

## Appendix

### *Surgical Technique*

Hip arthroscopy was performed by the senior author (O.M.-D.) with the patient supine. After proper distraction was achieved and both arthroscopic portals were established, interportal capsulotomy was carried out using an arthroscopic blade connecting the anterolateral and mid-anterior portals. If the surgeon expected to perform an extensive cam decompression—which occurs in approximately 15% to 20% of cases—the anterior limb of the capsulotomy was extended distally in an oblique fashion and 1 additional stitch was used to perform the capsular repair (Fig. E-1).

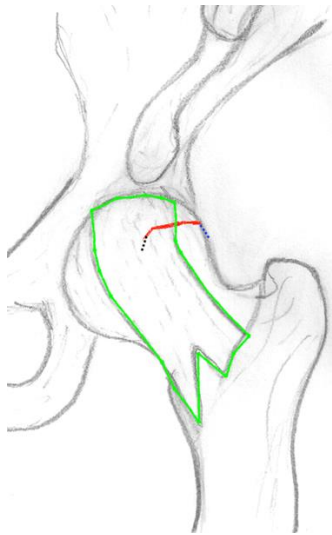


Fig. E-1

Diagram showing the interportal capsulotomy technique and size. Red line = interportal capsulotomy, green outline = iliofemoral ligament, and dotted lines = capsulotomy extension used if needed for a large cam resection.

The mean interportal capsulotomy length was 23 mm with a range of 18 to 30 mm. However, the position of this capsulotomy relative to the acetabular clock face was adjusted for each hip to permit access to the lesion. This was achieved by first creating a small 15-mm capsulotomy to permit evaluation of chondrolabral pathology and then extending this capsulotomy either anteromedially or posterolaterally to facilitate access for low-anterior labral repair or posterolateral cam debridement, respectively. For large cam lesions, our 3-cm window is utilized as a “mobile window” through the use of distal capsular traction sutures and by varying the position of the hip during cam resection. Successful cam resection with a limited (<3-cm) capsulotomy requires meticulous preoperative planning and a systematic approach to ensure that the femoral osteoplasty does not result in underresection or overresection.

Once surgical treatment in the central and peripheral compartments was completed, an envelope containing a preprinted group allocation (capsular repair or no capsular repair),

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produced by computer-generated randomization, was opened. Because all patients in this cohort had simultaneous bilateral FAI surgery, the first hip capsule was treated according to the randomized allocation in the envelope while the second side was treated with the opposite treatment option. Importantly, the length of the capsulotomy made in the second hip was matched with that made in the first hip in each of the randomized pairs. Patients were blinded to the capsulotomy treatment performed in each hip.

Capsular repair was performed with number-2 Vicryl Plus (polyglactin 910 plus antibacterial) suture (Ethicon) loaded into a SpeedStitch (ArthroCare) device, which was inserted through the mid-anterior portal with a 70° arthroscope through the anterolateral portal resting in the peripheral compartment. The suture is first passed through the anterior aspect of the proximal (acetabular) capsular leaflet, after which the SpeedStitch is removed and reloaded with the opposite limb of the same suture. The SpeedStitch is then carefully reinserted through the mid-anterior portal utilizing a slotted cannula and taking care to avoid entanglement with the first suture limb<sup>10</sup>. After the suture is passed through the distal (femoral) capsular leaflet, directly across the location of the first pass, an arthroscopic Weston sliding knot followed by 2 half-hitches on alternating posts is tied. The process is repeated until adequate capsular closure and tension have been obtained to the surgeon's satisfaction. Typically, capsular repair is performed with 2 or 3 sutures resulting in closure of the anterior 70% of the capsulotomy site (Fig. E-2). We intentionally leave the posterior-lateral (non-iliofemoral ligament) portion of the capsule open to enable evacuation of the joint's postoperative hematoma.

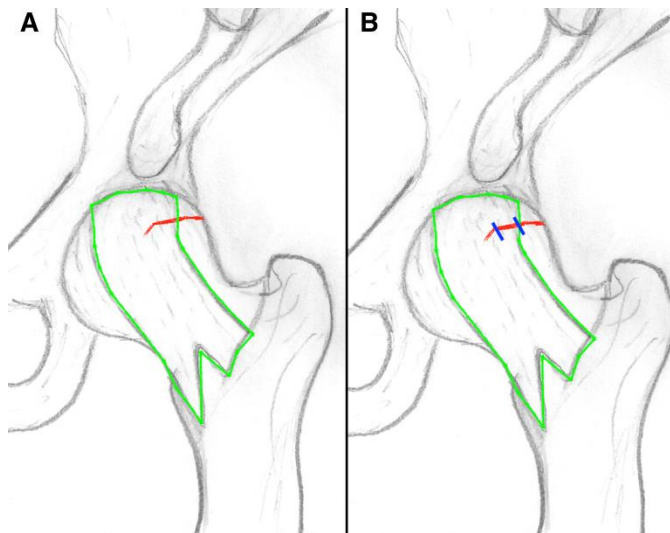


Fig. E-2

Interportal capsulotomy (A) and capsulotomy repair (B). The capsulotomy was started posterior to the iliofemoral ligament (green outline) and care was taken to not breach the full width of the ligament.

## **Rehabilitation**

Patients were instructed to avoid combined abduction and external rotation of the hip for 4 weeks postoperatively to prevent stressing of the capsular repair. Gentle stationary bicycling was initiated on postoperative day 1. All patients were encouraged to bear weight as tolerated on both lower extremities, utilizing crutches for balance and support during the first 10 to 14 days postoperatively.