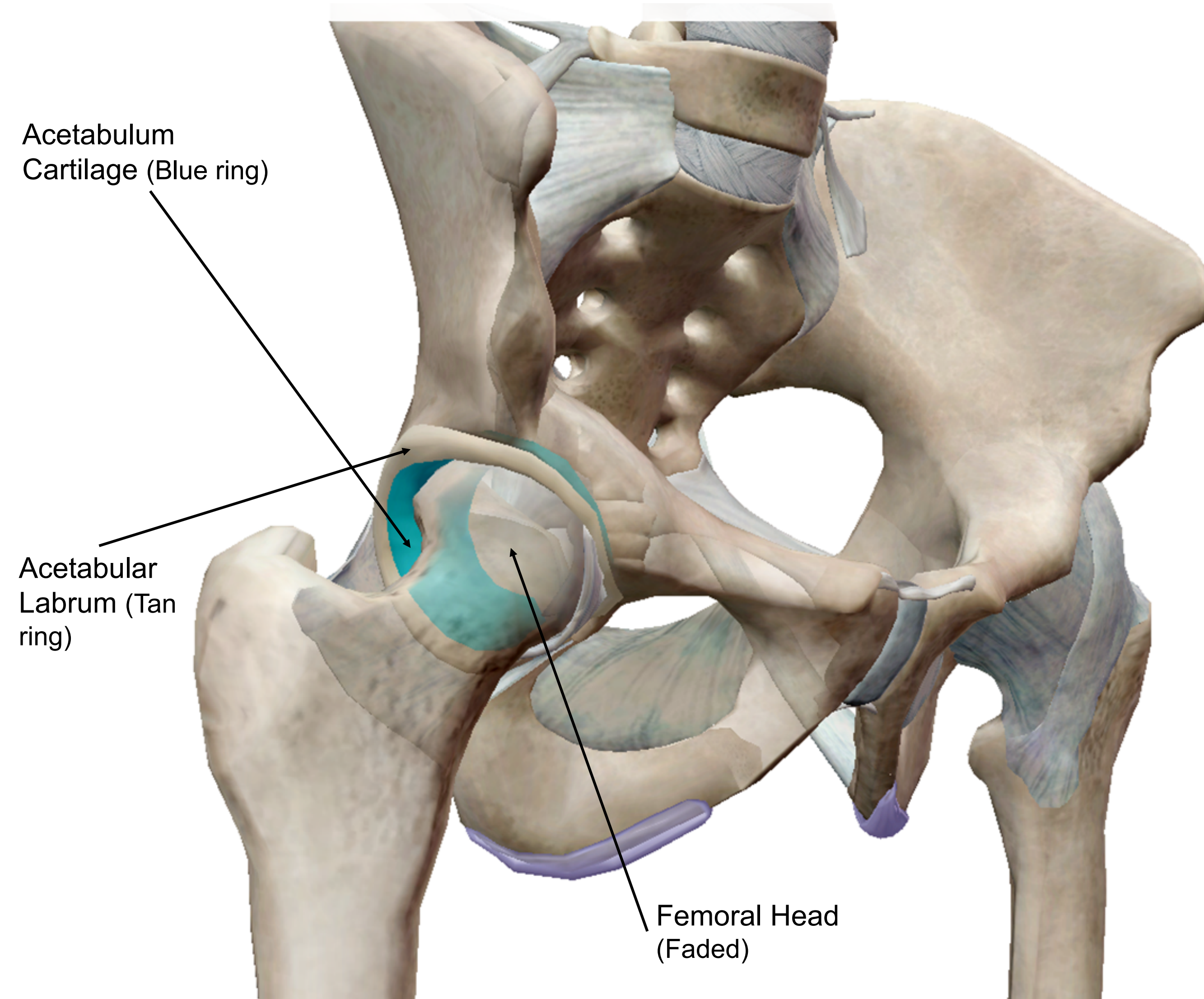


Abstract

Manual therapy is a rehabilitation method that is used as protocols for various surgeries, such as hip arthroscopic surgery. Femoroacetabular impingement (FAI) is a hip pathology that affects the range of motion of the hip joint. Hip arthroscopic surgery is used to relieve this impingement and physical therapy is always prescribed post operation. Manual therapy is usually not used or used in moderation in rehab protocols that primarily utilize exercise-based methods. However, it has been displayed that exercise-based methods have caused negative long-term effects for patients, such as hip flexor tendonitis. The purpose of this study is to determine the efficacy of manual therapy for college aged individuals who are suffering from FAI and hip labral tears. A total of 18 participants were chosen from OrthoCarolina, Charlotte NC. These patients met the criteria of having FAI, hip labrum tear, and having a hip arthroscopic surgery to relieve the impingement and tear. The participants underwent a 6-month rehabilitation protocol where they were split into 3 groups, those being, exercise-based, manual therapy, and mixed method. It is hypothesized that the mixed method rehabilitation group will have the best results.

Introduction

- Femoroacetabular impingement (FAI) overall prevalence is estimated at 10-15% in younger adults (Hufeland et al., 2016).
- Three forms of rehabilitation: Manual Therapy, Exercise-based therapy, and Mixed-method therapy.
- Manual therapy allows a patient to recover post-operation without facing muscular complications seen through exercise-based protocols.
- Additional research is needed to display the efficacy of manual therapy when compared to exercise-based therapy



(Visible Body. 2020).

Figure 1. Acetabulum and Femoral Head Joint

Purpose Statement

- The purpose of this proposal is to understand the effects of manual therapy/interventions on the recovery of individuals who suffer from FAI and hip labral tear
- It was hypothesized that the best outcome for recovery is through a rehabilitation program that incorporates both manual therapy and exercise-based rehabilitation methods.

Operational Definitions

- **Femoroacetabular Impingement (FAI)**- hip pathology where extra bone growth is observed on the femoral neck or the acetabular rim, if not both, causing decrease movement of the hip joint.
- **Manual Therapy** - Form of treatment that focuses on lengthening, relaxing, and repositioning of muscles to relieve pain, decrease inflammation, and restore range of motion.
- **Exercise-based Therapy** – Form of treatment that focuses recovery through causing strain of the muscle to cause muscle growth.
- **Mixed-Method Therapy** – Form of treatment that incorporates components of both exercise-based therapy and manual therapy.
- **Hip Arthroscopic Surgery** – A surgery used to observe the hip joint and to reconstruct any sort of deformity of the either the hip capsule or femoral head.

Methods

Recruitment

Patients were selected by the Doctors from OrthoCarolina

Criteria

- FAI and Hip Labral Tear must be present as well as a candidate for Hip Arthroscopic surgery.
- 18 participants were deemed eligible and were selected

Research Design

- 6-Month Rehabilitation Protocol
- Subjects were split into three equal groups
- N=6 per group

Group 1
Manual Therapy

Group 2
Exercise-Based
Therapy

Group 3
Mixed-Method
Therapy

Measurements

- Hip flexion, extension, internal/external rotation, adduction and abduction were tested for strength on a 0-5 scale
 - 0 being severe weakness and 5 being normal strength
- iHot-33, Hip Outcome Score (HOS), and Copenhagen Hip Outcome Score (HAGOS) measure quality of life of the hip joint
 - All three scales are Visual Outcome Scales (VAS)

Data Analysis

- ANOVA and SPSS software utilized
- Basic Descriptive Statistics (Mean, Standard Deviation, and Range)
- Bivariate Correlations at two-tailed level
- ❖ Correlations will be between the three rehabilitation groups

Discussion

- It was assumed that all participants gave maximum effort to the protocol and exercises.
- The primary limitation of this study was the small sample size.
- Both exercise-based therapy and mixed-method therapy protocols have been studied and the purpose of this study was to compare manual therapy to them.
- Future research can further demonstrate if manual therapy is a valid rehabilitation protocol.

Conclusion

The prevalence of FAI has been increasing in the previous years and is seen to cause damage to the acetabular labrum of the hip. To relieve FAI, a patient must choose between either surgical intervention and physical rehabilitation or just physical rehabilitation. This proposal seeks to further the understanding of the efficacy of manual therapy through testing subjects who are recovering from FAI and an acetabular labrum tear. Exercise-based rehabilitation protocols have produced muscular conditions, such as hip flexor tendonitis, which can be avoid through lack of physical strain from exercises. In previous research it has been displayed that mixed-method rehabilitation protocols have yielded better results than just exercise-based methods. By isolating manual therapy and exercise-based methods, the significance of manual therapy is displayed.

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