Letter to the Editor

Unexplained Fractures: Child Abuse or Bone Disease

A Systematic Review

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To the editor

We read with interest the article by Pandya et al. [9]. Their review of the medical literature for bone diseases mimicking child abuse and neglect (CAN) is helpful with the very important interpretation of unexplained fractures.

However, we do not understand why the study by Paterson et al., in which they introduced a variant form of osteogenesis imperfecta (OI) which they called ‘temporary brittle bone disease’ (TBBD) [11], was not excluded from the study. Paterson et al. suggested a temporary deficiency of an enzyme, involved in the posttranslational processing of collagen, as the underlying problem of TBBD in infants [11]. Others have suggested decreased fetal movement in utero might be the reason of temporary brittle bones [8]. No single clinical or laboratory study supports one of these theories. TBBD is not clinically validated nor generally accepted by expert professionals [4, 5, 7].

The Supreme Court in the United Kingdom concluded in a 2001 case that Paterson’s TBBD theory had no scientific basis and the investigation was subjective, unreliable, nonscientific, and nonproven [1]. In 2004 the General Medical Council removed Paterson from their register of practicing physicians in the United Kingdom because

“he ignored crucial evidence to advance his own controversial theories on bone disease” [3].

Paterson recently published five more cases on infants with multiple rib fractures [10], which he presented as evidence for the existence of TBBD. Letters to the editor showed once again the complete lack of validation for the entity [6, 12]. Crucial additional information in these cases, such as data from brain imaging, eye examinations, or a complete skeletal survey, were not provided [10]. There was no review of the radiologic images by a pediatric radiologist [10]. In four cases there were no data on examination for skin injury [10].

Being unaware of the lack of scientific basis for the existence of TBBD is dangerous, as the important evaluation of fractures in young children might lead to incorrect conclusions, possibly resulting in ongoing risk for the child or other children. In our opinion TBBD should be considered a theory without any scientific basis. This background information should have been provided in the otherwise instructive review by Pandya et al. [9].

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