Hinsdale Orthopaedics

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Clinical Outcomes for the Treatment of Amorphous Calcification of the Labrum during Hip Arthroscopy with Minimum Two-Year Follow-up

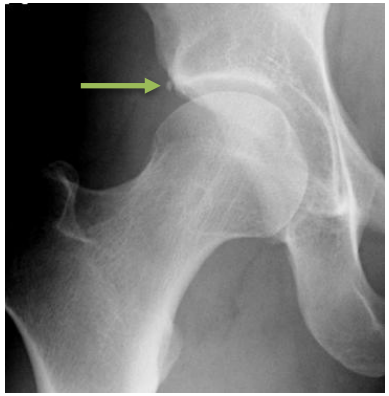
Itay Perets, MD
David Hartigan, MD
John P Walsh, MA
Edwin O Chaharbakhshi, BS
Mary R Close, BS
Benjamin G. Domb, MD

Disclosures

- American Hip Institute[a], AANA Learning Center Committee[a], Amplitude[c], Arthrex[b,c,d], ATI[b], Breg[b], DJO Global[d], Orthomerica[d], Pacira[b,c], Stryker[b,c]
- a – boardmember; b – research support; c – consulting; d – royalty; e - stockholder

Background

- Calcific tendinitis of the shoulder
  - Resorptive phase - soft calcification (toothpaste like) .
  - Associated with diabetes and hypothyroidism.
- Os acetabuli
  - stress fractures? unfused secondary ossification center?
  - Location and the high incidence in FAI
  - Well-defined borders
  - Larger when compared to ACs.
  - Solid mass that is removable in one piece.
- Amorphous calcification
  - Soft calcification (paste-like).
  - Dense fibroconnective tissue.
- Common pathophysiology???



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Purpose

- To evaluate clinical outcomes, satisfaction, demographics, and radiographic findings for patients whose hip arthroscopies involved AC excision accompanied by labral and/or FAI treatment.

Methods

- Primary hip arthroscopy for FAI and/or labral tears with min 2 year FU.
- Excision of amorphous calcification
- Reviewed:
  - Demographics including comorbidities
  - Radiographics
  - Intra-operative findings and procedures.
- VAS and satisfaction were recorded.
- Patient reported outcome:
  - mHHS
  - HOS-SSS
  - NAHS

Figure 1: Intra-operative amorphous calcification is noted (*) between the capsule (C) and the labrum (L).

Surgical Technique

- Localization of the AC can be predicted by pre-operative radiographs.
- The capsule is elevated by electrocautery at the labral-capsular recess.
- Once a portion can be visualized, the location is confirmed.
- Excision is done with a soft tissue elevator and/or a shaver at the labral-capsular recess in the confirmed location.
- Due to the amorphous nature of this calcification, a thorough excision is necessary in order to ensure complete removal of the AC.
- Confirmation of AC removal is done by radiographs.

Results

Table 1: Demographics

n = 12	n (range)	%
Age (years)	39.85 ± 5.64 (34.35 – 50.62)	
Time between symptoms onset and surgery (months)	8.8 ± 5.7 (4.2 - 24.6)	
Sex		
Male	0	0
Female	12	100%
Side		
Left	5	41.67%
Right	7	58.33%
Weight (kg)	62.94 ± 18.72 (55.33 – 90.72)	
Height (in)	65.33 ± 4.09 (62 – 68)	
BMI (kg/m²)	22.82 ± 3.12 (19.90 – 30.41)	
Follow-Up (months)	38.85 ± 16.58 (23.98 – 72.02)	
Satisfaction	7.45 ± 2.42 (3 – 10)	

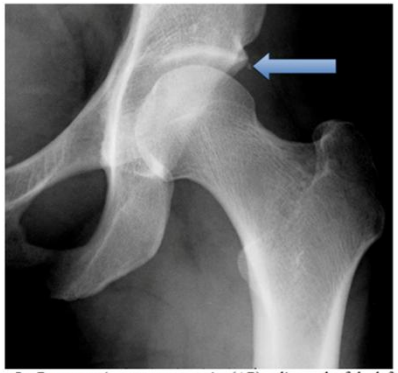

Figure 5a: Pre-operative antero-posterior (AP) radiograph of the left hip in year old female patient shows a common location and appearance of AC (see arrow).

Figure 5b: Post-operative AP radiograph of the same hip with no sign of AC

Table 4: Intraoperative Findings

n = 12	n	%
ALAD		
0	4	33.33%
1	2	16.67%
2	3	25%
3	3	25%
4	0	0
Acetabular Outerbridge Grade		
0	1	8.33%
1	3	25%
2	5	41.67%
3	2	16.67%
4	1	8.33%
Femoral Outerbridge Grade		
0	10	83.33%
1	0	0
2	0	0
3	1	8.33%
4	1	8.33%
Seldes Tear Type		
1	7	58.33%
2	3	25%
1 and 2	2	16.67%

Table 3: Intraoperative Procedures

n = 12	n	%
Labral treatment	**12**	**100%**
Repair	10	83.33%
Debridement	2	16.67%
Reconstruction	0	0
Capsular Treatment	12	100%
Release	6	50%
Plication	6	50%
Acetabuloplasty	10	83.33%
Femoroplasty	9	75%
Microfracture (femoral or acetabular)	0	0

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Results

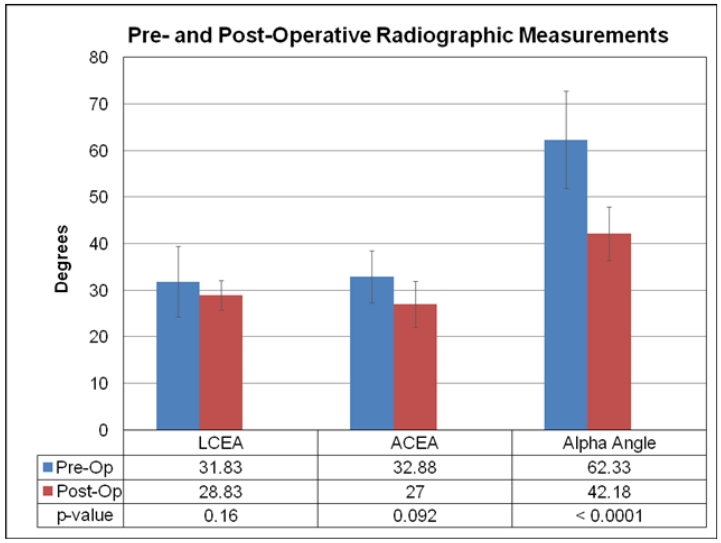
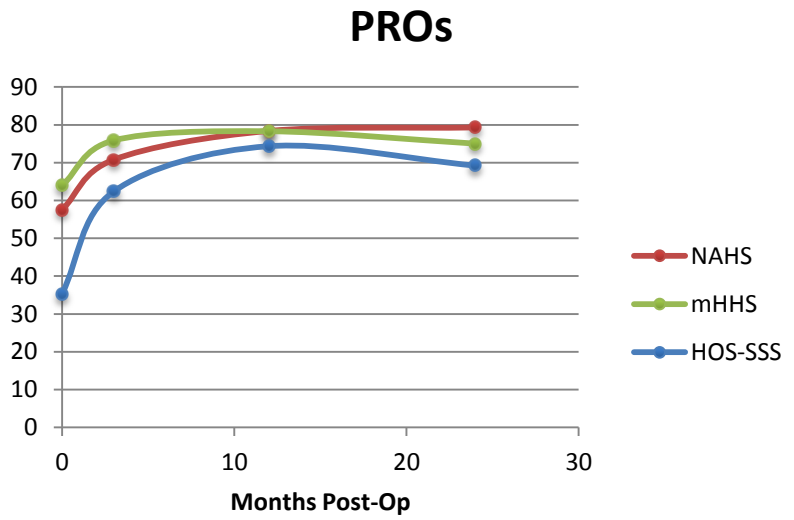
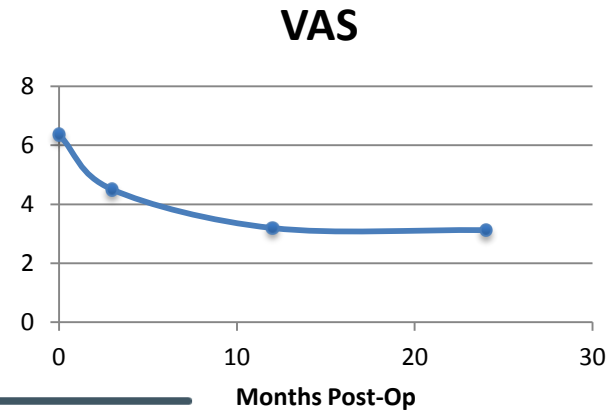


Figure 2: Pre- and post-operative radiographic measurements.





- No revisions
- 92% survivorship
- No DM
- 18.2% - hypothyroidism (p=0.03)

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Conclusions

- The treatment of AC as a part of hip arthroscopy procedures demonstrates statistically significant improvements in PROs and VAS.
- Hypothyroidism may be a risk factor for the development of AC.

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