

P.T.; Shane Nho, M.D., M.S.;
 Andrew Wolff, M.D.; John Salvo, M.D.;
 John Christoforetti, M.D.; Thomas Ellis, M.D.

Purpose/Introduction: Report the effect of alpha angle on the severity of synovitis findings in patients undergoing hip arthroscopy in a large multi-center study group. **Methods:** De-identified data was collected from 10 individual surgeon practices that each perform greater than 100 hip arthroscopy cases per year for a minimum of 8 years. An AP view establishing the alpha angle of the involved hip was recorded for each patient. Patients were then grouped by severity of synovitis identified during arthroscopic evaluation. An analysis of variance (ANOVA) tested the effect of radiographic alpha angle of the observed synovitis during arthroscopy. The magnitude of the differences between the groups of patients based on synovitis severity were established by a Tukey's post hoc analysis. Synovitis was defined on the following scale: Grade 0, no evidence of erythema or hypertrophy of the synovial membrane and absence of villi; Grade I, some erythema or hypertrophy of the synovial membrane and low density villi; Grade II, severe erythema that is contained or patchy and moderate presence of villi; Grade III, Diffuse erythema and hypertrophy throughout the membrane as well as high density of villi. **Result:** The 3162 patients (1138 male; 2024 female) averaged 34.05 (SD: 11.3) years of age, 25.2 (SD: 3.6) BMI, a 40.8 (SD:20.4) pre-op pain VAS, and 34.07 (SD: 17.9) pre-op iHOT-12. Analysis of variance confirmed an effect of alpha angle on synovitis, $F(3)=12.3$, $p<0.001$. The post hoc analysis showed that alpha angles were different ($p<0.05$) between each of the synovitis groups: Grade 0 (57 ; SD:12), Grade I (59 ; SD 13) Grade II (61;SD: 14), and Grade III (66; SD: 14). **Conclusion:** The results of this study show that patients with more significant synovitis findings during arthroscopically have greater alpha angle values. **Disclosure:** The author(s) have no commercial interest to disclose. The FDA has cleared all pharmaceuticals and/or medical devices for the use described in this presentation.

The Effectiveness of Alpha-2-Macroglobulin Injections for Osteoarthritis of the Knee



Authors: Kamali Thompson, M.D.;
 David Klein, M.D.; Kirk Campbell, M.D.;
 Guillem Gonzalez-Lomas, M.D.;
 Michael Alaia, M.D.; Eric Strauss, M.D.;
 Laith Jazrawi, M.D.

Purpose/Introduction: Osteoarthritis, a degenerative and debilitating joint disease, is one of the most prevalent diseases in the United States. Despite the significant burden osteoarthritis can place on an individual and society, nonoperative treatment options are still very limited. Little clinical data exists on the use of injectable macromolecules for the treatment of osteoarthritis of the knee. Alpha-2-macroglobulin (A2M), a naturally

occurring macromolecule, inhibits the many endogenous and exogenous proteinases presenting in the pathogenesis of osteoarthritis. This macromolecule is not typically contained in high quantities in traditional PRP preparations. To date, no studies exist evaluating the effectiveness of A2M with other intra-articular injectables. The purpose of this study is to compare the clinical effectiveness of intra-articular injection of A2M against both platelet-rich plasma (PRP) and corticosteroids. **Methods:** This prospective randomized control trial was conducted at a single medical center. Seventy-five patients with symptomatic knee osteoarthritis with Kellgren-Lawrence grade 2 or 3 were randomized into one of three cohorts receiving intra-articular injection. One group was given PRP, one group was given A2M, and one group was given corticosteroids. All groups had blood drawn to simulate A2M preparation. Patient reported outcomes were collected prior to injection, 6 weeks and 12 weeks following injection. Several measures were used for clinical assessment including the visual analog scale (VAS), Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Knee Injury and Osteoarthritis Outcome Score (KOOS), Lysholm, and Tegner scores. **Result:** Seventy-five patients with a mean age of 61.08 ($\pm$ 8.48) were enrolled between June 2018 and February 2019. At six weeks, the A2M group had the greatest improvements in VAS (-1.60) and WOMAC (-10.9) scoring, however, the differences were not statistically significant. Between the injection and the twelve week visit, the A2M group had a statistically significant improvement in WOMAC score compared with traditional PRP (-18.43 vs -5.70, $p<0.02$). Overall, both corticosteroid (-1.57) and A2M (-1.70) had a better improvements in VAS when compared with traditional PRP (-0.61). However, these were also not statistically significant. **Conclusion:** Our study demonstrates Alpha 2 Macroglobulin shows similar effectiveness to corticosteroids in the treatment of knee osteoarthritis. Both A2M and corticosteroids appear to show better effectiveness than traditional PRP injection, however the differences are small and did not reach statistical significance in most outcome measures. The extra preparation time required and cost associated with A2M may not warrant its routine use in the management of knee osteoarthritis. **Disclosure:** The author(s) have no commercial interest to disclose. The FDA has cleared all pharmaceuticals and/or medical devices for the use described in this presentation.

The Everted Native Acetabular Labrum: Patho-Anatomy, Imaging Findings, and Surgical Treatment



Authors: Laura A. Vogel-Abernathie, M.D.;
 Matthew J. Kraeutler, M.D.; Mary K. Jesse, M.D.;
 Corey K. Ho, M.D.; Omer Mei-Dan, M.D.

Purpose/Introduction: The purpose of this study is to introduce the concept and the patho-anatomy of the everted acetabular labrum phenomenon, assess the magnetic resonance imaging (MRI) characteristics of this