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Prevalence of type b and non-type b Haemophilus influenzae in post vaccination era

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Haemophilus influenzae (Hi/HI) is a Gram-negative opportunistic pathogenic bacterium that commonly resides as commensals within the human pharynx and may cause respiratory or invasive infections in non-immune infants and young children. Introduction of routine use of the Hib conjugate vaccine in Bangladesh since 2009, the incidence of invasive Hib disease decline to 1.85% from 35% at present. However, the aim of the project is to identify the reason behind the HI positive vaccinated cases. With the virtual elimination of H. influenzae type b (Hib), other serotypes and specially the non-typeable strains have acquired virulence traits which may emerge as significant pathogens of children. All the vaccinated and culture positive H. influenza samples like blood, cerebrospinal fluid (CSF), ear swab (ES) and nasopharyngeal swab (NS) are scrutinized from the three enrolling projects of Child Health Research Foundation, Dhaka Shishu Hospital: Invasive Bacterial Diseases (IBD), Acute Otitis Media (AOM) and Vaccination and Pediatric Microbiome (VPM). The molecular detection of 452 vaccinated HI positive strains, identified by conventional method, has shown only 9 (1.99%) typeable strains whereas most of them are non-typeable (93.14%) and the resting (22 samples) are other species of Haemophilus. The result suggests that present vaccine does not have any effect on non-typeable strains of H. influenzae and moreover molecular approach to identify the strains is more reliable for determining the specific strains and other species also.

Biography

Rezowana Mannan is currently working as a Laboratory Officer at the Department of Biochemistry and Microbiology at North South University, Bangladesh since 1 year. She has volunteered to help the department in promotional activities of the MS program. She has expertise in pathological investigations with her BSc in Health Technology (Lab) degree and has 2 years of experience at diagnostic lab.

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