Case report

Perineal scalds from drive through restaurants: A public health hazard

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1. Introduction

Burns due to hot beverages are a well known public health hazard, both at home [1] and in the workplace [2]. Although, such injuries are often minor, they can be severely debilitating, and on occasion, fatal [3]. Burns due to hot liquids most commonly affect children [4] but in certain circumstances, the adult population is at risk. We believe these risks are reducible with increased awareness, education and simple first-aid measures.

We report a series of three patients sustaining perineal scalds due to hot drinks served at drive through restaurants admitted to our burns unit during a 2-week period in a cold December in Wales.

2. Case report

A 52-year old woman with a 2% TBSA partial thickness burn to her perineum, external genitalia, buttocks and inner thighs was admitted as an emergency to the burns unit (see Fig. 1). The patient was the driver of a car who was receiving a cup of hot tea passed through the car window by a restaurant worker. The drink was passed down from the serving position in a brisk fashion, not in a cardboard tray, and with a loosely fitting lid. The tea was freshly made, without milk. As the drink was passed, her grip was lost, causing the liquid to spill onto her groin. Due to the confined space, she had to drive her car forward in order to get out of the vehicle. No first-aid was offered by the serving staff, even though a trained first-aid staff member was on duty.

Her wounds were treated conservatively with bactigras dressings. She remained in hospital for 2 days and was catheterised for the first 24 h. The wounds were fully healed at 3 weeks, with no residual scarring or pigmentation change.

A 23-year old woman with a 1.5% partial thickness burn to her lower abdomen, perineum, medial and lateral thighs was admitted as an emergency (see Figs. 2 and 3). The patient was a front seat passenger in a car, holding a cardboard tray containing two hot drinks purchased from a drive through restaurant. Whilst getting herself comfortable in the confined car environment, one of the cups containing hot coffee without milk tipped into her groin. She got out of the vehicle when able, removed her clothes and dabbed the burn area with ice and cold drink she had purchased. Her wounds were treated conservatively with bactigras dressings. She remained in hospital for 5 days and catheterised for the first 24 h. The wounds were fully healed at 6 weeks, with no residual scarring or pigmentation change.

A 39-year old woman with a 1.5% partial thickness burn to her perineum and inner thighs was admitted as an emergency. The patient was a front seat passenger of a car who was holding a cup of coffee without milk in a cardboard tray.

As she removed the cup from the tray, the cup deformed, the lid came off, and coffee spilt out onto her groin. First-aid
was attempted with cold water but inadequate facilities and space made this difficult. Her wounds were subsequently treated conservatively with bactigras and mepilex dressings. The wounds were fully healed at 4 weeks, with no residual scarring or pigmentation change.

3. Discussion

Scald burns to the perineum from hot liquids served at drive through restaurants have not previously been reported. Perineal scalds are associated with both physical and psychological morbidity. The scalds sustained in these cases were embarrassing and upsetting for the patient. They were associated with prolonged periods away from work, and several visits to the hospital for dressing changes and wound assessment. Most importantly, they were preventable injuries. If certain health and safety measures relating to the dispensing of hot liquids at drive through restaurants were observed, these injuries would greatly reduce in incidence.

The height of the drive through window is significantly higher than that of the car window and the hot drinks are passed down to the driver. As in Case 1, if the driver has not got a proper hold of the drink on transfer then it is likely to spill onto that person. Drive through restaurants by nature are restrictive and give little space for the driver to get out unless driving forward out of the drive through. This delays urgent first-aid to the scald. We found that first-aid facilities were lacking in the restaurants. If there was a nominated first-aider on duty, they were slow to act and/or poorly trained. Cold water or sterile towels were not given to the patients in any of the cases, and professional help was requested late, if at all.

Other issues highlighted in this study include no rigid trays with depressions to secure the drink, lids not secured in place, lack of milk within the drink and the high temperature of the liquid upon dispensing.

We would like to suggest several measures that may be implemented to decrease to the rate of perineal scalds in drive through restaurants and/or to reduce the severity and depth of the burn include:

- a securely fitting lid for all cups holding hot drinks;
- rigid cups that resist deformation when grip is applied;
- trays with all hot liquids, with rigid bays for each cup;
- reducing the temperature of the liquid served;
- adding milk before handed to the driver;
- adequate first-aid facilities on site;
- at least one nominated member of staff with first aid knowledge of burns ensured to an adequate level;
- regular health and safety teaching sessions to all staff highlighting the risks associated with hot liquids;
- lowering the height of drive through windows so that drinks do not have to passed downwards to the driver;
- more space for the driver or passenger to open the door and get out of the car, or first-aider gain access.

It is important to note that the consumer has to take responsibility for some of the risks, ensure they are aware of the dangers that hot drinks pose, and to concentrate whilst receiving the hot drinks.
We believe that these measures, if adhered to, would greatly reduce the incidence of injuries of this type and keep the associated morbidity to a minimum.

REFERENCES


