Reply to Letter to the Editor

Unexplained Fractures: Child Abuse or Bone Disease

A Systematic Review

Nirav K. Pandya MD, Keith Baldwin MD, MPH, MSPT,
Atul F. Kamath MD, Dennis R. Wenger MD,
Harish S. Hosalkar MD, MBMS (Ortho), FCPS (Ortho), DNB (Ortho)

Published online: 22 June 2011

© The Association of Bone and Joint Surgeons® 2011

We thank Drs. Karst and van Rijn for bringing to our notice as well as that of the readership, issues regarding the study by Paterson et al. [2]. The fact that the existence of ‘temporary brittle bone disease’ as a variant of osteogenesis imperfecta has been challenged and in some ways shown to be nonscientific was known and of interest to us. We were, however, unaware (as an entire group of coauthors of our study [1]) of the court ruling from the United Kingdom related to the study Paterson et al. [2], and we welcome the clarification provided by Drs. Karst and van Rijn regarding the unscientific basis of ‘temporary brittle bone disease.’ Their point is even more relevant in light of the fact that the MOOSE group (Meta-analysis of Observational Studies in Epidemiology) state in their guidelines that because observational studies are vulnerable to bias confounding and chance, readers should consider explanations for the observations other than the conclusions of the authors [3]. However, had we known a priori about this issue, the study by Paterson et al. [2] still would have met our search criteria and our inclusion and exclusion criteria. As such, strict observation of systematic review technique would dictate that it be included. However, we would have made note of the controversy.

Of note of the 914 cases we pooled in our study, the article by Paterson et al. [2] only contributed 39 cases (less than 5%). The omission of their article (based on the facts provided) would not have changed our main conclusion, which is that various bone disorders (primarily osteogenesis imperfecta, rather than temporary brittle bone disease) may be mistaken for child abuse.

Again, we thank Drs. Karst and van Rijn again for bringing these facts to our attention.

References

1. Pandya NK, Baldwin K, Kamath AF, Wenger DR, Hosalkar HS. Unexplained fractures: child abuse or bone disease: a systematic review. *Clin Orthop Relat Res*. 2011;469:805–812.
2. Paterson CR, Burns J, McAllion SJ. Osteogenesis imperfecta: the distinction from child abuse and the recognition of a variant form. *Am J Med Genet*. 1993;45:187–192.
3. Stroup DF, Berlin JA, Morton SC, Olkin I, Williamson GD, Rennie D, Moher D, Becker BJ, Sipe TA, Thacker SB. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. *JAMA*. 2000;283:2008–2012.

Re: Pandya NK, Baldwin K, Kamath AF, Wenger DR, Hosalkar HS. Unexplained fractures: child abuse or bone disease: a systematic review. *Clin Orthop Relat Res*. 2011;469:805–812.

N. K. Pandya, K. Baldwin, A. F. Kamath
Department of Orthopaedic Surgery, Children’s Hospital
of Philadelphia, Philadelphia, PA, USA

D. R. Wenger, H. S. Hosalkar (✉)
Department of Orthopedic Surgery, Rady Children’s Hospital,
3030 Children’s Way, Suite 410, San Diego, CA 92123, USA
e-mail: HHOSALKAR@rchsd.org