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Editorial

Spinal cord injury in children caused by back-bend in dance

In recent years, with the continuous development and improvement of Quality Education policy in China, parents have paid more and more attention to physical, health and aesthetic education of children. Thus various dance training programs for young children are soaring, meanwhile, the number of relevant spinal cord injuries (SCIs) has gradually increased, especially for girls.^{1–5} According to the data from professor Xiao-Dong Guo (the director of Trauma Center, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology), from 1992 to 2002, the number of children with SCIs caused by back-bend in dance accounted for only 4.0% of all children with SCIs, but it reached 33.9% from 2015 to 2019.⁶ Because the spine in young children is not fully developed, especially in children under the age of 6–8, these children are prone to SCIs when they are subjected to traumatic forces on spine. Worse still, at early stage, clinical examinations does not show mostly marked abnormal signs with no fracture or dislocation of the spine in imaging manifestations, which often leads to misjudgments by clinicians during diagnosis and treatment, eventually leading to irreversible paralysis in children, and bringing a serious burden to the injured children, their families and even the society.

Nowadays, Chinese government encourages each family to implement three-child policy and Quality Education policy. Accordingly, SCIs of children in dance training increased significantly somehow, which becomes a serious hidden danger for the healthy growth of children, especially for dancing training girls, even being directly related to national economy and the people's livelihood, and restricting future development.

In fact, the incidence of such injuries is not uncommon globally. In 1982, Pang and Wilberger et al.⁷ named this kind of SCI without fracture and dislocation signs, such as X-ray, CT/Myelography and dynamic X-ray, as spinal cord injury without radiologic abnormality (SCIWRA). The data show that the causes of this special SCI in young children and adolescents are usually caused by traffic accident, fall from a height and other violence.^{8–11} However, in China, injuries similar to SCIWRA are mainly caused by back-bend in dance, so prof. Xiao-Dong Guo's team named it back-bend paralysis.⁶

Regrettably, back-bend paralysis has not yet attracted enough attention from the majority of children's parents, dance training institutions and related medical personnel. In this regard, we hope to publish a series of relevant studies to arouse wide concern of relevant medical personnel, as well as the awareness of children's

parents and social training institutions, so as to minimize the occurrence of this preventable SCI in young children.

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Yuan Tian, Gui-E Liu, Wen-Jun Zhao, Lei Li*

Department of Trauma Surgery, War Trauma Medical Center, State Key Laboratory of Trauma, Burn and Combined Injury, Daping Hospital, Army Medical University, Chongqing, 400042, China

* Corresponding author.

E-mail address: leili@cjtrauma.com (L. Li).

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