

Tonsillectomy does not improve bedwetting: results of a prospective controlled trial

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Purpose: Sleep disordered breathing caused by tonsillar hypertrophy has been implicated as a cause of primary and secondary nocturnal enuresis in children. We prospectively studied the preoperative and postoperative rates of nocturnal and daytime incontinence in a group of children with tonsillar hypertrophy undergoing tonsillectomy compared to a matched control group undergoing surgery unrelated to the airway or urinary tract.

Materials and Methods: A total of 326 toilet trained children 3 to 15 years old were included, with 257 in the tonsillectomy group and 69 in the control group. Severity of tonsillar hypertrophy was graded preoperatively on a scale of 1 to 4. A voiding questionnaire regarding number of bedwetting and daytime incontinence episodes per week, voids per day, bowel movements per week, secondary or primary enuresis and family history was completed by parents preoperatively, and at 3 and 6 months postoperatively.

Results: Preoperatively the respective rates of nocturnal enuresis and daytime incontinence were 33% and 17% in the tonsillectomy group ($p = 0.89$), and 35% and 14% in the control group ($p = 0.3$). The respective cure rates for bedwetting at 3 and 6 months postoperatively were 40% and 50% in the tonsillectomy group ($p = 0.60$), and 35% and 48% in the control group ($p = 0.61$). Similarly no difference was seen in improvement or cure of daytime incontinence at 3 and 6 months postoperatively.

Conclusions: We found no association between tonsillar hypertrophy and urinary incontinence before or after tonsillectomy.

Editorial Comment

There have been a number of reports in the literature suggesting that tonsillectomy may be beneficial for the treatment of nocturnal enuresis. Because the current literature contains largely retrospective reviews and case reports, the authors sought to design a prospective controlled trial to determine whether tonsillectomy would improve daytime or nighttime incontinence postoperatively. They had 257 patients in the tonsillectomy group that all had evidence of tonsillar hypertrophy and 69 patients in the control group who were scheduled to undergo minor outpatient surgery for unrelated problems. They found similar rates of daytime and nighttime incontinence in both groups. They performed follow-up visits at three and six months and found improvement in both the study and control groups. There was no statistically significant difference between the two groups in terms of resolution or improvement of their incontinence either during the daytime or at night.

This was a nice prospective controlled study that should give one pause before suggesting to patients or parents that bedwetting is an indication for tonsillectomy. While there still remains an association between disordered breathing during sleep, upper airway obstruction, and enuresis, it is not clear yet how to tease out which patients would benefit from removal of their tonsils and/or adenoids versus the more proven methods of medical and behavioral management.

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