Incorrect postulate regarding humeral fractures in non-ambulant infants

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Received: 18 April 2014 / Accepted: 10 July 2014 / Published online: 31 August 2014
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Sir,

I read with great interest and curiosity the article by Somers et al. [1]. The objective of their article was “to investigate the widely accepted view that an infant with limited mobility cannot sustain a fracture of the humerus by his or her own actions in the absence of the intervention of an external party.” The authors cite a case report by Hymel and Jenny [2] of a 5-month-old who sustained a humerus fracture after being rolled by a 3-year-old sibling. Then, the authors describe seven cases where isolated humerus fractures were attributed to the children rolling over that arm. I do not believe one can compare the case report by Hymel and Jenny [2] with the seven cases described in Somers et al. [1] and postulate that rolling without the intervention of an external party can cause isolated humerus fractures in non-ambulatory infants, since none of the cases in the latter report had the intervention of an external party.

It is crucial to understand the intrinsic and extrinsic factors that affect long bone fractures [3]. While Somers et al. [1] took into account many of the bone intrinsic factors, they completely disregarded the most important extrinsic factor: the force (energy) required for a bone to fail (fracture).

None of the infants described by Somers et al. [1] was crawling and two of them had just begun rolling over or attempting to roll over. The main reason infants cannot roll over at a young age is that they lack the necessary strength to push their weight against gravity. It is very unlikely that an infant who can barely push their own weight against gravity

could have enough strength to overcome the failure point of a long bone, such as the humerus.

Somers et al. [1] state that all the caregivers gave the same history consistently throughout the proceedings. However, in four cases, only one adult was present at the time of the fracture. They also mention that there were no other fractures detected or any other significant injuries to support a diagnosis of non-accidental injury. Most children diagnosed with non-accidental injury do not have other fractures or significant injuries [4].

Therefore, to postulate the idea that infants with limited mobility can fracture a long bone in the absence of the intervention of an external party without analyzing all factors that affect bone fractures is, to my belief, incorrect.

Conflicts of interest None

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