Accepted Manuscript

Perinatal risk factors for obstructive sleep apnea syndrome in children

Yafei Tan, Dan Zhang, Hui Mei, Hong Mei, Zhengmin Qian, Katherine A. Stamatakis, Savannah S. Jordan, Yan Yang, Shaoping Yang, Bin Zhang

PII: S1389-9457(18)30694-4

DOI: 10.1016/j.sleep.2018.08.018

Reference: SLEEP 3804

To appear in: *Sleep Medicine*

Received Date: 12 April 2018

Revised Date: 3 August 2018

Accepted Date: 6 August 2018

Please cite this article as: Tan Y, Zhang D, Mei H, Mei H, Qian Z, Stamatakis KA, Jordan SS, Yang Y, Yang S, Zhang B, Perinatal risk factors for obstructive sleep apnea syndrome in children, *Sleep Medicine* (2018), doi: https://doi.org/10.1016/j.sleep.2018.08.018.

Perinatal risk factors for obstructive sleep apnea syndrome in children

Yafei Tan [a,†], Dan Zhang [a,†], Hui Mei [a,†], Hong Mei [a], Zhengmin Qian [b], Katherine A. Stamatakis [b], Savannah S. Jordan [b], Yan Yang [a], Shaoping Yang [a,*], Bin Zhang [a,*]

[a] Wuhan Children's Hospital (Wuhan Maternal and Child Healthcare Hospital), Tongji Medical College, Huazhong University of Science & Technology, Wuhan, China
[b] College for Public Health & Social Justice, Saint Louis University, MO, USA

* Corresponding authors: Wuhan Children's Hospital (Wuhan Maternal and Child Healthcare Hospital), Tongji Medical College, Huazhong University of Science & Technology, No. 100 Hongkong Road, Jiangan District, Wuhan, China. Tel.: +86 027 82433149/+86 027 82433244; fax: (+86)027-82433149/+86 027 82433244.
E-mail addresses: 2500070378@qq.com (B. Zhang); 1464502946@qq.com (S. Yang).

[†] These authors contributed equally to this work.

ABSTRACT

Objective: The aim of this study was to determine whether specific perinatal factors are associated with obstructive sleep apnea syndrome (OSAS) in children.
Methods: A retrospective case–control study was conducted. All cases of OSAS were obtained from a tertiary pediatric hospital between April 2013 and April 2016. A total of 823 children who had been diagnosed with OSAS were designated as the case group, and 823 children without OSAS were selected with strict criteria to match with the case group by age, gender and body mass index. Logistic regression models were used to determine the perinatal factors associated with childhood OSAS.
Results: Preterm birth (adjusted odds ratio (aOR): 1.87, 95% confidence interval (CI): 1.13–3.08) and cesarean section (aOR: 1.32, 95% CI: 1.03–1.68) were significantly associated with OSAS. Exposure of the mother to smoke (aOR: 2.59, 95% CI: 1.57–4.26) was also associated with an increased risk of childhood OSAS. Mothers aged 35 years and above, performing manual labor, and living in suburban areas significantly increased the risk of childhood OSAS. Multiparous mothers decreased the risk of childhood OSAS (aOR: 0.59, 95% CI: 0.42–0.83). Maternal education, gravidity, prenatal care times, pregnancy-induced hypertension, multiple pregnancies, sex of the child and birth weight were not significantly associated with OSAS in children.
Conclusion: Perinatal risk factors are important for predicting childhood OSAS. Our findings provide evidence regarding several potentially useful factors for recognizing OSAS in children, which could be important in diagnosis of pediatric OSAS by physicians.