



## Low Apgar score in term New-Borns and long-term infectious morbidity: A population-based cohort study with up to 18 years of follow-up

Yuval Gutbir

Ben Gurion University of the Negev, Israel

### Abstract

Since introduced, the Apgar score has remained the most widespread predictor for neonatal morbidity and mortality. We aimed to investigate the association between low 5-min Apgar score and long-term infectious pediatric morbidity. A population-based cohort analysis was performed comparing total and specific subtypes of infectious morbidity leading to hospitalization among term newborns with normal ( $\geq 7$ ) and low ( $< 7$ ) 5-min Apgar scores, born between 1999 and 2014 at a single tertiary regional hospital. Infectious morbidity included hospitalizations involving a pre-defined set of infection-related ICD-9 codes. A Kaplan-Meier survival curve was constructed to compare cumulative infectious morbidity incidence and a Cox proportional hazards model to adjust for confounders. The long-term analysis of 223,335 children (excluding perinatal death cases) yielded 585 (0.3%) infants with low 5-min Apgar scores. The rate of infection-related hospitalizations was 9.8% and 12.4% among newborns with normal and low 5-min Apgar scores, respectively ( $p = 0.06$ ). Adjusting for maternal age, gestational age, hypertension, diabetes, caesarean delivery, and fertility treatments, the association proved to be statistically significant (adjusted HR = 1.28; 95% CI 1.01–1.61).

**Conclusion:** Term infants with low 5-min Apgar scores may be at an increased risk for long-term pediatric infectious morbidity.

### Biography

Yuval Gutbir has earned his MD at Ben Gurion University of the Negev in Israel in 2018. He has completed his internship year in Sheba-Tel Hashomer Medical Center with honors, and currently he is a resident in Pediatrics in Hadassah Ein-Karem Hospital in Jerusalem. Being a younger brother for an amazing sister with CP, and as a young physician, he get to treat children suffering from various pregnancy and delivery-related complications. Hence, he devote his research to both clinical as well as epidemiological and basic science aspects of pregnancy, delivery and early childhood pathologies and their potential long-term effects. He published a paper suggesting that low Apgar scores may be a risk factor for longterm infectious morbidity in children, and another work of mine examining the association between early childhood Shigellosis and future ADHD morbidity is currently under review.

### Publication

1. Early Childhood Shigellosis and Attention Deficit Hyperactivity Disorder: A Population-Based Cohort Study with a Prolonged Follow-up, Eugene Merzon, Yuval Gutbir, Shlomo Vinker, Avivit Golan Cohen, Dana Horwitz, Shai Ashkenazi, and Yair Sadaka.
2. Shigella ADHD, Authors: Yair Sadaka, Dana Horwitz, Eugene Merzon, Shlomo Vinker, Avivit Golan Cohen, Shai Ashkenazi, Yuval Gutbir



14th International Conference on Pediatrics & Neonatal Healthcare  
March 11-12, 2020 | Zurich, Switzerland

**Author Citation:** Yuval Gutbir, *Low Apgar score in term New-Borns and long-term infectious morbidity: A population-based cohort study with up to 18 years of follow-up*, Pediatrics Healthcare 2020, 14th International Conference on Pediatrics & Neonatal Healthcare, Zurich, Switzerland, March 11-12, 2020