



Category: Metagenomics

Detection of bacterial and viral pathogens in hospitalized children with acute respiratory illness and determination of different socio demographic factors as important cause of the disease in Odisha, India

Bhagyalaxmi Biswal¹, Bhagirathi Dwibedi¹ and S.K. Kar^{1,2}

¹Regional Medical Research Centre (ICMR), Bhubaneswar-751023, Odisha, INDIA

²IMS & SUM Hospital, Bhubaneswar, Odisha, INDIA

Presenting author: wani.biswal@gmail.com

Abstract

The paper an attempt has been made to analysis the status of acute respiratory tract infection among children in India. In the present study we aimed to present first time the detection of viruses, bacteria and mix infection of viruses and bacteria in hospitalized children with ARI and also to analyze the influence of socioeconomic status of parent in two divergent geographical settings of Odisha. Hospitalized children with ARI aged <5 were recruited from July 2014 to June 2015. Nasopharyngeal/Oropharyngial swabs were collected for detection of common respiratory viruses by reverse transcriptase chain reaction (RT-PCR). Bacteria were isolated by routine culture methods. Bivitiat analysis including chi square was used as test of significance. The analysis revealed 150 (56%) were detected with ≥ 1 bacteria, 40 (15%) with ≥ 1 virus, 22 (8.2%) with ≥ 2 bacteria and 20 (7.4%) with both bacteria and virus. Most frequently detected pathogens were *Klebsiella pneumoniae* (18.3%), *Sptrptococcus pneumoniae* (12.7%), *Parainfluenza A* (36.6%) and *Influenza- A* 18 (30%). Incidences of pathogens were detected more among children <1 year, Gender discrimination in the form of dietary neglect of the female children has also been noted mostly in case of tribal patients. The present study had identified low socioeconomic status, poor housing conditions, illiterate mothers, birth weight, tobacco smoking families and nutritional status as important determinants for ARI. Interventions to improve these modifiable risk factors can significantly reduce the ARI burden among children especially in tribal population.

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