

FEMOROACETABULAR IMPINGEMENT SYNDROME (FAI)

CYPRUS EXPERIENCE

Slide 2 : The Cyprus Experience of Hip Arthroscopy is very poor. It is still in infancy.

The first hip arthroscopy was performed in 2009 and the last in 2014. All procedures took place in Aretaeio Hospital, in the early stages under the help and supervision of Dr. Möckel.

The Cyprus hip Arthroscopy Experience consists of 25 cases. 20 cases were operated for FAI and the other 5 cases for other reasons, such as Removal of loose bodies due to Synovial Chondromatosis or old Perthes disease, Release the Psoas Tendon due to painful THR, Debridement and Microfracture technique of acetabular bone cyst and bone biopsy of acetabular neoplastic bone lesion.

Slide 3: Although most of what I am going to say have been said before by the previous speakers, I think it's worthwhile to refresh the most important issues rapidly.

The diagnosis of FAI was suspected on: **Patients' History** and **Clinical Examination**. And the diagnosis was confirmed by the **Radiographic examination**.

Slide 4: Concerning patient's History the most frequent mentioned symptom was pain in sitting position and the C- sign.

Slide 5: Concerning Clinical **Examination**, The most important findings were the Log –Roll test, pain with full flexion in supine position, painful internal rotation Impingement test positive, (Which is very sensitive but not specific test) and localized tenderness on hip joint.

The Examination pays attention to exclude any other extra articular pathology.

Radiographic Examination:

Slide6: Important is **A true AP Pelvic view** (These are the signs of correct position (symmetrical foramina) and Coccyx in line with symphysis pubic)

Slide 7: A **Modified lateral or Frog position**. Because the CAM deformity is not in a standard position of the anterolateral neck. I modified this view in a way that I put the patient's leg in figure of "4" position, and then I ask him to raise his knee while I control the contour of the femoral neck using fluoroscopy. I take picture at the position where the deformity is seen.

Slide 8: Another X-Ray view is the Faux-Profil view by standing and turned patient. This view is not used very often, although is a good measurement for anterior acetabular coverage. We see here the ACE angle, which if it is less than 25° this indicates under coverage.

Slide 9: How do we evaluate these X-RAYS ??

Slide 10: On the AP view we can assess the acetabular coverage. Known is the **Lateral-Center-Edge angle**, a measurement for lateral coverage. Normal is 25°-40°. Values less than 25 indicate under coverage in other words dysplastic hip, and values above 40 indicate overcoverage or Pincher deformity.

Slide 11: Additionally we can assess the anterior and posterior lip for the cross over sign, which is also a sign of focal overcoverage. Visible is also the ischial spine, both signs of acetabular retroversion.

Slide 12: The lateral view is very important for Cam deformity. Known is also the **alpha angle**, which is a sign of head sphericity and head-neck-offset. Normal values are up to 50°. Values above 50° indicate abnormal head-neck offset or Cam deformity.

Slide 13: Is MRI evaluation necessary?

The Answer is yes, although the MRI is not diagnostic but supporting . MRI must be done to exclude other pathologies, like AVN, Transient osteoporosis etc.

Instead, **MRI-Arthrogram** is important in assessing the labrum and chondral condition. Its accuracy is reasonable high, but practically it is not easy to be done routinely.

Slide 14: Let's come now to our experience.

20 patients have been operated, 15 males and 5 females , in ages of 26 to 55, mean age 38, and we had 12 left and 8 right hips.

Slide 15: We had 2 hips with **Pincher Type FAI**, all underwent Pincher correction and debridement and smoothing of labrum since the labrum was irreparable.

We had also 12 hips with **CAM- FAI**. All underwent Cam Correction, and among these patients, 3 had additionally Labrum debridement/ smoothing.

Finally we had 6 hips with **Mixed type FAI** too. All of them had labrum tear. We performed Correction of Pincher and cam deformity to all cases. In addition in 4 hips, we performed labrum repair and in 2 labrum debridement.

Slide 16: All patients have been operated in supine position in an ordinary traction table.

Slide 17: A very quick video of Pincher correction and Labrum repair. (CC, Perilabral sulcus , Peel off the labrum, bone correction, sutures through labrum, Reattachment of the labrum with push lock)

Slide 18: This is a picture of it.

Slide 19: This video shows Cam correction (PC, Thinning out the capsule, not capsulotomy preparation of the bone , correction of deformity)

Slide 20: A picture of cam correction. And a picture during dynamic Impingement test intraoperatively. The space created is obvious.

Slide 21: Let see our results.

All patients have been evaluated with the **Hip Outcome Score**, a self-questioner concerning activity of Daily Living and Sports, and also evaluated with a short version of **International Hip Outcome Tool (IHOT 12)** , a self-questioner about daily activities, functionality and sports. The evaluation took place preoperatively and 6 months after operation

Slide 22: Results. HOS -> Preop mean score: 76,6 out of 100 and Post op 91,4 out of 100. IHOT 12 -> Preop mean score: 71,3 out of 100 and postop mean score 88,8 out of 100.

HOT 12 -> Preop: mean score 71,3 out of 100 and postop mean score: 88,8 out of 100

Slide23: This slide shows the improvement reflecting the HOS , where the blue line presents the preop and the red line the postop values.

Slide 24: And this is the improvement reflected by the use of the IHOT12.

Thank you