Weight Changes Immediately Following Tonsillectomy

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INTRODUCTION

Tonsillectomy is an extremely common surgical procedure performed in the setting of recurrent infection and upper airway obstruction in the pediatric population (1). Many children with Obstructive Sleep Apnea Syndrome (OSAS) are underweight or have failure to thrive due to increased metabolic activity secondary to increased work of breathing, decreased oral intake due to anorexia, and poor growth from disruption of nocturnal growth hormone secretion (2). Failure to thrive is a serious morbidity of OSAS as it is detrimental to normal child development. Studies have shown that underweight status in patients with upper airway obstruction (3). Other reports have associated weight gain and increased long-term risk of pediatric obesity in children after adenotonsillectomy (4). There is a gap in the literature regarding the immediate effects of tonsillectomy on growth of children.

OBJECTIVE

To evaluate weight change in the pediatric population immediately after adenotonsillectomy and identify associated risk factors for weight loss.

METHODS AND MATERIALS

For institutional review board approval was obtained, a chart review of patients 12 years of age and younger who underwent adenotonsillectomy at a tertiary care center from January 2008 to November 2011 was conducted. Patient characteristics, preoperative and postoperative weight, indications for surgery, surgical technique, and perioperative complications were recorded. Any child who did not have a postoperative visit within 2 weeks and 6 weeks following surgery was excluded from the study. All subjects were seen preoperatively and postoperatively in the same clinic with weights obtained by the same medical assistant using the same scale. Regression analysis was then used to estimate the mean and distribution for weight change in each age group.

RESULTS

182 patients met inclusion criteria based on complete medical records and postoperative follow-up. Weight was recorded preoperatively (mean of 30 days prior to surgery) and postoperatively (mean of 24 days) using the same clinic scale. Patients’ ages ranged from 0.5 years to 12 years (median ± 2.5 years) (group A) to 6-12 years (median ± 2.5 years) (group B). Regression analysis estimated the mean and distribution for weight change at 21 days postoperatively. Groups A and B experienced percent total body weight changes of 1.7% and -1.2%, respectively (p=0.03). Percent decrease in weight of children 6-12 years old was independent of surgical indication, surgical technique, co-morbidities, and postoperative complications.

DISCUSSION

Immediately following tonsillectomy, pediatric patients experience varying degrees of weight loss. Children aged 6 and above have predicted weight loss in the immediate postoperative setting, while younger children tend to maintain or surpass their preoperative weight by the 21-day interval.

REFERENCES


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