

Single-use Detergent Sacs: A Retrospective Multicenter Canadian Review of Emergency Department Cases

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Introduction

Single-use detergent sacs (SUDS) are widely used in North America and Europe with emerging literature on their toxicity. This is the first Canadian multicenter study aimed to quantify and compare SUDS exposures to traditional detergent exposures.

Methods

A retrospective review of the Canadian Hospitals Injury Reporting and Prevention Program databases was conducted at the Hospital for Sick Children, Alberta Children's Hospital and the Stollery Children's Hospital. All exposures presenting to these 3 centers between 2009 and 2014 were identified, a case form was completed, and data were analyzed.

Results

Forty cases of SUDS exposure were identified alongside 35 cases of traditional detergent exposure during the study period resulting in an incidence of 3.16 SUDS exposures per million children per year presenting to tertiary pediatric emergency departments (EDs). In contrast, traditional detergent exposures had an incidence of 2.78 exposures per million children per year presenting to tertiary pediatric EDs over the study period. Although there was no change in incidence of exposure to traditional detergent over the study period, there was an increase in the incidence of SUDS exposures from 2010 to 2013, with a decrease seen in 2014. There was no significant difference seen in age, sex, location of exposure, transportation to hospital, morbidity, or mortality associated with SUDS exposures compared with traditional detergent exposure. Although not statistically more likely to cause long-term complications, SUDS-exposed children required more follow-up visits to health care providers than traditional detergents.

Conclusion

This multicenter study is the first to establish the incidence of SUDS and traditional detergent exposure in Canadian cities. Overall, the frequency of exposure to detergents-both traditional and SUDS-is very low. Given the increase in SUDS exposure, alongside larger sales of SUDS, continued efforts are required to monitor exposures, and reduce potential exposures to SUDS and traditional detergents in the future.