

#134 Vivienne Au

Advisor(s): Nira Goldstein

Impact of Adenotonsillectomy on Homework Performance in Children with Obstructive Sleep Apnea

Objective: Adenotonsillectomy (AT) has been shown to confer physiologic and neurocognitive benefits to a child with obstructive sleep apnea. There is a scarcity of data on how homework performance is affected postoperatively. Our objective was to evaluate the impact of AT on homework performance in children with OSA. **Methods:** Children in grades 1 to 8 undergoing AT for OSA based on clinical criteria with or without preoperative polysomnography along with a control group of children undergoing surgery unrelated to the treatment of OSA were recruited. The primary outcome of interest was the differential change in homework performance between the study group and control at follow-up as measured by the validated Homework Performance Questionnaire (HPQ-P). Adjustments were made for demographics and Pediatric Sleep Questionnaire (PSQ) scores.

Results: 116 AT and 47 control subjects were recruited, and follow-up data was obtained in 99 AT and 35 control subjects. For the AT children mean (SD) age was 8.5 (2.1) years, 57 (49.1%) were boys, 97 (83.6 %) were African American and mean (SD) follow-up was 8.7 (3.1) months, while for the control children mean (SD) age was 9.8 (2.4) years, 32 (68.1%) were boys, 33 (70.2 %) were African American and mean (SD) follow-up was 11.7 (2.8) months. There were no significant differences between the General (Total) HPQ-P scores and subscale scores between the AT and control subjects at entry and there were no significant differences in the change scores (follow-up minus initial scores) between the groups. Regression modeling also demonstrated that there were no group (AT versus control) by time interactions that predicted differential improvements in the HPQ-P ($P > 0.10$ for each model) although initial PSQ score was a significant predictor of lower HPQ-P scores for all models.

Conclusions: Children with OSA experienced improvement in HPQ-P scores postoperatively, but the degree of change was not significant when compared to controls.

Additional contributors to this project:

Derek Brian Wu, M.D.

Billy Yang

Sylvia J. Horne, M.D.

Jeremy Weedon, PhD

Michelle J. Bernstein, BA

Nira A. Goldstein, MD, MPH