

Disease burden of specific viral aetiology in bronchiolitis, and the correlation of it to the severity in a single unit.

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Introduction Respiratory syncytial virus (RSV) is the common cause for bronchiolitis and one of the major causes of hospitalization.

Objective Identify the disease burden of specific aetiology in bronchiolitis and the correlation of it to the severity.

Methodology An institutional based prospective descriptive cross-sectional study conducted in a single unit at teaching hospital Jaffna from November 2021 to April 2022. All the children clinically diagnosed as bronchiolitis were included. The study instrument was an interviewer administered questionnaire and further data were extracted from clinical records. Nasopharyngeal aspirates were performed at the time of diagnosis performed to

identify the RSV/ adenovirus and the severity of bronchiolitis was assessed with RADI score. Extracted data was analyzed using SPSS version 21. Pearson's correlation coefficient tests were used and p-value < 0.05 was considered statistically significant. Ethical clearance was obtained from Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results Thirty-one infants with a mean age of 5.1 ± 3.8 months were recruited. Majority were males (67.7%) and severe bronchiolitis was seen in 58.1%. Mean hospital stay was 5 days (range 2-19). Viruses were identified in 41.9% of the children, commonest being Adeno (35.5%) followed by RSV (22.6%) and both viruses were detected in 16.7% of children. About 90.2% of the children needed oxygen treatment, among them high flow oxygen was required in 9.7% of the patients and nasal prong oxygen in 80.6%. All children were discharged home without any adverse sequelae.

Correlation between severity and RSV or Adenovirus positivity was $r=-0.174(p=0.350)$, $r=-0.145$ ($p=0.437$) respectively. Correlation between oxygen need and RSV or Adenovirus positivity was $r=-0.084(p=0.653)$, $r=0.243(p=0.188)$ respectively. Correlation between duration of hospital and RSV or Adenovirus positivity was $r=0.140(p=0.452)$, $r=0.204(p=0.271)$ respectively.

Conclusion Adeno virus was the commonest aetiological agent and there was no significant correlation between virus positivity and its severity with oxygen demand or duration of hospital stay.