



Queensland Children's Hospital

OVEN DOOR BURNS IN QUEENSLAND CHILDREN

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AIM

The aim of this study is to document and describe the effects of oven door burns in children, and compare the incidents over the last 20 years. This project hopes to contribute to further evaluation of strategies to reduce the frequency and severity of oven door burns and prompt further action from the industry to revisit safety requirements for household ovens.

METHODS

Retrospective burns registry and departmental database review of all children with oven door burns treated at The Stuart Pegg Paediatric Burns Centre between July 1998 and October 2002 were compared with children treated at the Pegg Leditschke Children's Burns Centre from the time of its opening in November 2014 to October 2018. The characteristics of recent presentations of oven door burns were compared with historical characteristics in a similar population. The age of the child, circumstances of the incident, injuries sustained, treatment required and long-term sequelae were examined across the two groups.

RESULTS

In the 1999–2002 group, thirty-four children sustained partial thickness burns to the hands. One child (3%) required skin grafting and eleven (32%) required scar management.

In the 2014–2018 group, seventy-nine children, sustained superficial or partial thickness burns, with seventy-two cases (90%) involving the hands. Two children (3%) required grafting, and six patients (7%) required inpatient management. The median time to re-epithelialisation was 10 days for those patients that did not require grafting and 9 patients required scar management (11%). The SEIFA index¹ was condensed into tertiles and used to examine the socio-economic distribution within the group. This showed even distribution amongst each tertile, with twenty-eight cases (35%) in the bottom tertile, twenty-two cases (27%) in the middle tertile and twenty-seven cases (34%) in the top tertile. The majority of the burns occurred despite supervision, non-accidental injury was ruled out in all cases.

CONCLUSIONS

Oven doors remain a hazard to the hands of young children, especially between the ages of seven and fifteen months. These incidents usually occur at home with more than half occurring around dinner time.

There has been no significant change to the nature or impact of oven door burns between these two groups of data spanning almost twenty years. Public awareness should be raised highlighting the dangers posed by hot oven doors. Furthermore, action is required to review the safety standards of household oven doors, as the current standards are not effective in protecting children from contact injuries.

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¹ Socio Economic Indexes for Australia (SEIFA, 2016) Postal Area (POA) Index of Relative Socio-economic Advantage and Disadvantage. Decile 1–3 (bottom tertile), decile 4–7 (middle tertile) and decile 8–10 (top tertile)

Results from 2014–2018

Results from 1998–2002

Despite the young age, predominantly boys (60%) were affected



88%

occurred at home

Ages ranged from 5–24months

Average age of 12 months

Median age of 11 months

54% of injuries involved one hand

54%



36% of injuries involved both hands

36%



73% of children sustained injuries touching the OUTSIDE of the oven door

73%



24% of children sustained injuries touching the INSIDE of the oven door

24%



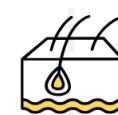
2 cases

required grafting

Injury sustained from touching the inside of the oven door

10 days

Average days to discharge from clinic



Despite the young age, predominantly boys (60%) were affected



65%

occurred at home

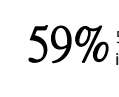
Ages ranged from 8–16months

Average age of 10 months

Median age of 10 months

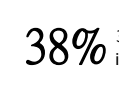
59% of injuries involved one hand

59%



38% of injuries involved one hand

38%



91% of children sustained injuries touching the OUTSIDE of the oven door

91%

9% of children sustained injuries touching the INSIDE of the oven door

9%

1 case

required grafting

Injury sustained from touching the inside of the oven door

7 days

Average days to discharge from clinic

