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Obese children sustain significantly more both bones forearm fractures when compared to non-obese children

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Background: Obesity in children is associated with an increased risk for fracture. The causes remain unclear and may be related to increased bone weakness during periods of intense growth or increased kinetics (when falling). The hypothesis was that obese children sustain more severe fractures compared to non-obese children, and needed more treatment under general anesthesia.

Methods: 6 Months prospective study on obese and non-obese children presenting to the emergency room with an upper extremity long bones fractures (ULBF). The children's activity prior to trauma was assessed with a questionnaire. The mechanism of injury, the characteristics of the fracture defined using a validated pediatric classification and the treatment modalities were compared.

Results: The calculated prevalence of obesity in children with ULBF was 28%. 46 obese children (mean 9.28 y.) and 119 non-obese children (mean 9.32 y.) aged 2 to 16 years were included in the study. The risk for sustaining both bones forearm fractures was twice higher in obese children when compared to non-obese children (p=0.012). Obese children required a higher number of manipulations under general anesthesia (p=0.092).

Conclusion: The prevalence of obesity in children with ULBF was higher than in the general pediatric population. There was no statistical difference between both groups in the reported level of activity prior to injury, in the kinetics and in the treatment modalities. Obese children had a significantly higher risk for a combined radius-ulna fracture. Further research is needed to evaluate the relationship between obesity, bone growth and trauma.

Biography

Cavuoto A has completed his medical study at the age of 26 years at the University of Lausanne. Since two years, he works as resident in a surgery department.

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