ABSTRACT

Over the past few decades physicians and scientists have been trying to reduce the burden of childhood pneumonia still it accounts for 15% among all under 5 year old child deaths, even in 2015. *Haemophilus influenzae* is an important pathogen in causing childhood pneumonia and other respiratory disease children. Due to introduction of *Hin* conjugate vaccine the *Hib* prevalence is near to zero. Latest report evidences non-*Hib* and non-typeable (in 70-80% cases) strains becoming more invasive. This study was designed to find out if *Haemophilus influenzae* present among the pneumonic patients and remain associated with some clinico-epidemiological factors with serotype specific confirmation and if *Hin* strains differ in bacteriological, biochemical and serological characteristics. With prior consent, naso-pharyngeal swabs (NPS) were taken from 260 children under-5 years-old, of them 83% were pneumonic or partially treated for pneumonia, 56% males and 44% females who received antibiotic in ≤ 3 doses. NPS-samples transported (in Brain heart infusion-broth) to AIMST-laboratory (within 3-4 hours) were cultured in Chocolate-II Agar in presence of 5% CO_2 at 35-37°C. Colony morphology were observed (pleomorphic, small-to-medium pale greyish colonies), microscopically verified (pinkish gram negative cocobacilli) and serologically confirmed and antimicrobial susceptibility testing was performed using n=10 antibiotic-discs where oxacillin and penicillin-G were nearly 100% resistant but 3rd generation cefalexin group were 100% sensitive to *Haemophilus influenzae. Hin* isolates were confirmed by employing PCR using two specific primers and found that, all the 13 phenotypically identified are non-typeable. Clinical findings (diagnosed by pediatricians) revealed n=220, 83% pneumonia & bronchopneumonia (including partially-treated) and 17% ALRI and our lab results determined the 5% were *Hin* (n=13 of 260) in those CPn-cases that we studied from two hospitals of Kedah. Non-typeable *Hin*-strains that we found also remain similar to other reports posing an important question if we need a new vaccine, in-addition with the currently available *Hib* vaccine. This keeps our door open to conduct further clinico-epidemiological and molecular studies to clear the pathogenicity of non-typeable *Haemophilus influenzae*.