GROUP A STREPTOCOCCUS PHARYNGITIS AMONG SCHOOLCHILDREN IN BAMAOK, MALI

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Background: Group A Streptococcus (GAS) is one of the most common and versatile human pathogens, causing superficial and invasive infections as well as rheumatic fever and other immunologic sequelae. Recently, multivalent M type-specific vaccines have shown promise in trials. To use such vaccines in developing countries, the GAS burden and distribution of emm-types must be characterized.

Methods: Four public elementary schools in two low-income quartiers (Djicoroni-para and Sebenikoro) in Bamako, Mali were identified and a census of the student body was performed at the beginning of the study and at the beginning of the school year. Study personnel are present in each school infirmary to identify 5- to 16-year old children with pharyngitis and complete a clinical history and physical exam. A throat swab is obtained and processed to culture GAS according to standard procedures. Emm-typing is performed according to the Centers for Disease Control Protocol. All children with GAS pharyngitis are treated with a 10-day course of penicillin or erythromycin (if allergic to penicillin).

Results: From 30 May to 12 September 2006, of the 12,508 students under surveillance, 58 presented with pharyngitis (3 cases per 10,000 person-weeks), 41 from Djicoroni-para and 17 from Sebenikoro. Of these, 15 (26%) were positive for GAS; 0.8 cases per 10,000 person-weeks. Almost half of the cases were 8-10 years of age (n=7) and most were females (n=10). Compared to those without GAS, children with GAS isolated from the throat were more likely to report pain with (p=0.31) and difficulty swallowing (p=0.15) and on examination had tonsillar exudates (p=0.02) and painful lymph nodes (p=0.08). Emm-typing results are available for 11 isolates and represent at least 8 types, including 69.1 (n=2), 63.3 77, 8.1, 81.2, and 89.6. (Data from 30 May 2006 to 26 March 2007 will be presented.)

Conclusions: These data suggest that GAS is an important cause of pharyngitis in Malian schoolchildren. Emm-type distribution of pharyngitis cases appears to be broad. More data is needed to determine the coverage afforded by current GAS vaccines.