

Letters to the Editor

W135 Invasive Meningococcal Strains Spreading in South America: Significant Increase in Incidence Rate in Argentina[∇]

In Argentina, the incidence rate of meningococcal disease is 0.6 cases per 10⁵ inhabitants, representing around 250 cases declared every year. The number of meningococcal strains received annually at the Reference Laboratory for Meningococci of the National Institute for Infectious Diseases (INEI-ANLIS, Dr Carlos G Malbrán) from Argentina represents around 50% of the meningococcal invasive disease cases declared in the country. The Reference Laboratory participates in an external quality assurance program coordinated by the Pan American Health Organization. Within this context, the reference laboratory produces annual reports on serogroup distribution, strain characterization, and antimicrobial susceptibility (3, 6, 7). Serogroup B has been and still is the most frequent (around 65%). Serogroup C was associated with an epidemic wave at the end of the 1990s (with most strains being C:2b:nonserosubtypeable), and it has represented around 20% of the strains until 2005. In 2006, a new situation appeared, with a similar proportion of isolates showing serogroup C, Y, or W135 (7% in each), evolving to 11.4%, 6.8%, and 13%, respectively, during 2007. In 2008, serogroup W135 increased dramatically, reaching 27.7% of the received isolates during the first 5 months ($P < 0.05$). In 2007 and 2008, most of the W135 strains (14/16 [87.5%] and 14/18 [77.8%], respectively) were isolated in Buenos Aires Province (including Buenos Aires city), while this proportion was clearly different (less than 50%) from that for 2000 to 2006. Although these data are based on laboratory surveillance and should be confirmed with epidemiological data, the situation of an increased number of invasive W135 cases appears to affect mainly Buenos Aires Province.

Most of the cases (63%) appeared in children under 9 years old, with 28% in children under 1 year old. The age distribution might be affected because most of the hospitals sending strains to the reference laboratory are in fact pediatric hospitals, which might produce some bias in the data.

In order to do a preliminary analysis of the new epidemiological situation, seven strains randomly chosen among those W135 isolates received in 2007 (four strains) and 2008 (three strains) were characterized by multilocus sequence typing (4) and *porB* and *porA* (1) and *fetA* (9) sequences. All the strains belonged to sequence type 11 (clonal complex ST-11) and showed the same *porB* (2-144 [C, Eb, 2a, and Cc]), *porA* (5 and 2), and *fetA* (F1-1) alleles. W135 meningococcal strains belonging to clonal complex ST-11 have been associated with an international outbreak among Hajj pilgrims in 2000 and 2001 (8), but they also have been identified in several countries in the meningitis belt (5) and in Taiwan (10), Turkey (2), and recently the south of Brazil (11). In fact, the last is the first report of an increase of W135 invasive cases in Latin America, and it might be closely related to the increase now noted in

Argentina. A retrospective analysis shows that there was a cluster of W135 cases in Misiones, an Argentinean province just on the border with the south of Brazil, in 2005 and 2006, while the increase in W135 clinical cases reported in Brazil was during 2004 and 2005.

These preliminary results from Argentina look like an epidemic situation rather than the results that can usually be found in endemic-disease situations with more-heterogeneous strains. Whether this situation represents a new epidemiological feature in Argentina or reflects an outbreak located in Buenos Aires, and its relation to other increases of cases in the region, are questions to be clarified in a wider study that is under way.

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