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Trends in childhood trauma mortality in the fast economically developing State of Qatar.

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Abstract

Background: The aim of this study was to explore the trends in injury mortality in children aged 0-18 years in the State of Qatar. No such study has been conducted previously in Qatar.

Methods: Univariate statistical analysis was used in this retrospective descriptive study. A total of 2934 children aged 0-18 years who died due to injuries in the period of 1 January 1993 to 31 December 2007 were studied.

Results: The leading causes of death were road traffic injuries (RTIs) (71.3%), drowning (9.3%) and accidental falls (6.0%). Injury death rates were higher in citizens (57.7%) than in non-citizens (42.3%). The children of 15-18 years old had the highest frequency of injury deaths (34.4%), followed by children of 10-14 years old (21.3%). The mortality rate of RTI per 100 000 population increased remarkably in the year 2005 compared to previous years.

Conclusions: The present study suggests that RTI is a major cause of childhood death. Injury mortality is higher in boys than in girls. During the period of 1993-2007, there was a dramatic increase in childhood mortality caused by RTI. This study highlights the burden of RTI caused mortalities in children, which requires immediate action.

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Outpatient treatment of children with severe pneumonia with oral amoxicillin in four countries: the MASS study

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Abstract

Objective: A recent randomized clinical trial demonstrated home-based treatment of WHO-defined severe pneumonia with oral amoxicillin was equivalent to hospital-based therapy and parenteral antibiotics. We aimed to determine whether this finding is generalizable across four countries.

Methods: Multicentre observational study in Bangladesh, Egypt, Ghana and Vietnam between November 2005 and May 2008. Children aged 3–59 months with WHO-defined severe pneumonia were enrolled at participating health centres and managed at home with oral amoxicillin (80–90 mg/ kg per day) for 5 days. Children were followed up at home on days 1, 2, 3 and 6 and at a facility on day 14 to look for cumulative treatment failure through day 6 and relapse between days 6 and 14.

Results: Of 6582 children screened, 873 were included, of whom 823 had an outcome ascertained. There was substantial variation in presenting characteristics by site. Bangladesh and Ghana had fever (97%) as a more common symptom than Egypt (74%) and Vietnam (66%), while in Vietnam, audible wheeze was more common (49%) than at other sites (range 2–16%). Treatment failure by day 6 was 9.2% (95% CI: 7.3–11.2%) across all sites, varying from 6.4% (95% CI: 3.1–9.8%) in Ghana to 13.2% (95% CI: 8.4–18.0%) in Vietnam; 2.7% (95% CI: 1.5–3.9%) of the 733 children well on day 6 relapsed by day 14. The most common causes of treatment failure were persistence of lower chest wall indrawing (LCI) at day 6 (3.8%; 95% CI: 2.6–5.2%), abnormally sleepy or difficult to wake (1.3%; 95% CI: 0.7–2.3%) and central cyanosis (1.3%; 95% CI: 0.7–2.3%). All children survived and only one adverse drug reaction occurred. Treatment failure was more frequent in young infants and those presenting with rapid respiratory rates.

Conclusions: Clinical treatment failure and adverse event rates among children with severe pneumonia treated at home with oral amoxicillin did not substantially differ across geographic areas. Thus home-based therapy of severe pneumonia can be applied to a wide variety of settings.

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The importance of early treatment with tranexamic acid in bleeding trauma patients: an exploratory analysis of the CRASH-2 randomised controlled trial

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Abstract

Background: The aim of the CRASH-2 trial was to assess the effects of early administration of tranexamic acid on death, vascular occlusive events, and blood transfusion in trauma patients with significant haemorrhage. Tranexamic acid significantly reduced all-cause mortality. Because tranexamic acid is thought to exert its effect through inhibition of fibrinolysis, we undertook exploratory analyses of its effect on death due to bleeding.

Methods: The CRASH-2 trial was undertaken in 274 hospitals in 40 countries. 20 211 adult trauma patients with, or at risk of, significant bleeding were randomly assigned within 8 h of injury to either tranexamic acid (loading dose 1 g over 10 min followed by infusion of 1 g over 8 h) or placebo. Patients were randomly assigned by selection of the lowest numbered treatment pack from a box containing eight numbered packs that were identical apart from the pack number. Both participants and study staff (site investigators and trial coordinating centre staff) were masked to treatment allocation. We examined the effect of tranexamic acid on death due to bleeding according to time to treatment, severity of haemorrhage as assessed by systolic blood pressure, Glasgow coma score (GCS), and type of injury. All analyses were by intention to treat. The trial is registered as ISRCTN86750102, Clinical Trials.gov NCT00375258, and South African Clinical Trial Register/Department of Health DOH-27-0607-1919.

Findings: 10 096 patients were allocated to tranexamic acid and 10 115 to placebo, of whom 10 060 and 10 067, respectively, were analysed. 1063 deaths (35%) were due to bleeding. We recorded strong evidence that the effect of tranexamic acid on death due to bleeding varied according to the time from injury to treatment (test for interaction $p < 0.0001$). Early treatment (≤ 1 h from injury) significantly reduced the risk of death due to bleeding (198/3747 [5.3%] events in tranexamic acid group vs 286/3704 [7.7%] in placebo group; relative risk [RR] 0.68, 95% CI 0.57–0.82; $p < 0.0001$). Treatment given between 1 and 3 h also reduced the risk of death due to bleeding (147/3037 [4.8%] vs 184/2996 [6.1%]; RR 0.79, 0.64–0.97; $p = 0.03$). Treatment given after 3 h seemed to increase the risk of death due to bleeding (144/3272 [4.4%] vs 103/3362 [3.1%]; RR 1.44, 1.12–1.84; $p = 0.004$). We recorded no evidence that the effect of tranexamic acid on death due to bleeding varied by systolic blood pressure, Glasgow coma score, or type of injury.

Interpretation: Tranexamic acid should be given as early as possible to bleeding trauma patients. For trauma patients admitted late after injury, tranexamic acid is less effective and could be harmful.