High Rate of Meningococcal Disease in Baja-California, Mexico: An Unknown Endemic Disease with a Rate Similar to the USA
General Hospital of Tijuana, Tijuana, Mexico

Background: Meningococcal Disease (MD) is reported with a rate of 0.06/100,000 in Mexico, much lower than the 0.44/100,000 reported in the US. Tijuana, Baja-California, is a Mexican city that borders with San Diego, California, with a daily 50,000 people transit through the border. The real incidence of MD is unknown in this region.

Methods: From Oct/15th to Jan/15th, an active search for MD was performed prospectively at the General Hospital of Tijuana, Baja-California, Mexico. Patients between 1 month and 16 years of age were included. Clinical, demographical and microbiological characteristics were analyzed.

Results: A total of 14 confirmed (an approximate rate of 0.45/100,000) and 6 probable MD cases were found. From confirmed cases, 5 had clinical purpura (CP) and meningitis, 2 CP without meningitis and 7 meningitis without CP. Avg age was 5.2 years (5m - 16y), all children were local. Most cases were seen during winter and autumn, and a previous upper respiratory infection was present in 50% of cases. Incidence of serogroups found were C (64.3%), B (14.3%), Y (7.1%) and unknown (14.3%). Overall mortality was high (21%), and the presence of CP, trombocytopenia and prolonged clotting factors at admission were associated with poor prognosis. Furthermore, N. meningitidis was the major cause of confirmed bacterial meningitis.

Conclusions: MD is endemic in Baja-California, Mexico, with similar rates to the US, but much higher when compared to Mexican-National reports. Serogroup C was the most prevalent, and immunization should be a Public Health issue in this Mexican region.

doi:10.1016/j.ijid.2008.05.1188

69.009

Prevalence and Predictors of Methicillin-Resistant Staphylococcus aureus (MRSA) and Extended-Spectrum Beta-Lactamase (ESBL) Gram-Negative Bacteria at Hospital Presentation in Singapore
S. Pada1,∗, D. Lye1, P. Krishnan2, J. Chan3, S.P. Chan3, G. Cham4, B.S. Ang1, Y.S. Leo5
1 Department of Infectious Diseases, Tan Tock Seng Hospital, Singapore, Singapore
2 Laboratory Medicine, Tan Tock Seng Hospital, Singapore, Singapore
3 Clinical Research Unit, Tan Tock Seng Hospital, Singapore, Singapore
4 Emergency Medicine, Tan Tock Seng Hospital, Singapore, Singapore
5 Tan Tock Seng Hospital, Singapore, Singapore

Background: Methicillin resistance occurs in 66% of nosocomial Staphylococcus aureus while ESBL in 21% Escherichia coli and 51% Klebsiella pneumoniae at our institution. Community-onset MRSA and vancomycin-resistant enterococci (VRE) occur locally. We wish to determine the prevalence and predictors of colonisation by MRSA, VRE and ESBL-positive Gram-negative bacilli (GBN) in patients admitted from our Emergency Department.

Methods: All adult patients >16 years of age consenting to participation underwent nasal, axilla, groin and rectal swabs, processed by validated published methods to screen for MRSA, VRE and ESBL-positive GNB. A questionnaire was used to record age, gender, co-morbidity, nursing home residence, contact with healthcare workers; hospitalisation, visit to hospital outpatient, general practitioners or government polyclinics within 3 and 12 months; and oral antibiotic use within 1 and 3 months. Univariate and multivariate analysis were performed to determine independent predictors of colonisation by MRSA, VRE and ESBL-positive GNB.

Results: Of 1003 patients recruited, mean age was 47 years; male comprised 65% and nursing home residents 2.2%. Diabetes mellitus occurred in 21%. Hospitalisation within 3 and 12 months was noted in 17% and 27% respectively. Visit to hospital outpatient, government polyclinics and general practitioners within 12 months occurred in 48%, 44% and 48% respectively. Oral antibiotic was taken by 28% within last 3 months. MRSA colonisation occurred in 1.8% and ESBL-positive GNB 12% while none had VRE. The only independent predictor of MRSA colonisation was hospitalisation within 3 months (adjusted odds ratio 3.9, p = 0.04) and of ESBL-positive GNB colonisation was oral antibiotic within 1 month (adjusted odds ratio 1.9, p = 0.02).

Conclusions: MRSA and VRE colonisation remain a nosocomial problem while oral antibiotic use in the community has