Pharyngotonsillitis in children and young adults

Background
Pharyngotonsillitis, or acute sore throat, is a common reason for attending primary care and also a common cause of antibiotic prescription. Much focus by the health care providers is directed at finding and treating patients with the bacteria Group A Streptococci, while the rest of the cases are regarded, somewhat bluntly, as viral infections. It has recently been shown that at least 20 different bacteria and viruses can cause acute sore throat, but more research is needed to explore if these microorganisms give rise to different clinical symptoms and courses.

Aim
To learn more about which viruses and bacteria can be found in patients seeking primary care for acute sore throat, and how these microorganisms are associated to the clinical course, complications and to subsequent re-consultations for sore throat.

Methods
Observational studies in Swedish primary health care, on patients ranging from 0 to 45 years in age. Patients attending with acute sore throat are sampled from throat, nose and blood and analyzed with PCR for 20 viruses and bacteria, and followed up by diaries and medical file reviews. One study uses registry data on visits, ICD-10 codes, prescriptions, blood tests and throat cultures for 20,000 patients.

Preliminary results
In the first study, a 2-year follow-up of 207 patients showed that Group A Streptococci are associated with the highest incidence of re-consultations within 30 days (20%), while the group differences between microorganisms even out over time. Complications were rare.

In the second study, preliminary results show that clinical features, both alone and in combination, are insufficient to predict the presence of different microorganisms. Cough and coryza have high negative predictive values for Group A Streptococci, but cannot readily be used to detect viruses. A rapid detection test greatly enhances the predictive values of Group A Streptococci when the pre-test probability is high, but give rise to many false positives when pre-test probability is low.

The third study shows that Group A Streptococci are highly prevalent in all children regardless of throat infection, and that interpretation of a positive finding therefore is difficult. Overall, around two thirds of both patients and healthy controls have a positive sample for viruses or bacteria.

Significance
Learning more about which clinical symptoms the different bacteria and viruses give rise to, can help us to better direct antibiotic treatment to the patients most in need of it.

Published paper