

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

2-4 November 2023 • Abu Dhabi



Submission Id: 198

Title: ABSENCE OF GROUP A STREPTOCOCCUS (GAS) IN CHILDREN WITH SUSPECTED PHARYNGITIS IN A HIGHLY ENDEMIC AREA IN MAPUTO CITY DURING THE HOT SEASON

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Background & Aims: Streptococcus pyogenes causes asymptomatic infections, pharyngitis, scarlet and post-infection immune sequelae. The worldwide circulation of Group A Streptococcus (GAS) is >18.1 million cases with an incidence of >1.78 million cases per year. Due to its impact on human morbidity and mortality assessing its occurrence in young population is key to efforts towards the prevention and control of Rheumatic Heart Disease. Aim: Our study aims at assessing the presence of Group A Beta-Hemolytic Streptococcus (GAS) and concordance of culture in suspected cases of pharyngitis, using a clinical predictive rule and rapid antigenic test.

Methods: GAS pharyngitis screening was conducted in sick children assisted in pediatric consultations during the five (5) working days of the third week of each month. The study will be conducted for a year in the Pediatrics Department of Mavalane Health Centre. During the first 4 (four) months of the observational study, demographic and clinical data were collected from the patients for later follow-up in those who tested positive. Patients were assisted by health professionals according to the protocols used in the AIDI consultation and sent for laboratory exam in cases classified as "suspected pharyngitis" using standardized criteria (Health Ministry, 2014). For testing we used the Rapid Diagnostic Tests (Streptataste-Biosynex) - sensitivity level of 96.8% and specificity of 94.7%. Children were submitted to the rapid test on the same day of the consultation. Children with high suspicion of streptococcal tonsillitis (fever, swollen/reddish throat and/or with purulent secretions) were submitted to both

Results: Overall 1401 children were seen in consultation, of which 42 (2.9%) were eligible for the rapid test. The suspected cases include children aged 4 to 15, with 7-year-olds having the highest index of suspicion. The symptoms and signs leading to the rapid test were 28 (66.6%) had reddened glands, 27 (64.2%) had swollen glands, 26 (61.2%) had pain when swallowing, 15 (35.7%) had sore throat, 9 (21.4%) had fever, and 7 (16.6%) had purulent secretions. All rapid tests were negative. None of the 7 (17.0%) children with high suspicion of streptococcal tonsillitis had growth in the cultured sample.

All suspicious children were followed up by phone call, regardless of the outcome. Of the 41 children suspected of pharyngitis and started treatment, 25 (69%) have recovered from tonsillitis, 2 (4%) are in treatment and 10 (23%) did not answer the phone calls.

Conclusions: We found no GAS presence in children with suspicion of pharyngitis in a low-transmission season in this highly endemic area for RHD. There was 100% concordance between the rapid test and culture. Our results suggest/confirm seasonal variation in risk of transmission and have implications in the design of prevention and control programs in under-resourced areas.