

Emmanuel Sampo

Joseph Ki-Zerbo Universite, Burkina Faso

Title: Antibiotic susceptibility study of carried and clinics *Neisseria meningitidis* at (Kaya and Boussouma) Health Regions of North Central Burkina Faso in 2016 and 2017

Abstract:

Antibiotic resistance is one of the most pressing public health issues facing the world today. Its prevalence is higher in developing than in developed countries. The aim of this study was to reduce the emergence of *Neisseria meningitidis* with decreased susceptibility to penicillin G and resistant to chloramphenicol. Isolation of clinical and carriage strains of *N.meningitidis* was performed on specific media (TMM, GSF) after incubation at 37°C for 18 to 24 hours. Gram, biochemical and antigenic identification of isolates was performed. Following this, an antibiogram and E-Tests were performed to study the susceptibility profile of the strains at CHR Kaya. Diagnosis of clinical strains by conventional bacteriological methods showed 22 (2.6%) by Gram, 22 (2.6%) by latex, 10 (1.2%) by culture. Bacteriological identification of carriage strains showed a predominance of non-groupable (NG) serogroups (86.85%), followed by NmW (12.54%) and NmC (0.61%). NmA, NmX and NmY serogroups were absent. Clinical strains showed a profile of 100% sensitivity to Chloramphenicol, Ampicillin, Ceftriaxone and Augmentin, and 90% susceptibility versus of 10% resistance to Penicillin G and Oxacillin. Antibiotic susceptibility testing of carriage strains showed that groupable *N.meningitidis* was 92.86% chloramphenicol-susceptible, 83.33% oxacillin-susceptible versus 7.14% chloramphenicol-resistant and 16.67% oxacillin-resistant. Non-clusterable *N.meningitidis* were 92.79% chloramphenicol-susceptible, 90.14% oxacillin-susceptible versus 7.21% chloramphenicol-resistant, 9.86% oxacillin-resistant. 8 out of 7 groupable *N.meningitidis* subjected to E-Tests, 4(54.14%) had an MIC \leq 0.06 mg/L, 1(14.3%) with an MIC between (0.06-1 mg/L) and 2(28.57%) with an MIC >1mg/L. Similarly, of 41 non-groupable Nm subjected to E-Tests, 4(9.76%) had an MIC \leq 0.06 mg/L, 8(19.51%) with an MIC between (0.06-1 mg/L) and 29(70.73%) with an MIC >1mg/L. NmA reference strain gave 100% MIC \leq 0.06 mg/L. The susceptibility profile study showed the presence of *Neisseria meningitidis* with decreased susceptibility to penicillin G and high-level resistance to chloramphenicol among community and clinical strains. E-Tests confirmed this resistance by determining the MICs of groupable and non-groupable strains.

Biography

Emmanuel Sampo has completed his PhD at the age of 55 years from Joseph KI-ZERBO University I am a head of microbiology lab at Schiphra Hospital health center. I has published more than 25 papers in reputed journals and has been serving as an editorial board member of repute.