

## EMERGENCY MEDICINE JOURNAL

### Infants under 12 months most at risk of physical abuse

*Three times more likely to die than kids sustaining other types of physical trauma*

Infants under the age of 12 months are most at risk of serious physical abuse, reveals a large study of severely injured children published online in ***Emergency Medicine Journal***.

And the severity of their injuries means that they are three times more likely to die than children who have sustained other types of trauma, the findings show.

The researchers base their findings on returns submitted to the Trauma Audit Research Network (TARN) between 2004 and 2013. TARN is a database which collects information on patients treated for injuries that are sufficiently severe to warrant hospital treatment for at least three days. Virtually all (96%) acute care hospitals in England and Wales contribute to TARN.

In 2012 TARN identified deliberate physical trauma as a significant cause of injury in young children. This prompted the researchers to see if abused children have a typical profile that might help clinicians identify them more readily, so ensuring speedy referral to specialist care.

The data supplied by the hospitals were categorised as: accidental injury; suspected child abuse; and alleged assault, which typically includes injuries sustained during fighting.

Between 2004 and 2013 just under 16,000 children up to the age of 16 were treated in the contributing hospitals for severe injuries. Some 6% had either self-harmed or did not have sufficient data so were excluded from the study, leaving 14,845 cases for analysis.

Most (92%) of these children's injuries were classified as accidental. Of the remainder, 2.5% were classified as alleged assault; and one in 20 (5%) was classified as abuse.

A clear pattern emerged for children who had been abused. Nearly all of them (98%) were under the age of 5; and three quarters of them (76%) were less than a year old.

Compared with children whose injuries had been accidental, the injuries of abused children were more severe and tended to involve the head/brain.

Accidental injuries tended to involve the arms and legs, while alleged assaults more commonly affected the torso.

A relatively small proportion of the children died as a result of their injuries, but abused children were three times more likely to do so (7.6% vs 2.6%).

Boys were only slightly more likely to be abused (59%), whereas they predominated in the other two categories, particularly alleged assault (89%).

By way of explanation for the age distribution they found, the researchers point out that older children don't escape abuse, but there were only two children between the ages of 11 and 15 reported to TARN.

“It may simply be that the more robust physique of an older child means that major trauma is more difficult to inflict,” they suggest.

High profile cases of child abuse have tended to be older children, possibly because of the missed opportunities to intervene, they say: but the evidence shows they are not a true reflection of the age group who appear to be most at risk.

“There is a danger that this reporting bias influences key staff such as social workers, doctors and teachers [to focus] on older children, when the overwhelming risk of major trauma and death occurs in the first few months of life,” they warn.