McGill score and oxygen desaturation index can be used as indicators of nocturnal oximetry for adenotonsillectomy when polysomnography is not available. Adenotonsillectomy in children with obstructive sleep-disordered breathing improves quality of life.

Materials and Methods

Ninety-two children, candidates for adenotonsillectomy, aged 4-10 years old with obstructive sleep-disordered breathing (OSDB) (snoring >3 nights/week) and tonsillar size grade III or IV were enrolled in the study.

Exclusion criteria: recurrent tonsillitis, craniofacial anomalies, neurological or neuromuscular disorders, genetic syndromes, cardiovascular disease, sickle cell disease, symptomatic asthma, epilepsy, sedative medication, systemic or intranasal corticosteroids.

All children underwent a baseline evaluation including clinical examination, estimation of BMIz-score, blood pressure, CRP, urine creatinine measurements, and nocturnal oximetry just before surgery. A follow-up evaluation performed three months postoperatively.

The main outcomes assessed by nocturnal oximetry were McGill score, and oxygen desaturation index (ODI). Quality-of-life information was achieved from parents using OSA-18 questionnaire and Epworth score. All parents gave signed consent.

Results

Seventy-five children with mean age of 6 years old (SD: 1.7), 38 (50.7%) males, met the inclusion criteria and were followed-up. Baseline nocturnal oximetry revealed 51 children with McGill score = 1 (normal) while in postoperative assessment 70 children showed normal McGill score (p<0.001). Statistically significant difference before and after surgery was also found for ODI (p = 0.002). Data analysis revealed a statistically significant difference before and after surgery for OSA-18 and Epworth Scale Score (p = 0.001).