

Vitamin D deficiency vs. child abuse: what do we know now and where do we go?

Peter J. Strouse

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With the letters to the editor from Feldman [1] and Keller and Barnes [2], we hereby conclude this foray into the abyss of vitamin D deficiency, rickets and child abuse. Further debate is welcomed in your local coffee house, conference room, an online chat room or other chosen arena.

What do we know now?

1. Child abuse, unfortunately, is extremely common in the United States and throughout the world. Individuals of multiple medical disciplines contribute to the diagnosis and treatment of these patients. Individuals of multiple non-medical disciplines also contribute to investigating and assuring the medical and social well-being of these children. We must all work together with a common goal of ensuring the health and well-being of our greatest resource.
2. We believe that *most* physicians, regardless of their specialty, practice medicine correctly. Differential diagnoses are considered when appropriate. Tests for alternative diagnoses are performed when appropriate. Diagnoses are not rendered when unsubstantiated by medical evidence. Uncertainty in diagnosis is appropriately stated when the diagnosis is uncertain.
3. In many different ways, there are many different diseases and processes that may simulate child abuse, both clinically and on radiology studies. As physicians dealing with child abuse, it is imperative to know about these disorders and how they may mimic or be confused with child abuse.
4. There is a pandemic of vitamin D deficiency in the world. Evidence of widespread vitamin D deficiency in women of childbearing age is irrefutable. The significance of the maternal deficiencies to their infants is not fully determined.
5. There is *no* concrete evidence in the literature that vitamin D deficiency in infants younger than 6 months of age renders them susceptible to the same types of fractures as have been accepted to bear high specificity for child abuse.

Where do we go?

Agree or disagree, Keller and Barnes have set forth a hypothesis in their commentary [3] and the following letter [2]. It is an unproven hypothesis. Good scientific studies are needed to prove or disprove this hypothesis. Throwing darts at each other serves no purpose. Let's dig into those hospital and radiology information systems and see what evidence exists. Better yet, let's design prospective studies that evaluate these children over time or as they present. Surely, given the prevalence of child abuse and the apparent prevalence of vitamin D deficiency, there should be plenty of evidence to sort this out. We look forward to seeing these studies.

References

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3. Keller KA, Barnes PD (2008) Rickets vs. abuse: a national and international epidemic. *Pediatr Radiol* 38:1210–1216. doi:10.1007/s00247-008-1001-z

P. J. Strouse (✉)
Department of Radiology, Section of Pediatric Radiology, C.S.
Mott Children's Hospital, F3503,
University of Michigan Health System,
1500 E. Medical Center Drive,
Ann Arbor, MI 48109-0252, USA
e-mail: pstrouse@umich.edu