

Case Report

Fatal Drowning of Infant in Bathtub

Chu Kong^{1*}, Lee Yan², Filomena Laia McGuire² and Jorge Sales Marques²

¹Department of Emergency Medicine, Centro Hospitalar Conde S. Januario, Macau, China

²Department of Pediatric and Neonatology, Centro Hospitalar Conde S. Januario, Macau, China

Summary

A 4-month-old boy was brought into the Emergency Room, found unresponsive by parents after being submerged in the bathtub of a hotel room. He was bathing with his parents who had fallen asleep for “few minutes” when the incident occurred. The infant succumbed regardless of prolonged resuscitation. Drowning was thought to be less likely in a densely populated or high-income region. In this report, we present the case of fatal infant drowning that happened in a hotel, review the current threat of drowning towards children’s life globally and emphasize the importance of preventive strategies, especially caretaker supervision.

Background

Drowning remains in the top three causes of non-accidental injury/death among children ages 1 to 19 years [1]. Drowning is defined as the process of experiencing respiratory impairment from submersion/immersion in liquid and its outcomes are classified as death, morbidity and no morbidity [2]. Sites of drowning and mortality rates vary by age groups, gender and country income levels. We report a case of fatal infant drowning and raise the attention on the importance of drowning prevention.

Case Presentation

A 4-month-old boy was sent to emergency room after being found unresponsive in the bathtub of a hotel room. He was having hot water bath, together with his parents and his 2-year-old sibling, at the time of the accident. His parents claimed they had consumed alcoholic drinks before the bath and had fallen asleep in the bathtub for a few minutes. They found the baby face down and unresponsive when they awakened. They immediately called for fire rescue assistance. The baby was found pulse-less and without spontaneous breath when fire rescue arrived. Cardiopulmonary resuscitation (CPR) was immediately started. Upon arrival at emergency room, the baby was still in cardiopulmonary arrest and resuscitation was continued. Two doses of adrenaline were administered by endotracheal and intra-osseous via, before the successful cannulation of intravenous assess. Transient change in cardiac rhythm from a systole to pulse less wide complex bradycardia was presented during CPR. No recovery was achieved with 2 more attempts of intra-cardiac injection of adrenaline. The infant succumbed after 45 minutes of in-hospital resuscitation.

Discussion

Drowning is the third leading cause of non-accidental injury/death

worldwide, accounting for 7% of all injury-related deaths. The highest drowning rates are among children 1-4 years globally [3]. Studies from South and East Asia showed that drowning accounted for over three times as many deaths as road traffic accident in children between 0-17 years old and as high as 90% of all fatal injuries in children between 1-4 years old. In China, drowning is the leading cause of mortality among children below 14-year-old [4]. Studies from 1995 looking into the sites where children drown in the US, found that 55% of infant drowning occurred in bathtubs [5]. A study looking specifically into bathtub near drowning over a 10-year period revealed that bathtub near drowning accounted for 24% of overall submersion injuries and 48% of the victims were less than 12 months old. 95% of the incidents happened in the child’s home [6] Infants are relatively immobile and totally caregiver dependent and can drown in very little water quickly. Many children are injured in the bathtub as a result of abuse or neglect. Surveys to study the level of supervision and practices of caregivers while children were in the bathtub show that some caregivers (5% of the survey population) reported leaving a 6-12 months old child unsupervised in the bathtub either alone or with a sibling [7]. Another survey found 15% of the participants had even left a child ≤ 12 months old unsupervised in the bathtub, with the youngest being 5 months old. Common caregiver activities when the child was left unsupervised included getting a towel or diapers, answering a phone and cooking [8]. In the case we reported in this correspondence, the infant was left alone in bathtub with his 2-year-old sibling while his parents had fallen asleep in the bathtub after alcohol consumption. With this case report, we want to highlight and emphasize again the importance of caregiver’s supervision and the need for every possible preventive effort, from bathtub seats to barriers impeding unsupervised access to water by young children. Drowning can be a fatal event or leave serious neurological damage

***Corresponding author:** Chu Kong, Department of Emergency Medicine, Centro Hospitalar Conde S. Januario Macau, China, E-mail: chukongmeion@yahoo.com.hk

Rec Date: April 21, 2016, **Acc Date:** April 28, 2016, **Pub Date:** April 29, 2016.

Citation: Chu Kong, Lee Yan, Filomena Laia McGuire and Jorge Sales Marques (2016) Fatal Drowning of Infant in Bathtub. BAOJ Pediat 2: 008.

Copyright: © 2016 Chu Kong, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

in children. Guidelines and recommendations [1, 3, 9] are available and the reduction of drowning requires collaborative effort of caretakers, paediatricians and governments.

References

1. Margie Peden (2008) World report on child injury prevention. World Health Organization Geneva.
2. Van Beeck EF (2005) A new definition of drowning: towards documentation and prevention of a global public health problem. *Bulletin of the World Health Organization* 83(11): 853-856.
3. David Meddings (2014) Global report on drowning: preventing a leading killer. World Health Organization Spain.
4. Linnan, Michael (2007) Child Mortality and Injury in Asia: Survey results and evidence. Innocenti Working Paper 2007-06, Special Series on Child Injury No. 3. UNICEF Innocenti Research Centre, Florence.
5. Ruth A. Brenner (2001) Where Children Drown, United States, 1995. *Pediatrics* 108(1): 85-89.
6. Lavelle JM (1995) Ten-year review of pediatric bathtub near-drownings: Evaluation for child abuse and neglect. *Ann Emerg Med* 25(3): 344-348.
7. Lois K. Lee (2007) Parental survey of beliefs and practices about bathing and water safety and their children: Guidance for drowning prevention. *Accid Anal Prev* 39(1): 68-62.
8. Simon HK (2003) Reported level of supervision of young children while in the bathtub. *Ambul Pediatr* 3(2): 106-108.
9. Jeffrey Weiss (2010) Technical Report – Prevention of Drowning. *Pediatrics* 126(1): e253 – e262.