

# Capsular management in the arthroscopic treatment of the femoro-acetabular impingement in athletes: our experience

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**Summary.** *Background and aim of the work:* In the last decade, thanks to the improvement of the surgical techniques, arthroscopic treatment of hip diseases has significantly spread and evolved and currently it represents the gold standard for the treatment of femoral-acetabular impingement. In the recent years, the function of the joint capsule (and therefore the results of an arthroscopic capsulotomy) has been better understood, opening a heated debate. The Literature is still torn about a proper capsular management and the need for a capsular suture, but latest studies are more oriented to its execution at the end of the surgical procedure. According to these recent studies, the joint capsule performs an essential function on primary stability, so a conservative capsulotomy and its final closure are therefore recommended to restore the native anatomy and physiology. Although capsular management remains a controversial topic, in recent years we have developed a new conservative capsulotomy technique associated with a final capsular suture. The aim of the present retrospective study is to assess the influence of different capsulotomy techniques and a possible capsular suture role on the patient's functional outcome in a cohort of patients with femoral-acetabular impingement arthroscopically treated. *Hypothesis:* Our hypothesis is that a conservative "longitudinal" capsulotomy with a proper capsular suture positively influences the patient's functional outcome in athletes. *Methods:* 36 patients (competitive athletes) treated with hip arthroscopy for femoral-acetabular impingement have been retrospectively enrolled at the Orthopaedic Clinic of Academic Hospital of Udine during a period of two years (2016-2018); collected data have been analyzed and compared with a retrospective model. Patients have been divided into three equivalent groups, 12 without a suitable capsular management (T-Capsulotomy technique), 12 performing a Longitudinal Capsulotomy but without a final suture and 12 treated with a conservative Longitudinal Capsulotomy and a capsular suture. Patient's post-operative functional outcome has been analysed using the modified Harris Hip Score (mHHS), the Hip Outcome Score-Activity of Daily Living (HOS-ADL) and the Hip Outcome Score-Sport Scale (HOS-SS). Return to sport. *Results:* In our series there was no statistically significant difference in functional scores, however longitudinal capsulotomy seems to be associated with a higher percentage of return to sports activity (91,6% vs 75%). *Conclusions:* The new longitudinal shape capsulotomy technique and a capsular suture with a single side-to-side stitch at the end of the procedure in athletes can positively influence the patient's functional outcome. (www.actabiomedica.it)

**Key words.** Hip arthroscopy, capsular suture, capsulotomy, femoral-acetabular impingement, athletes













