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Abstract

Purpose: The primary aim of this study was to identify differences in alpha angle on plain radiographs, MRIs, and CTs of patients diagnosed with abnormal hip pathologies.

Methods: This was a retrospective review of 60 (n=93 hips) patients diagnosed with slipped capital femoral epiphysis (SCFE), Legg-Calvé-Perthes disease, hip dysplasia, pelvic apophyseal injuries, or femoroacetabular impingement (FAI) who had a plain radiograph, MRI, and CT of their hips performed prior to treatment. We compared the alpha angle of the affected hip measured on an AP view of the pelvis on plain radiograph, the coronal view on CT, and the coronal view on MRI using a one-way ANOVA. This study was approved by the COMIRB, and we defined statistical significance as $p < 0.05$.

Results: We found no statistically significant differences between the alpha angle on plain radiograph, MRI, or CT ($p < 0.48$), nor were there statistically significant differences in alpha angle between genders on plain radiograph ($p < 0.53$), MRI ($p < 0.93$), or CT ($p < 0.17$) for those diagnosed with FAI.

Conclusion: This study revealed no significant differences between alpha angles on plain radiograph, MRI, or CT for patients diagnosed with FAI. Further data needs to be collected to complete this study.