

**Introduction:** Pediatric residual obstructive sleep apnea is defined as persistence of an AHI index  $\geq 1$  respiratory event per hour of sleep after otorhinolaryngology intervention. In terms of OSA phenotypes in children, we recognize the classic, adult and congenital phenotype.

**Material and methods:** We aimed to study 34 patients with OSA diagnosed by polysomnography. Based on the result we indicated adenotonsillectomy to all 34 patients. After 3 months we invited patients to sleep laboratory to provide second control polysomnography. These patients were divided according to clinical phenotype into 2 groups: classic phenotype and adult phenotype.

**Results:** Residual sleep apnea was diagnosed in 24 patients with mean AHI  $6,67 \pm 9,17$  after procedure. Incidence of severe residual OSA was 25%; moderate residual OSA 29,17%; mild residual OSA 45,83%. Residual OSA in classic phenotype was present in 8 patients (57,1%). In 16 patients with adult phenotype of OSA (80,0%) were diagnosed residual OSA. Prevalence was significantly higher in children with adult phenotype ( $p < 0,001$ ).

**Conclusion:** We concluded that there is a higher risk of residual OSA in children with adult phenotype. Phenotyping of children with OSA appears to be an important tool for further management and also in predicting the severity of residual OSA.