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Abstract Title: Thrombolysis in Pediatric Population from the KID Database

Press Release Title: Is Clot-Busting Drug Safe for Kids with Strokes?

Objective: To assess safety outcomes associated with thrombolysis in children in a large sample.

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Background: Thrombolysis for acute ischemic stroke (AIS) in children is yet to be proven efficacious. There is limited information about safety in large pediatric samples.

Design/Methods: A cohort of children with AIS was identified from the Kids’ Inpatient Database for the years 1998 to 2009. AIS identified by the clinical classification software codes (109 and 110). Multivariate logistic regression analyses were used to assess covariates associated with hospital mortality and intracerebral hemorrhage (ICH).

Results: In this analysis, 9367 children were admitted with the diagnosis of AIS; only 75 (0.8%) had received thrombolysis. The mean age of the treated children was older than the rest of the cohort (12.88 ± 7.5 vs. 8.18 ± 7.5; P < 0.0001). Gender, race and family income approximated by ZIP-code were similar among the treated and untreated children. Unadjusted analysis showed higher hospital mortality and ICH rates in the thrombolysis group (12.0% vs. 6.2%; P = 0.03) and ICH (4.0% vs. 3.8%; P = 0.003). Adjusted analysis showed that ICH is predictive of a higher hospital mortality (OR 3.42; 95% CI 1.95, 5.99) but not the use of thrombolysis (OR 1.77; 95% CI 0.86, 3.64). Thrombolysis remained predictive of ICH (OR 4.28; 95% CI 1.30, 14.0).

Conclusions: Thrombolysis for AIS is infrequently utilized in children. However, the risk of ICH is as low as those reported in adult population. Thrombolysis is associated with ICH but was not predictive of higher mortality.