

## Osteoporosis in childhood

It is well known that bones tend to become brittle with ageing. Less well-known is that children also suffer from fractures resulting from little or no force to provoke the injury. The cause in some children is the medication necessary to treat an underlying disease. The medication involved is a steroid hormone, also known as cortisone. However, in the treatment of diseases such as leukemia, chronic kidney disease and childhood acute arthritis, it may be necessary, in order to achieve a cure, to treat with very large doses of steroid.

There is a cost associated with such treatment in that excess steroid in the blood weakens bones that may then fracture with that injury often being compounded by the underlying disease. A particularly insidious type of fracture is one involving the vertebrae making up the spine.

Among other studies, the fact of this injury and its frequency was little understood until recently. Research including a large study at multiple health centers across Canada, led by Dr. Leanne Ward and coordinated by her Group at the University of Ottawa, has revealed the frequency and severity of the fracturing resulting in more attention being paid to the symptoms of and treatment for these injuries.

In this particular paper Dr. Ward and her collaborators have summarized the use of x-ray diagnosis in these children including one remarkable aspect as follows. As treatment for the underlying diseases has so greatly improved - often resulting in a cure - the affected children are not only living much longer but it is found that, with appropriate care, in some children up to puberty there may be re-shaping of the affected segments of the spine which then become near normal in size and shape. By contrast adult spinal fractures result in permanent vertebral deformity and have never been observed to recover in this way.

One important implication is that in the medication-induced osteoporosis of childhood, the need is to treat the underlying disease, and with success in this the bones may take care of themselves.

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### Publication

[The Radiology of Vertebral Fractures in Childhood Osteoporosis Related to Glucocorticoid Administration.](#)

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