

## HIP ARTHROSCOPY IN ATHLETES

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**ABSTRACT**

**Objective:** To confirm the therapeutic importance of hip arthroplasty in athletes whose pain precludes sportive function of the hip joint, being able to minimize it to the extent of helping on the return of sports practice at satisfactory levels. **Methods:** 49 athlete patients (51 hips) submitted to hip arthroscopy complaining of pain and inability to practice sports were assessed. Follow-up time ranged from 12 to 74 months (mean: 39.0 months). Preoperatively, pain site, severity according to Facial Expression Scale (FES) and the degree of disability using the modified Harris Hip Score (HHS) were assessed. Different diagnoses were provided, which led to the indication of arthroscopy, such as femoralacetabular impact, acetabular

lip injury not secondary to femoral-acetabular impact, etc. Postoperatively, the patients were assessed by using the same methods as used at baseline and by the subjective analysis of return to sports activities. **Results:** Based on pre-and postoperative HHS and FES, the statistical analysis showed significance between values. We found some improvement in all cases and return to sports activities at a satisfactory level in most of the cases. **Conclusion:** As a result of our study, we confirm that arthroscopy in athletes with local hip injuries is an effective technique, able to promote the return to sports practice in most of the cases, without pain, and with an effective joint function, provided well indicated.

**Keywords** – Arthroscopy; Acetabular; Hip; Sports

**INTRODUCTION**

Shoulder and knee arthroscopy in athletes is a common procedure and its indications are well-defined. Over the years, arthroscopy of other joints such as the elbow, ankle, and wrist have become popular. In the hip, this enthusiasm lagged because the joint is deep and access is more difficult due to the anatomy of the

joint. Even so, it has become a reality in the United States and Europe, as well as in Brazil and throughout Latin America, with increasingly frequent indications for different conditions<sup>(1)</sup>.

Since Glick<sup>(2)</sup> published the technique with the patient positioned in lateral recumbency, after discovering that one can visualize the large joint area

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by the lateral traction vector, hip arthroscopy has gained great momentum, demonstrating itself to be a safe procedure of great diagnostic and therapeutic importance.

With the growing number of sports practitioners seeking a fit body and a healthier life intending to improve their performance, the number of hip conditions related to sports has been increasing<sup>(3)</sup>.

The main cause of hip pain in athletes is injury to the acetabular lip due to acute traumatic causes or, much more frequently, to complex mechanisms that have not been fully elucidated<sup>(4)</sup>. Femoroacetabular impingement (FAI) is one of those causes and has been gaining importance as the main cause of injury to the acetabular lip.

Arthroscopic procedures can help in this context, making a satisfactory recovery possible in order to allow patients to return to sports<sup>(5)</sup>.

The aim of this study is to confirm the therapeutic significance of hip arthroscopy in athletes with pain that is incapacitating in relation to sports.

## METHODS

We define sports as the set of regular physical exercises that is performed by an individual or collectively<sup>(6)</sup>. According to this definition, 49 individuals (51 hips) practicing sports who had debilitating pain in the hip joint that prevented them from performing sports were evaluated. Of these, 32 were male (65.3%) and 17 were female (34.7%). Ages ranged from 16 to 51 years (an average of 33.1 years). Among the subjects studied, 42 were White (85.8%), three were Black (6.1%), three were of mixed ethnicity (6.1%), and one person was of Asian descent (2.0%). The right hip was the most affected in 33 subjects (64.7%) and the left hip in 18 (35.3%). The sport that was the most played was soccer in 14 cases (28.5%). The minimum follow-up period was 12 months and maximum 74 months (averaging 39 months). In the preoperative period, we assessed the location of the pain and its intensity according to the Facial Expression Scale (FES)<sup>(7)</sup>, and the degree of disability using the criteria of the Harris Hip Score modified by Bird (HHS)<sup>(8)</sup>.

After surgery, patients were reassessed at various times using the same criteria as in the preoperative period (HHS and FES).

To assess whether there was a difference between

the FES values before and after surgery, we performed the Wilcoxon test to test continuous variables. We considered  $p$  values  $< 0.05$  for statistically significant differences in the values of FES before and after arthroscopy.

The Wilcoxon test was used to test the HHS variable, with  $p$  values  $< 0.05$  considered statistically significant differences in relation to the HHS values before and after arthroscopy. To analyze the various diagnoses that led to the indication for surgery, patients were divided into three groups according to the intraoperative diagnosis, namely: group A, those with a diagnosis of femoroacetabular impingement (54.9%), group B, those with lesions of the acetabular lip not secondary to FAI (35.5%) and group C, patients with other diagnoses (9.6%) (Tables 1 and 2). All patients underwent anatomical correction of the anatomical deformities by osteoplasty, both acetabulum (pincer) and femoral (cam) when present.

The HHS and FES values before and after surgery were studied using the Kruskal-Wallis test, in order to assess possible differences between the three groups studied. We considered  $p$  values  $< 0.05$  to be statistically significant.

To evaluate the level of return to sports activities in the postoperative period in the most simple manner possible, we used a subjective criterion: whether or not the patient returned to the sport. For those who returned, individuals were asked to categorize their

**Table 1** – Diagnostic Frequency of Groups A, B and C.

Diagnosis	Frequency	Percentage
Group A – Femoroacetabular impingement	28	54.9%
Group B – Labial lesion not secondary to femoroacetabular impingement	18	35.5%
Group C – Other diagnoses	5	9.6%
Total	51	100%

**Table 2** – Diagnostic Frequency of Group C

Diagnosis	Frequency	Percentage
Chronic tendinitis in the iliopsoas muscle tendon	2	3.9%
Iliotibial band syndrome	1	1.9%
Round ligament lesion	1	1.9%
Inflammatory hip disease	1	1.9%
Total	5	9.6%

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