Injury among children and young people with and without attention-deficit hyperactivity disorder in the community: The risk of fractures, thermal injuries, and poisonings

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Abstract

BACKGROUND:
Injuries commonly cause morbidity and mortality in children and young people (CYP). Attention-deficit hyperactivity disorder (ADHD) is the commonest neurobehavioural disorder in CYP and is associated with increased injury risk. However, large, population-based estimates of the risk of specific injuries are lacking. We aimed to provide estimates of the risk of fractures, thermal injuries, and poisonings in CYP with and without ADHD.

METHODS:
In this population-based cohort study, we used primary and secondary care medical records from England from the Clinical Practice Research Datalink. There were 15,126 CYP with ADHD frequency-matched to 263,724 without, aged 3-17 years at diagnosis. The risk of (a) fractures, (b) thermal injuries, and (c) poisonings in CYP with ADHD was compared with those without.

RESULTS:
The absolute rate of injury per thousand person-years at risk in CYP with versus without ADHD was fracture 28.9 (95% CI [27.5, 30.3]) versus 18.7 (95% CI [18.5, 19.0]), long bone fracture 17.7 (95% CI [16.7, 18.8]) versus 11.8 (95% CI [11.6, 12.0]), thermal injuries 4.4 (95% CI [3.9, 4.9]) versus 2.2 (95% CI [2.1, 2.3]), and poisonings 6.3 (95% CI [5.7, 6.9]) versus 1.9 (95% CI [1.9, 2.0]). Adjusting for age, sex, geographical region, deprivation, and calendar year, CYP with ADHD had 25% increase in risk of fracture (hazard ratio [HR] = 1.25; 95% CI [1.19, 1.31]), 21% increase in risk of long bone fracture (HR = 1.21; 95% CI [1.13, 1.28]), double the risk of thermal injury (HR = 2.00; 95% CI [1.76, 2.27]), and almost four times the risk of poisoning (HR = 3.72; 95% CI [3.32, 4.17]).

CONCLUSIONS:
CYP with ADHD are at greater risk of fracture, thermal injury, and poisoning compared with those without. Paediatricians and health care professionals should provide injury prevention advice at diagnosis and reviews.