

## Letter to the Editor

### Congenital Disease of the Hip

George Hartofilakidis MD, George C. Babis MD

Published online: 22 November 2008  
© The Association of Bone and Joint Surgeons 2008

#### *To the Editor:*

It was with great interest that we read the articles from the symposium on Developmental Dysplasia of the Hip published in April 2008. We participated in this symposium with the article “The Morphologic Variations of Low and High Hip Dislocation” [7].

We wish, however, to comment on the terminology “developmental dysplasia of the hip,” as used by most of this symposium’s authors. We have been concerned about that terminology’s propriety, mainly for two reasons. First, the term “developmental” is not descriptive of the congenital origin of the deformity; second, an indiscriminate use of the word “dysplasia” is not in agreement with the variety of underlying pathology.

Before the availability of radiographs Dupuytren [4], in 1826, observed some newborn infants with displacement of the head of the femur from the acetabulum; he named this condition “congenital displacement.” Dupuytren’s recognition of the congenital nature of the deformity has been accepted as original [4]. In 1897, based on anatomic specimens, Phelps [14] also concluded the majority of such cases are really dislocations in uterus or at birth.

Since that time, after pioneer works with anatomic dissections and studies of the pathologic features at open operations [3, 8, 9, 12, 13, 15], the majority of authors have accepted the congenital nature of the deformity.

Therefore, in considering the current use of the term “developmental” that focuses on the possibility of the

deformity to develop, one wonders why the original word “congenital,” indicating the deformity’s origin in uterus, has been abandoned.

Such a change came after Klisic’s [10] brief report in 1989 arguing “congenital dislocation of the hip,” a term used up to that time, is a misleading term, because the disorder is of variable pathology, not always a dislocation, and even when dislocation occurs, it often happens postnatally; therefore it is not truly congenital. He recommended, without convincing arguments, the use of the term “developmental displacement.”

Surprisingly, many authors and the American Academy of Orthopaedic Surgeons accepted the wording change of “congenital” to “developmental” but replaced the word “displacement” with “dysplasia.” Thus, from a term that had a deficient second component (“dislocation”), we unfortunately acquired a nonspecific term deficient in both its components (“developmental” and “dysplasia”).

The term “dysplasia” is composed of the Greek words *δυσ* (bad) and *πλάση* (formation). Thus, dysplasia could be used for the total spectrum of hip deformities. Yet, to avoid confusion and diagnostic inaccuracies, it is preferable for the term “dysplasia” to be reserved for the milder types of hip deformities. It is clear we still do not have an agreed terminology covering the entire pathology of congenital deformities of the hip or a generally accepted classification of its types that will improve our communication, treatment planning, and evaluation of results of various treatments.

Stanisavljevic and Mitchell [15] were, to our knowledge, the first who used the terminology “congenital disease of the hip” for the total spectrum of congenital hip deformities in infancy, classified as dysplasia, subluxation, and dislocation. Their historical study published in 1963 was based on 240 deseeded hips of 120 stillborn and

---

G. Hartofilakidis, G. C. Babis (✉)  
First Department of Orthopaedics, Athens University Medical  
School, Athens, Greece  
e-mail: george.babis@gmail.com

G. Hartofilakidis  
e-mail: geo@hart7.com

newborn babies between 1958 and 1961. Subsequently, several authors accepted the proposed term “congenital disease of the hip” and the classification in infants as dysplasia, subluxation, and dislocation [2, 16, 17]. We have adapted such concepts and used the term “congenital disease of the hip” in adults, and relying on radiographic and morphologic criteria validated during THA, we have described three types of diseases of increasing severity: dysplasia, low dislocation, and high dislocation [5, 6].

We strongly recommend using the terminology “congenital disease of the hip” for the entire spectrum of related deformities, with the classification as dysplasia, subluxation, and dislocation in infants and as dysplasia, low dislocation, and high dislocation in adults.

Finally, the short and interesting report “50 Years in CORR” [1], noted Massie suggested no dislocation of the hip could occur embryologically. However, Massie’s [11] report in 1956 referred to a 5.5-week embryo when the components of the hip do not have their definite position. Furthermore, in a previous article, in 1951, Massie and Howorth [12] illustrated a case of bilateral dislocation of hip at the eighth month of fetal life.

## References

1. Brand RA. 50 years ago in CORR: congenital dislocation of the hip: its causes and effects. *Clin Orthop Relat Res.* 2008;466:1015–1016.
2. Chung SMK. *Hip Disorders in Infants and Children.* Philadelphia, PA: Lea and Febiger; 1981.
3. Dunn PM. The anatomy and pathology of congenital dislocation of the hip. *Clin Orthop Relat Res.* 1976;119:23–27.
4. Dupuytren G. The Classic: Original or congenital displacement of the head of thigh-bones. *Clin Orthop Relat Res.* 1964;33:3–8.
5. Hartofilakidis G. Developmental dysplasia of the hip: an unsuitable term. *J Bone Joint Surg Am.* Electronic letter published October 6, 2004.
6. Hartofilakidis G, Karachalios T. Total hip arthroplasty for congenital disease of the hip. *J Bone Joint Surg Am.* 2004;86:242–250.
7. Hartofilakidis G, Yiannakopoulos CK, Babis GC. The morphologic variations of low and high hip dislocation. *Clin Orthop Relat Res.* 2008;466:820–824.
8. Howorth MB. Congenital dislocation of the hip. *Ann Surg.* 1947;125:216–236.
9. Howorth MB, Smith HW. Congenital dislocation of the hip treated by open reduction. *J Bone Joint Surg Am.* 1932;14:299.
10. Klisic PJ. Congenital dislocation of the hip: a misleading term. *J Bone Joint Surg Br.* 1989;71:136.
11. Massie WK. Congenital dislocation of the hip: its causes and effects. *Clin Orthop Relat Res.* 1956;8:103–121.
12. Massie WK, Howorth MB. Congenital dislocation of the hip. Part III: Pathogenesis. *J Bone Joint Surg Am.* 1951;33:190–198.
13. Orlorani M. The Classic: Congenital hip dysplasia in the light of early and very early diagnosis. *Clin Orthop Relat Res.* 1976;119:6–10.
14. Phelps AM. The Classic: Congenital dislocation of the hip. *Clin Orthop Relat Res.* 2008;466:763–770.
15. Stanisavljevic S, Mitchell CL. Congenital dysplasia, subluxation, and dislocation of the hip in stillborn and newborn infants: an anatomical-pathological study. *J Bone Joint Surg Am.* 1963;45:1147–1158.
16. Wedge JH, Wasylenko MJ. The natural history of congenital disease of the hip. *J Bone Joint Surg Br.* 1979;61:334–338.
17. Weinstein SL. Natural history of congenital hip dislocation and hip dysplasia. *Clin Orthop Relat Res.* 1987;225:62–76.