O344

Abstract (oral session)

Comparison of English methicillin-resistant and methicillin-sensitive Staphylococcus aureus bacteraemia mandatory surveillance data

M.C. Muzyamba*, J. Davies, S. Wasti, R. Guy, J.K. Abernethy, A.P. Johnson, E. Sheridan, R. Hope (London, UK)

Objectives: Comparison of bacteraemia due to meticillin-resistant and meticilin-sensitive Staphylococcus aureus (MRSA and MSSA respectively) reported by mandatory surveillance. MSSA bacteraemia surveillance was added in 2011, necessitated by the relatively low rate of decline in MSSA compared to MRSA. Methods: English mandatory surveillance data for MRSA and MSSA bacteraemia was extracted for the period January to September 2011. Episodes were categorized as hospital onset if bacteria was isolated >=3 days after admission to an acute Trust (with admission day = day 1); all other cases were classified as community onset. Results: There were 7-fold more MSSA than MRSA bacteraemia reported with 6567 and 914 cases respectively. Hospital onset was associated with 49% of MRSA and 34% of MSSA cases. Sources of bacteraemia, reported for 23% of cases, were dominated by skin/soft tissue infection and lines for both MRSA and MSSA. This was not the case previously for MRSA where, in 2007, lines were responsible for twice as many bacteraemias as skin/soft tissue infections. Major differences in proportions of sources of infection between MRSA and MSSA were only observed for pneumonia where the prevalence of this source in MRSA was double that of MSSA (18% v 9%). This relationship was retained even when cases were also broken down by hospital or community onset. Amongst patients admitted to hospital as "Emergencies" the proportions of hospital onset MRSA reports were higher than those for MSSA (87% v 78%, P<0.001); importantly this was over double the normal hospital population of emergency admissions of 36%. However, older patients dominated this admission route thus predisposing to higher infection rates. MRSA and MSSA reports increased with increasing age; however, uniquely MSSA numbers show a distinct peak in the 45-64 age group. In this age group, there was evidence of an increasing number of infections due to the major sources, skin/soft tissue infections and lines but also coincides with increases in more minor sources of bacteraemia most notably in arthritic sepsis, UTI and indwelling devices. Conclusion: MRSA and MSSA reports increased with increasing age but MSSA reports show a secondary peak in the 45-64 age group. Significant differences in proportions of MRSA and MSSA reports by source of bacteraemia, admission route and onset mode were observed. These differences may help explain the lower rate of decline for MSSA compared to MRSA reports.