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Tonsillectomy reduces moderately the frequency of tonsillitis, but it must be evaluated case by case

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Spanish key words: amigdalitis; amigdalectomía; amígdalas; revisión sistemática.

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Tonsillectomy reduces moderately the frequency of tonsillitis, but it must be evaluated case by case

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Abstract

Authors' conclusions: tonsillectomy has a moderate effect on the reduction of the frequency of tonsillitis and its consequences in the following years. This effect disappears with time (after the first year).

Reviewers' commentary: this study gathers studies of different type, with different risks of bias. Some of the studies have serious methodological flaws, especially in relation to the diagnosis of tonsillitis. The conclusions favor the validity of the review, due to the fact that all of them point to a similar effect of tonsillectomy. The effect of tonsillectomy is limited, and this procedure must be considered to be performed only in selected cases. This study can be useful in the moment of considering the referral to an otorhinolaryngologist for tonsillectomy.

Key words: tonsillitis; tonsillectomy; tonsils; systematic review.

La amigdalectomía, en el mejor de los casos, tiene efectos moderados y breves

Resumen

Conclusiones de los autores del estudio: la amigdalectomía tiene un efecto moderado y limitado en el tiempo en la reducción de la frecuencia de amigdalitis posteriores y sus consecuencias.

Comentario de los revisores: este estudio reúne estudios de distinto tipo con riesgo de sesgo variable. Algunos estudios reunidos presentan serios problemas metodológicos, especialmente en cuanto a los criterios diagnósticos de amigdalitis. Las conclusiones de todos los estudios son similares en cuanto a la dirección de los resultados. El efecto de la amigdalectomía es moderado y debe llevarse a cabo de manera muy selectiva. Puede ser útil a la hora de valorar la derivación de los pacientes para amigdalectomía.

Palabras Clave: amigdalitis; amigdalectomía; amígdalas; revisión sistemática.

STRUCTURED ABSTRACT

Objective: to compare the results of tonsillectomy (TE) versus watchful waiting in children with recurrent throat infections in terms of frequency of tonsillitis and sleep, cognitive and behavioural outcomes.

Design: systematic review (SR) without meta-analysis.

Source of data: the authors searched the MEDLINE database via PubMed, Embase and the Cochrane library from January 1980 to June 2016 using a combination of controlled

vocabulary and related key terms ("tonsillectomy", "adenotonsillectomy", "streptococcal", etc). They also hand-searched the reference lists of included articles and recent reviews.

Study selection: the authors developed inclusion criteria in consultation with an expert panel. They included randomised controlled trials (RCTs) and prospective or retrospective cohort studies (only in English). Studies with a high risk of bias were excluded. Out of 9608 retrieved citations, they selected seven studies that included children with 3 or more "throat infections" (TIs) in the past 1 to 3 years and with a low or moderate risk of bias.

Data extraction: two investigators examined the studies independently: number and severity of TIs, school absences, quality of life and health care utilization.

Main results: the authors made a qualitative synthesis of the 7 selected studies. The number of TIs decreased from baseline in both groups, with greater decreases in sore throat days, clinician contacts, diagnosed group A streptococcus (GAS) infections and school absences in the TE group in the short term (12 months). Although the results of all studies showed similar trends, the effect varied between studies. There were no differences in quality of life between the two groups.

Conclusion: throat infections and the other variables under study were better in the first year post surgery in children that underwent TE compared to children managed with watchful waiting (first year of followup), but not in subsequent years.

Conflicts of interest: the authors disclosed none.

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COMMENTARY

Justification: tonsillectomy is one of the surgical procedures performed most frequently in children, although its effectiveness is relatively low. Most throat illnesses become less frequent with increasing age. The factors that need to be considered for the indication of TE are: potential risks and benefits compared to alternative management, the natural course of the disease, the frequency and severity of infections, the preferences of the family, antibiotic tolerance, academic performance, accessibility of health care services and health care costs.¹

Clinical practice guidelines recommend differentiating between two categories of cases: severe, in which TE would be indicated (≥ 7 episodes documented in a year, ≥ 5 episodes/year in two consecutive years, ≥ 3 episodes/year in three consecutive years), and moderate, in which TE would not be indicated. The eligibility for TE must be determined on a case-to-case basis.

Otherwise, TE would only be indicated in patients with GAS infection complicated by multiple antibiotic allergy, peritonsillar abscess, a history of rheumatic fever (RF) or contact with an individual with RF.²

Validity or scientific rigour: the population under study was well defined, although there was some imprecision as

regards diagnosis, since many studies use a general clinical definition (throat pain). The intervention (tonsillectomy) was well defined, but the alternative management with which it was compared was not properly explained. The outcome measures and methodology varied from study to study, so the authors could not perform a meta-analysis. The search was restricted to works published in English and excluded studies with a high risk of bias, which happened to be the studies involving patients with more severe forms of disease. Both factors limit the external validity of the study.

Clinical relevance: the authors reported a greater decrease in the number of throat infections, clinician contacts, diagnosis of infection by group A streptococcus (GAS) and school absences in the short term in patients treated with TE. These differences, while statistically significant, seem scarcely relevant from a clinical standpoint. This is a moderate effect that, furthermore, does not persist and is only observed in the first year, which may overlap with the natural decrease in episodes of tonsillitis as years go by. In one of the studies with the lowest risks of bias, the TE group had 1.74 episodes of throat pain or infection in the first year post surgery, (95% confidence interval [95 CI]: 1.54 to 2) compared to 2.93 episodes in the control group (95 CI: 2.69 to 3.22).³

There are previous studies that have not found a reduction in the number of respiratory infections following TE⁴ or have found only a modest decrease in recurrent pharyngitis.⁵ A study of the cost-effectiveness of TE compared to medical treatment in reducing the frequency of tonsillitis in school-aged children concluded that TE can reduce the overall number of episodes of tonsillitis in the two years following the procedure (95 CI: 0.61 to 5.2) at a reasonable cost (with a reduction of £261 [95 CI: 161 to 586] per prevented episode of "tonsillitis" [throat involvement]).⁶ Furthermore, we must take into account that the risks of severe complications of TE could exceed the risks of rheumatic fever or local suppurative complications in conservative treatment.

Applicability to clinical practice: the methodological limitations and heterogeneity of the studies reviewed, the selection bias in favour of mild and moderate forms of disease, and the impossibility of performing a quantitative synthesis of the data pose significant challenges to drawing conclusions from this study. At any rate, it seems that the beneficial effects of tonsillectomy are unimportant from a clinical standpoint and that they do not persist, so the indication for this surgery should be assessed very carefully on a case-to-case basis.

Conflicts of interest: the authors of the commentary had no conflicts of interest to declare.

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