RISK OF SECONDARY SURGERY AFTER TONSILLOTOMY VERSUS TONSILLECTOMY, A POPULATION STUDY IN SWEDEN 2007-2012

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Aim
To describe the risk of secondary tonsil surgery following tonsillotomy and tonsillectomy respectively in children with upper airway obstruction in Sweden

Introduction
In Sweden, tonsillotomy has over the last decade gradually replaced tonsillectomy as the favoured surgical method for reducing airway obstruction from enlarged tonsils. Less postoperative morbidity with comparative symptomatic relief are the advantages seen. Concern have been raised that tonsillotomy increases risk of secondary tonsil surgery compared to tonsillectomy.

Material & Methods
Retrospective register-study from the National Patient Register in Sweden from January 2007 to December 2012. All children, 1 - 12 years, who underwent tonsillotomy or tonsillectomy with or without simultaneously adenoidectomy, on the indication classified as upper airway obstruction were included in the study. Patients with previous history of tonsil surgery were excluded. Secondary tonsil surgery conducted within 30 days from the first procedure were not regarded as revision surgery, since it is likely to assume that these surgeries are linked to postoperative haemorrhage rather than regrowth of tonsillar tissue or recurrent tonsillitis.

Results
A total of 28700 patients met the inclusion criteria and were included in this study. Of these 16400 were operated on with tonsillotomy and 12300 with tonsillectomy. The mean age in the tonsillotomy group was 5.1 years and 5.6 years in the tonsillectomy group. The duration of follow-up was up to 6 years, with a median of 2.1 years in the TT group and 3.4 years in the TE group. A total of 741 patients underwent secondary tonsil surgery. Of these 635 were operated with a primary tonsillotomy and 106 with primary tonsillectomy. A Poisson regression analysis was used to identify risk factors for subsequent tonsil surgery, to calculate Hazard ratio between the groups and to calculate the expected incidence of secondary surgery. We found that young age raises risk for subsequent tonsil surgery. We found no other variables that changes risk significantly. TT has a higher risk of secondary tonsil surgery than TE with a Hazard ratio of 5.5. Expected incidences of secondary surgery within 1, 3 and 5 years for tonsillectomy (fig 1) and tonsillotomy (fig 2) are displayed below.

Conclusion
The risk of secondary tonsil surgery, in the Swedish paediatric population, is 5.5 times higher after tonsillotomy compared to tonsillectomy. Young age is a highly significant predictor for increased risk of secondary tonsil surgery

More information and data at: www.entqualitysweden.se