eP545
ePoster Viewing
Streptococcus pneumoniae

STUDY OF CLINICAL PRESENTATION, SEROTYPE DISTRIBUTION, VACCINATION HISTORY AND OUTCOME OF PNEUMOCOCCAL BACTERAEMIA IN MILTON KEYNES, UK

A. Jarzynska[1], L. Brako[1], M. Healy[1], R. Randhawa[2], M.M. Raza[3]

[1]Medicine, Milton Keynes Hospital, Milton Keynes, United Kingdom ; [2]Respiratory Medicine, Milton Keynes Hospital, Milton Keynes, United Kingdom ; [3]Infectious Diseases, Milton Keynes Hospital, Milton Keynes, United Kingdom

Background:

Invasive pneumococcal disease (IPD) is a major cause of morbidity and mortality. In the United Kingdom (UK), vaccination is currently recommended for all infants as part of the childhood immunisation programme, for all adults over 65 years and for children and adults in certain clinical risk groups. . This includes pneumococcal polysaccharide vaccine (PPV23) and pneumococcal conjugate vaccine (PCV13).

Objectives:

To explore the epidemiology of invasive pneumococcal disease (IPD), serotype distribution, outcomes and correlation with vaccination.

Methods:

The microbiology database was interrogated to identify pneumococcal bacteraemias from May 2010 to June 2013 in our hospital. Demographic details of cases, clinical presentation including risk factors, serotype and susceptibility information were recorded. In addition outcomes and vaccination history were obtained.

Results:

74 cases of pneumococcal bacteraemia were identified (half male, 8 children, two-thirds over 50 years of age). 51 (69 %) patients were in clinical at- risk groups. However 10 cases (14%) were in asthmatics not on systemic steroids, who are currently not considered to be at risk to warrant vaccination. Majority (54, nearly 3/4 th) presented with pneumonia. Mortality was 9%. 19 different serotypes were isolated but the commonest serotype was 7F and 8 (15% each) followed by 19A and 3. 85 % of the serotypes are in PPV23 and 50% in PCV13. 4.5% isolates showed full or intermediate resistance to penicillin with only 3 % resistant to erythromycin but surprisingly there was 7% resistance to levofloxacin. Of the 74 cases 47 (64%) should have been vaccinated but of these only 17 had been vaccinated, 19 had not been vaccinated and for 11 vaccination history was not available. Of the 17 who were vaccinated 13 had infection with a vaccine-serotype – 3 of these were children and interestingly the other 10 were adults who had been vaccinated with PPV23 more than 5 years prior to the infection. Of the 47 vaccine candidates 40 had infection with a vaccine serotype, only 4 had a non-vaccine serotype (this included 3 children) and 3 unspecified serotypes.

Conclusions:

Our data suggests that although IPD continues to occur in the classical at risk groups our finding of bacteraemia in asthmatics not on systemic steroids warrants further evaluation of this category. Mortality in our cohort was less than reported elsewhere. Majority of IPD was due to vaccine serotypes. There was a high incidence of Levofloxacin resistance but low incidence of macrolide resistance. All the adult vaccinated cases who had infection with vaccine serotype had a gap of greater than 5 years from PPV23 vaccination raising the question of waning immunity and the need for booster doses in adults without indications for reinforcement immunisation.