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Title

Group A beta haemolytic Streptococci as a pathogen in patients presenting with an uncomplicated acute sore throat – a review

Priority 1 (Research Category)

Systematic review, meta-analysis, or scoping review

Presenters

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Abstract

Objective: Estimate the probability for a link between finding a group A Streptococci (GAS) in a throat swab and the symptom of a sore throat and to what extent this probability depends on climate zone and if the patient is a child or an adult.

Study design and analysis: Systematic literature review with meta-analysis.

Dataset: Medline and Scopus were searched from inception to December 2020.

Population studied: Case-control studies reporting prevalence of GAS in patients and healthy controls with data presented separately for children and adults.

Outcome measures: Positive etiologic predictive value (P-EPV), quantifying the probability for a link between finding of GAS in a throat swab and the symptom of a sore throat. P-EPV was calculated with separate analysis for children versus adults as well as for different climate zones.

Results: 11 of 26 studies identified were of enough quality to be included in the meta-analysis. The summary P-EPV for adults was 92% (87-95%) and for children 65% (42-80%) in a temperate or continental climate. The summary P-EPV for children was 49% (15-71%) in a dry climate. Irrespective of climate zone the summary P-EPV for adults was 94% (90-97%) and for children 83% (63-93%) when we only included patients having a Centor score of 3-4.

Conclusion: A throat swab detecting GAS in adult patients with an acute uncomplicated sore throat in primary care in a temperate/continental climate is useful to rule in GAS as the most likely aetiologic agent. A negative result of a throat swab is useful in both children and adults, irrespective of climate zone, to rule out GAS as the aetiologic agent and hence, avoid unnecessary antibiotic treatment.