CORR Insights

CORR Insights®: Modified Dunn Procedure is Superior to In Situ Pinning for Short-term Clinical and Radiographic Improvement in Severe Stable SCFE

Young-Jo Kim MD, PhD

Where Are We Now?

The surgical treatment for slipped capital femoral epiphysis (SCFE) treatment has evolved in important ways over the past 30

This CORR Insights® is a commentary on the article “Modified Dunn Procedure is Superior to In Situ Pinning for Short-term Clinical and Radiographic Improvement in Severe Stable SCFE” by Novais and colleagues available at: DOI: [10.1007/s11999-014-4100-1](https://doi.org/10.1007/s11999-014-4100-1).

The author certifies that he, or a member of his immediate family, has no funding or commercial associations (eg, consultancies, stock ownership, equity interest, patent/licensing arrangements, etc) that might pose a conflict of interest in connection with the submitted article.

All ICMJE Conflict of Interest Forms for authors and *Clinical Orthopaedics and Related Research®* editors and board members are on file with the publication and can be viewed on request.

The opinions expressed are those of the writers, and do not reflect the opinion or policy of *CORR®* or the Association of Bone and Joint Surgeons®.

This *CORR Insights®* comment refers to the article available at DOI: [10.1007/s11999-014-4100-1](https://doi.org/10.1007/s11999-014-4100-1).

years. Before the advent of fluoroscopically controlled in-situ pinning, treatment methods such as open epiphysiodesis and spica cast application had been difficult and morbid. Indeed, in-situ pinning was a major advance that at once led to improved outcomes. However, in-situ treatment does not address any residual deformity in the proximal femur. It is now accepted that residual proximal femoral deformity does cause femoroacetabular impingement, which may lead to limited hip ROM, gait disturbance, and osteoarthritis. The problem that remains is how best to treat this residual deformity, when to treat it, and through which surgical technique.

Y.-J. Kim MD, PhD (✉)
Department of Orthopaedic Surgery,
Boston Children’s Hospital, 300
Longwood Ave, Hunnewell 225, Boston,
MA 02115, USA
e-mail: young-jo.kim@childrens.harvard.edu

Where Do We Need To Go?

At present, there are many issues related to the management of SCFE that need to be resolved. There is general agreement that fluoroscopically controlled in-situ pinning is a good technique to stabilize the physis. However, numerous surgical techniques can be used to correct the remaining deformity, including femoral head-neck-junction osteoplasty, the modified Dunn technique to correct the deformity at the physeal level, base-of-neck femoral osteotomy, and intertrochanteric osteotomy with or without proximal femoral osteoplasty. Additionally, we do not know how large a deformity must be to be worth the surgical risk to correct it, and we do not know which technique is best for which deformities. In order to answer these questions, we need more comparative studies like the article by Novais et al. Additionally, we need better surgical instruction and techniques to decrease the complication rates of advanced techniques such as

CORR Insights

the modified Dunn open physal reduction technique.

How Do We Get There?

There is a role for the whole range of surgical techniques for SCFE deformity correction available today. The simplest technique such as in-situ pinning with head-neck junction osteoplasty may have the widest application, precisely

because it is relatively easy and safe. However, we need either randomized or case-control clinical studies demonstrating its effectiveness both at the short and longer terms. For more-severe deformities, I believe that more-advanced techniques such as intertrochanteric osteotomy or even modified Dunn techniques are needed to fully correct the deformity. These techniques, especially the modified Dunn technique, are complex and may be

difficult to implement, particularly in the hands of lower-volume or less-experienced surgeons. Perhaps a more-rational approach is to establish regional referral centers where some of these severe deformities could be treated safely. In North America, we are still at a stage where SCFE treatment is rapidly evolving. There are many opportunities for well-done comparative studies as well as efforts to improve the safety of some of the more-complex surgical techniques.