Comment on Terjesen and Horn: ‘Prognostic value of severity of dislocation in late-detected developmental dysplasia of the hip’

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Sirs,

We read with great interest the article by Terjesen and Horn¹ published in your esteemed journal. Recently, this article was discussed via a web-based online platform in the journal club meeting of our department. We want to congratulate the authors for conducting this study but there are some concerns about this article that needs to be clarified.

The authors stated that in Group 1, the children were subjected to a treatment of preliminary traction and closed reduction (data retrieved from old records) but what the endpoint of treatment would be was not mentioned and what results were attained in each grade of developmental dysplasia of the hip (DDH)? Were all the dislocated hips reduced? If they were reduced what degree of reduction was attained? These parameters are important when looking at long-term outcome measures like osteoarthritis.

In Group 2, out of 54 hips only 22 had an International Hip Dysplasia Institute classification² and only 17 had a Tonnis classification³ (due to five hips not having an ossific nucleus) in a retrospective grading. Only the lateral metaphysis height (LMH) classification was done prospectively in all 54 hips. Surprisingly, we have radiographs of all of Group 1 but a significant number of radiographs were missing in Group 2.

Residual dysplasia was measured in Group 1, where the authors have defined it as the signifier for the need for additional surgery during childhood and adolescence, or centre-edge angle < 20° degrees at skeletal maturity, but this has been not elaborated upon.

In Figure 3 of the original article, the authors mentioned that according to the LMH classification, Grades II and III are defined according to the position of the lateral margin of the metaphysis in relation to Hilgenreiner’s line. But the authors did not mention the position of the lower limb while taking the radiograph. The point on the lateral margin of metaphysis is subjected to change according to the rotation of the femur at the time of radiograph and based on different rotation profiles of the femur the point on the lateral margin of metaphysis changes. Accordingly, the borderline cases may be subject to classification error as either Grade II or III.

The authors stated that the LMH classification method is useful in severe grades of DDH as it does not take into account the superolateral margin of the acetabulum line as used in the Tonnis method,¹ whereas Perkin’s line (P-line) is used in all three classifications. But in the LMH method drawing a P-line accurately without a point on the superior lateral margin of the acetabulum is not possible. In some severe grades of DDH where the bone around the superolateral margin of the acetabulum is resolved and it is not radiologically delineated, drawing a P-line is also difficult.

According to this study, the LMH classification predicted 50% of Grade III DDH cases from Group 1 (treated by traction and closed reduction only) needed total hip arthroplasty. Whereas 72% of Grade III DDH cases according to the LMH method ideally need open reduction (according to Table 3 data in Group 2). So, in the current scenario with advanced management protocols for severe DDH, the incidence of osteoarthritis and the further need for total hip arthroplasty will be fewer than this.

A multicentric reliability check of the LMH classification is the need of the hour.

Yours faithfully,

The Authors

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COMPLIANCE WITH ETHICAL STANDARDS

OA LICENCE TEXT

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ICMJE CONFLICT OF INTEREST STATEMENT
The authors declare no conflict of interest.

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