

Comparison of Clinical Outcomes Between Athlete and Non-Athlete Following Arthroscopic Treatment for the Femoroacetabular Impingement

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Summary:

Arthroscopic FAI correction could provide satisfactory clinical outcomes for the patients with FAI. The evidence indicates that athlete could have the potential to recover more quickly.

Abstract:

Background:

Femoroacetabular impingement has become more widely recognized in the athletic patient population. However, there is a dearth of the literatures regarding a comparison of the clinical result between athlete and non-athlete.

Purpose:

The purpose this study was to compare the clinical results of athlete to those of non-athlete who underwent arthroscopic surgery for FAI.

Study design. Level II Cohort study.

Method:

From March 2009 to May 2011, patients (157 hips) who underwent arthroscopic FAI correction (rim trimming, labral refixation, cam osteochondroplasty and capsular plication) were enrolled in this study.

Exclusion criteria included the patients who were operated both sides of hip, combined with lumbar and/or knee disorder, with psychogenic problem, with osteochondroma and who had 25 degree or less of CE angle in preoperative patients(157 hips) were divided into two group according to the participation into sports activity. Athlete group consisted of 50 patients and 24 patients (48%) were regularly participated in sports activities until first occurrence of FAI symptoms. Non-athlete group included 37 patients.

AP X-ray. Gender, mean age at the time of surgery, period from onset to surgery, CE angle and a angle at preoperative hip X-ray, delamination, preoperative modified Harris Hip Score (MHHS), postoperative MHHS at 6 months (follow-up rate; 79.3%) and 12 months (follow up rate; 62.1%) were evaluated. Degree of severity of delamination was evaluated using MAHORN (Multicenter Arthroscopic Hip Outcome Research Network) classification.

Results:

The number of male patients in athlete group was significantly higher than that in non-athlete group. (Athlete group

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64%, non-athlete group 32%, $P < 0.01$) The mean age at the time of surgery in athlete group was significantly younger than that in non-athlete group (athlete group 34.7 years, non-sporting group 42.5 years, $P = 0.01$). There were no significant differences between two groups regarding the period from onset to surgery (athlete group 11.9 months, non-athlete group 13.5 months), preoperative CE angle (athlete group 35.1 degrees, non-athlete group 35.0 degrees), a angle (athlete group 59.4 degrees non-athlete group 61.6 degrees) and the severity of delamination (patients classified MAHORN ?-?; athlete group 24.5%, non-athlete group 37.1%).

There was no significant difference of preoperative MHHS between both two groups (athlete group; 66.4 ± 12.8 , non-athlete group; 63.9 ± 17.2). Compared to preoperative MHHS, postoperative MHHS of each group was significantly improved at 6 months (athlete group; pre 66.4 to post 93.5, $P < 0.01$, non-athlete group; pre 63.9 to post 89.5, $P < 0.01$) and at 12 months (athlete group; post 96.5, non-athlete group; post 95.2, $P < 0.01$). Postoperative MHHS at 6 months of athlete group was significantly higher than that of non-athlete group ($P < 0.01$, Mann-Whitney U-test), nevertheless, no significant difference at 12 months ($P = 0.30$). All of these competitive athletes (100%) achieved complete return to pre-injury activity at final follow-up.

Conclusions:

Arthroscopic FAI correction could provide satisfactory clinical outcomes for the patients with FAI. The evidence indicates that athlete could have the potential to recover more quickly.