

OP 9 PRELIMINARY STUDY OF THE MORPHOLOGY AND VARIABILITY IN THE GEOMETRIC ACETABULAR ANGLES IN PLANE ANTERIOR-POSTERIOR PELVIC RADIOGRAPH IN ADULT SRI LANKANS

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Introduction

The morphology of the acetabulum and its relationship to the femoral head are important contributing factors for the hip dysplasia, where radiological imaging plays a major role in decision making and diagnosis. In the assessment of acetabular morphology Sharp's angle (ShA) and Sourcil angle (SoA) are often used. Relationship between the femoral head and the acetabulum is described by Centre Edge Angle (CEA)

Objective

To assess the variations in the geometric acetabular angles in plane anterior-posterior pelvic radiographs in adult Sri Lankan population

Methods

One hundred and thirty nine (139) normal hip radiographs, analyzed:

Results

Majority 43.9% (61/139) of the ShA were between 360 to 400 with a mean value of 37.50 ± 3.73 . Percentage 43.2 (60/139) had CEA between 360 to 400 which accounts for a mean value of 38.160 ± 4.67 . SoA had the majority [60% (60/139)] varying around 00 to 50. In all three measurements there was no significance difference between two sides of the hip:

Gender difference was observed for SoA where males had 50% (16/32) between 60 -100 while females had 49.5% (53/107) between 00-50 which is statically significance (<0.006), where as other two angles had no gender differences.

Conclusions

Sharp's angle and Centre Edge Angle had mean values, which both were comparable with western data. Statically difference gender difference was observed in SoA. Further radiological studies preferably with larger samples are in need to develop reference values for a Sri Lankan population.