

ORAL PRESENTATION

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Age-related differences in injury pattern and hospital stay after paediatric trauma

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Introduction

It is estimated that children account for around 10% of all trauma admissions. While few studies describe paediatric trauma, only one British study has described age-related differences after paediatric trauma [1].

Aim

To describe age-related differences in paediatric trauma patients admitted to a Danish level 1 trauma center.

Methods

We included 331 paediatric trauma patients admitted during the 9-year period 1999-2007. Subjects were studied with respect to four age groups (<1 year [n=20], 1-5 years [n=119], 6-10 years [n=72], and 11-15 years [n=120]). We analysed the groups with regard to injury type and mechanism, injury severity score (ISS), and length of stay. $p < 0.05$ was considered statistically significant.

Results

Injury type and mechanism were significantly different between the four groups ($p < 0.0001$). The leading cause of trauma were burn injuries (65%) in patients aged less than 1 year, burn injuries (49%) and blunt trauma (49%) in children between 1-5 years, and blunt trauma (81%/82%) in 6-10 and 11-15 year old children. Mechanisms of blunt trauma were mainly road traffic accidents, followed by fall accidents. In total, eight (2%) patients had penetrating trauma.

ISS increased with age, however not significantly ($p = 0.19$), median ISS 9, 9, 10, and 11 respectively.

With increasing age, a significant decline in total length of stay was observed, median 20, 15, 9, and 9 days respectively ($p = 0.005$). However, patients aged 6 or

more had a significantly longer stay at the ICU, median 0, 0, 1, and 1 day respectively ($p = 0.002$).

Conclusions

Burn injuries were the leading cause of trauma in children aged less than 1 year, while burn injuries and blunt trauma occurred equally in 1-5 year old children. Children older than 6 years were more often implicated in blunt trauma, predominantly road traffic accidents and fall accidents. This age-related difference in injury pattern was reflected in the total length of stay that decreased with advancing age.

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Reference

1. Bayreuther J, Wagener S, Woodford M, Edwards A, Lecky F, Bouamra O, Dykes E: **Pediatric trauma: injury pattern and mortality in the UK.** *Arch Dis Child Educ Pract Ed* 2009, **94**:37-41.

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