

Berg AT, Shinnar S, Testa FM, Levy SR, Smith SN, Beckerman B. **Mortality in Childhood Onset Epilepsy**. Arch Pediatr Adolesc Med 2004;158;1147-1152.

Objectives To evaluate mortality in children with newly diagnosed epilepsy, to determine the risk of death, and to identify predictors of death from the point of diagnosis.

Design Prospective community-based cohort of 613 children with newly diagnosed epilepsy. The outcome measure was death. χ^2 Tests were used for bivariate analyses and the Cox proportional hazards model for multivariable analyses. Standardized mortality ratios were used to quantify the excess mortality in the cohort relative to the population.

Results Thirteen deaths occurred during 4733 person-years of follow-up, for a crude death rate of 2.7 per 1000 person-years (0.52 per 1000 person-years in those with nonsymptomatic epilepsy and 12.6 per 1000 person-years in those with symptomatic epilepsy). Ten deaths were associated with the underlying cause of the seizures, 2 were associated with the occurrence or probable occurrence of seizures, and 1 was unrelated to seizures or the underlying disorder. On multivariable analysis, symptomatic etiology (rate ratio, 10.2; 95% confidence interval [CI], 2.1-49.6) and epileptic encephalopathy (rate ratio, 13.3; 95% CI, 3.4-51.7) were independently associated with mortality. The overall standardized mortality ratio for the cohort was 7.54 (95% CI, 4.38-12.99). In children with symptomatic epilepsy, the standardized mortality ratio was 33.46 (95% CI, 18.53-60.43), and in those with nonsymptomatic epilepsy, it was 1.43 (95% CI, 0.36-5.73).

Conclusions Children with epilepsy have an increased risk of death. Most deaths occur in children with severe underlying conditions and are not directly related to the occurrence of seizures.