

IMMUNIZATION WITH A HEAT-INACTIVATED POLYVALENT BACTERIA VACCINE CAN PREVENT TONSILLECTOMY IN PATIENTS WITH RECURRENT TONSILLITIS

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Introduction

Recurrent tonsillitis (7 episodes in 1 year, or 5/year in the last 2 years, or 3/year in the past 3 years) induces a high consumption of antimicrobials and leads to a high rate of tonsillectomy, one of the most common surgical procedures performed in the world. Overuse of antibiotics results in potential treatment side effects and selection of multidrug-resistant bacteria, a growing global public health problem. Immune stimulation has been proposed as an alternative approach that could have the potential to prevent infection, avoiding the emergence of resistance. The aim of this study was to assess if the use of an immunostimulant of bacterial origin could reduce the number of acute episodes and avoid tonsillectomy procedures in patients with recurrent tonsillitis.

Methods

We performed an 8-year observational retrospective study in 140 patients presenting with a diagnosis of recurrent acute tonsillitis and tonsillectomy criteria between 2008 and 2015. Patients received daily sublingual immunization with a whole-cell heat-inactivated polyvalent vaccine manufactured by Allergy Therapeutics Ibérica (Alcalá de Henares, Spain) containing 4x10⁹ CFU/ml of *Streptococcus pyogenes* 60%, *Haemophilus influenzae* 20%, *Moraxella catarrhalis* 10%, and *Staphylococcus aureus* 10%, for a minimum of 3 months. New acute tonsillitis episodes and need for tonsillectomy were registered.

Results

Data from 140 patients (64% female, 36% male) was gathered from clinical records. The average age of patients was 22 years (range: 3-54 years). 31% of them were 3-14 years old, 41% were 15-30 years old and 28% were older than 30. Treatment duration ranged from 3 months to 12 months (mean 5 months) and the follow-up period lasted 14 months as average. 55% of the patients showed no recurrent tonsillitis criteria, 27.1% presented recurrent tonsillitis and 17.9% were lost during the follow-up. Of 115 patients that could be followed up, 79 (68.7%) did not require subsequent tonsillectomy. There were no significant differences between age groups. Only one patient presented a systemic adverse reaction (moderate rash) and no patient had to stop the treatment due to side effects.

Conclusions

Immune stimulation with a whole-cell heat-inactivated polyvalent bacterial vaccine is safe and capable of prevent acute episodes of tonsillitis and avoid tonsillectomy in children and adults with recurrent tonsillitis.

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INTRODUCTION

Acute pharyngotonsillitis is one of the most frequent respiratory infections in our environment, associated with work absenteeism. In spite of the fact that the most frequent etiology is viral, within the bacterial etiology, *Streptococcus pyogenes* or Group A β -hemolytic *Streptococcus* (GABHS) cause 5-30% of cases and antibiotics are among the most commonly prescribed drugs.

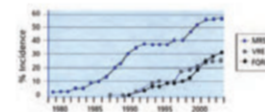
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The misuse or overuse of antibiotics results in potential treatment side effects and selection of multidrug-resistant bacteria, a growing global public health problem.

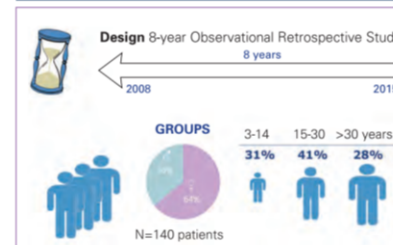
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Increasing incidence of antibiotic-resistant infections.



METHOD



Diagnosis

Recurrent Acute Tonsillitis with tonsillectomy criteria

7 episodes in 1 year
5/year in the last 2 years
3/year in the last 3 years

According to the Spanish ENT Society criteria.
Acta Otorrinolaringológica Española 2006;57(2):59-65

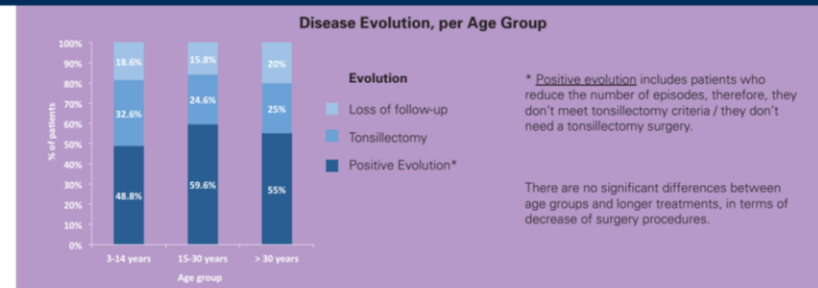
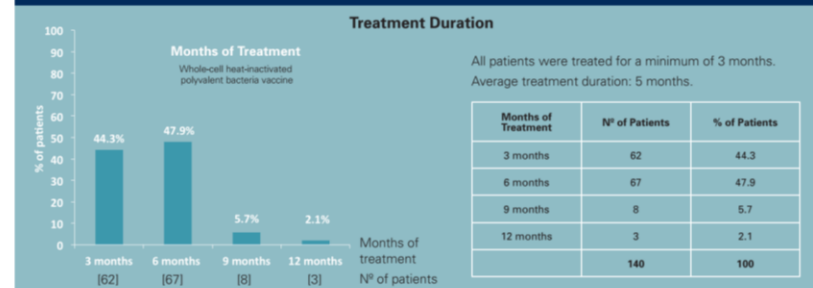
Treatment

Sublingual immunization

Gram-positive	
<i>Streptococcus pyogenes</i>	60%
<i>Staphylococcus aureus</i>	10%
Gram-negative	
<i>Haemophilus influenzae</i>	20%
<i>Moraxella catarrhalis</i>	10%

Whole-cell heat-inactivated polyvalent bacteria vaccine
4 drops daily
4x10⁹ CFU/ml
For 3-12 months (Average 5 m.)
Follow-up: 14 months (Average)

RESULTS



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CONCLUSIONS

- Immune stimulation with a whole-cell heat-inactivated polyvalent bacterial vaccine was well-tolerated, reduced acute episodes of tonsillitis and the number of tonsillectomy surgeries was decreased in children and adults with recurrent tonsillitis.
- Bacterial immunotherapy in recurrent pharyngotonsillitis can reduce the number of episodes, thus decreasing the number of antibiotic prescriptions. This could contribute to avoid the emergence of bacteria resistance.