Screening for developmental hip dysplasia in neonates. The role of the obstetrician, the paediatrician and the orthopedic

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Introduction:

Prevention of developmental hip dysplasia in neonates with an early, easy and effective way is essential. Untreated cases are associated with long-term morbidity and degenerative arthritis. Early detection and treatment of developmental dysplasia of the hip is the answer.

Aim:

The aim of our study is to evaluate the necessity of universal ultrasound screening for developmental hip dysplasia in early days of life along with the clinical examination.

Material:

We performed hip ultrasound with a linear head (L12) in neonates born between 1/1/2017 and 31/12/2017, regardless the clinical findings in neonatal clinical examination (Barlow/Ortolani test).

Alpha and beta angle were measured in 235 neonates (135 females and 100 males). Alpha angle is formed by the acetabular roof to the vertical cortex of the ilium and is greater than or equal to 60 degrees.

Ultrasound was performed by a specialized orthopedic surgeon on the second day of life or prior to discharge.

Results:

Only one baby had a positive family history for hip dysplasia and eight (3,4%) were in breech presentation.

127 of them (54%) were born by C-section.

Only one baby was referred by the paediatricians with a present “click” on clinical examination and his performed ultrasound had normal Graf’s angles.

All babies born with breech presentation had normal measurements for alpha and beta angle and no clinical findings on examination.

The baby with the positive family history had normal clinical examination and ultrasound screen.

Seven babies had alpha angle smaller than 60 degrees and beta angle medium measurement was 45 degrees (physiological immature hip) and needed evaluation on the 4th week of life. All of these 7 babies had no findings on clinical examination performed by experienced paediatricians, 6 out of 7 were born by C-section and none had a family history of hip dysplasia.

Conclusions:

In our study 7 out of 235 (2.9%) of babies born with normal hip clinical examination had an immature hip on ultrasound screen. Taking these as potentially dysplastic hips, universal screening in newborns for developmental hip dysplasia performed by experienced orthopedic is an easy, cheap and effective measure of prevention of hip abnormalities in adult life.