OBSTRUCTIVE SLEEP APNEA IN CHILDREN WITH CONGENITAL CRANIOFACIAL ANOMALIES AT DR. SOETOMO GENERAL HOSPITAL 2014 – 2018

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ABSTRACT

Background: Increased prevalence of craniosynostosis is associated with increased prevalence of obstructive sleep apnea (OSA). Children with congenital craniofacial anomalies usually have maxillary deformity, hypoplasia of mandible, macroglosia, or poor motor tone that predispose to upper and lower airway compromise and thus are at increased risk for the development of pediatric OSA. In children, symptoms of OSA include habitual snoring, frequent arousals, and pauses in respiration, daytime somnolence, and neurobehavioral problems.

Objective*:* To investigate the association between craniofacial anomalies and obstructive sleep apnea (OSA) in population-based sample of children.

Materials and methods: This is a retrospective cross-sectional study. The demographic details and medical histories of 33 children (0–18 years old) referred for assessment of OSA were examined retrospectively. The children underwent polysomnography and were classified as having primary snoring (PS) using apnea hypopnea index (AHI). Information was obtained from predictive value of the following factors for determining OSA severity: gender, body mass index, age, and congenital anomaly. Chi-squared analyses were used to compare the distribution of the demographic and clinical factors across the groups. Statistically significant risk factors were subsequently entered into logistic regression analysis.

Results: There were 64% patients diagnosed with *sleep apnea* by polysomnography, 62% were male and the rest were female. Based on type of anomaly, 66.67% of patients with congenital craniofacial anomalies were diagnosed with sleep apnea, and 60% of patients without craniofacial anomaly were diagnosed with sleep apnea. There were 21 patients diagnosed with sleep apnea, among whom 57.14% had congenital craniofacial anomalies. Statistically, there was no difference in the proportions between the congenital craniofacial anomaly group and the non-craniofacial anomaly group (p=0,692), and the risk ratio was 1.33.

Conclusion: There was no statistically significant difference between incidents of obstructive sleep apnea syndrome in congenital craniofacial anomaly and non-craniofacial anomaly. But the congenital craniofacial anomaly would increase the risk of obstructive sleep apnea 1.33 times on population.

Keyword: obstructive sleep apnea, craniofacial anomaly, congenital, polysomnography