



Adenotonsillotomy versus adenotonsillectomy for treating paediatric obstructive sleep apnea - effects on behavioural symptoms

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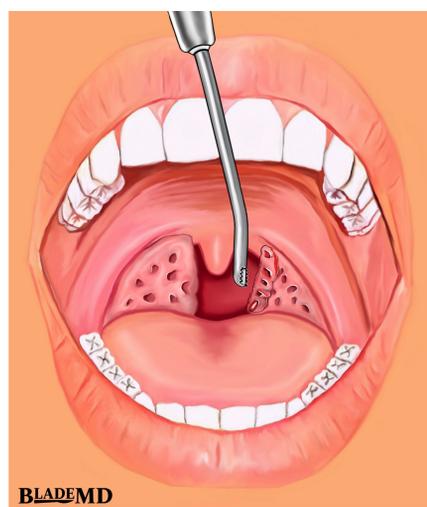
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Aim

Our previous randomized controlled trial (RCT) of children with obstructive sleep apnoea (OSA) showed no significant differences between adenotonsillectomy (ATE) and adenotonsillotomy (ATT) in improving nocturnal respiration and quality of life after one year. This is the continuous report with evaluation of behavioural symptoms according to the Strengths and Difficulties Questionnaire (SDQ).



Tonsillectomy is a total extracapsular excision of the tonsil, the most common surgical procedure worldwide to treat obstructive sleep apnoea.



Tonsillotomy is a common method in Sweden where only a reduction of the protruding tonsil tissue is performed. The method is accompanied with less bleeding, postoperative pain and costs for society.

Results

The SDQ was filled by 69 (87%) parents preoperatively, and by 68 (86%) postoperatively. At follow-up, the mean total score of SDQ in the ATE-group (n=31) was 9.6 (5.1), and in the ATT-group (n=37) 8.2 (6.7), $p = 0.09$. The mean total SDQ-score for all patient was preoperatively 10.6 (SD 5.0), and postoperatively 8.8(6.0), $p = 0.0002$.

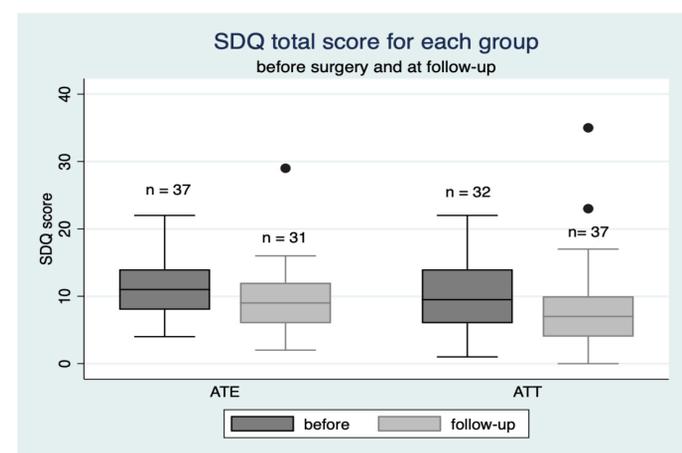


Table. The SDQ subscales and total score in each group at baseline and at follow-up, and the group differences between baseline and follow-up values, respectively.

SDQ subscales	Baseline				Follow-up one year			
	Total number	ATE n=37	ATT n=32	p-value ATE vs ATT	Total number	ATE n=31	ATT n=37	p-value ATE vs ATT
<i>Emotion</i>	70	2.2 (2.0)	1.9 (1.6)	0.49	69	2.0 (2.0)	1.4 (1.9)	0.08
<i>Conduct</i>	70	3.0 (1.9)	2.8 (1.8)	0.57	68	2.5 (1.8)	2.4 (2.4)	0.42
<i>Hyper</i>	69	4.3 (2.4)	4.0 (2.3)	0.58	69	3.9 (2.2)	3.3 (2.3)	0.25
<i>Peer</i>	70	1.5 (1.5)	1.5 (1.5)	0.90	69	1.1 (1.3)	1.1 (1.8)	0.53
<i>Prosocial</i>	70	7.7 (1.6)	7.5 (2.1)	0.86	68	7.9 (1.9)	7.9 (2.3)	0.65
<i>Impact</i>	32	0.4 (0.9)	0.8 (1.5)	0.79	61	0.2 (0.7)	0.5 (1.8)	0.36
Total score SDQ	69	11.0 (4.8)	10.2 (5.3)	0.52	68	9.6 (5.1)	8.2 (6.7)	0.09

Data are mean (SD) p = calculated with Mann Whitney U

Method

Parents, blinded to method, filled in the SDQ while their children, n=79, mean age 3.6 (2-6) years, underwent polysomnography before and one year after surgery. Five subscales and a total SDQ-score were analysed to evaluate differences between the treatment groups at follow-up with non-parametric test Mann Whitney U.

Conclusion

There were no significant differences in behavioural symptoms according to SDQ-score between ATE and ATT at follow-up, indicating that ATT is a treatment option in paediatric OSA. A significant improvement in SDQ-score after surgery for the whole group of patients was found.

