

RESPIRATORY SYNCYTIAL VIRUS ACUTE RESPIRATORY INFECTIONS IN YOUNG CHILDREN IN JORDAN: A PROSPECTIVE SURVEILLANCE STUDY

ZAID HADDADIN, MD¹, DANIELLE A. RANKIN, MPH, CIC^{1,2}, AHMAD YANIS, MD¹, YANAL SHAWAREB, MD¹, OLLA HAMDAN^{1,3}, MALEK SAADA, MD⁴, SARAH HILAL, MD⁴, AHMAD ALHAJAJRA, MD⁴, BASIMA MARAR, MD⁴, NAJWA KHURI-BULOS, MD⁵, NATASHA HALASA, MD, MPH¹

1. INTRODUCTION

- Worldwide, respiratory syncytial virus (RSV) is the leading cause of acute respiratory infections in young children
- Molecular diagnostics are limited in developing countries, and point-of-care rapid diagnostic tests (RDT) are needed
- We aimed to evaluate the utilization of RSV-RDT and the clinical characteristics and disease severity of RSV-positive children

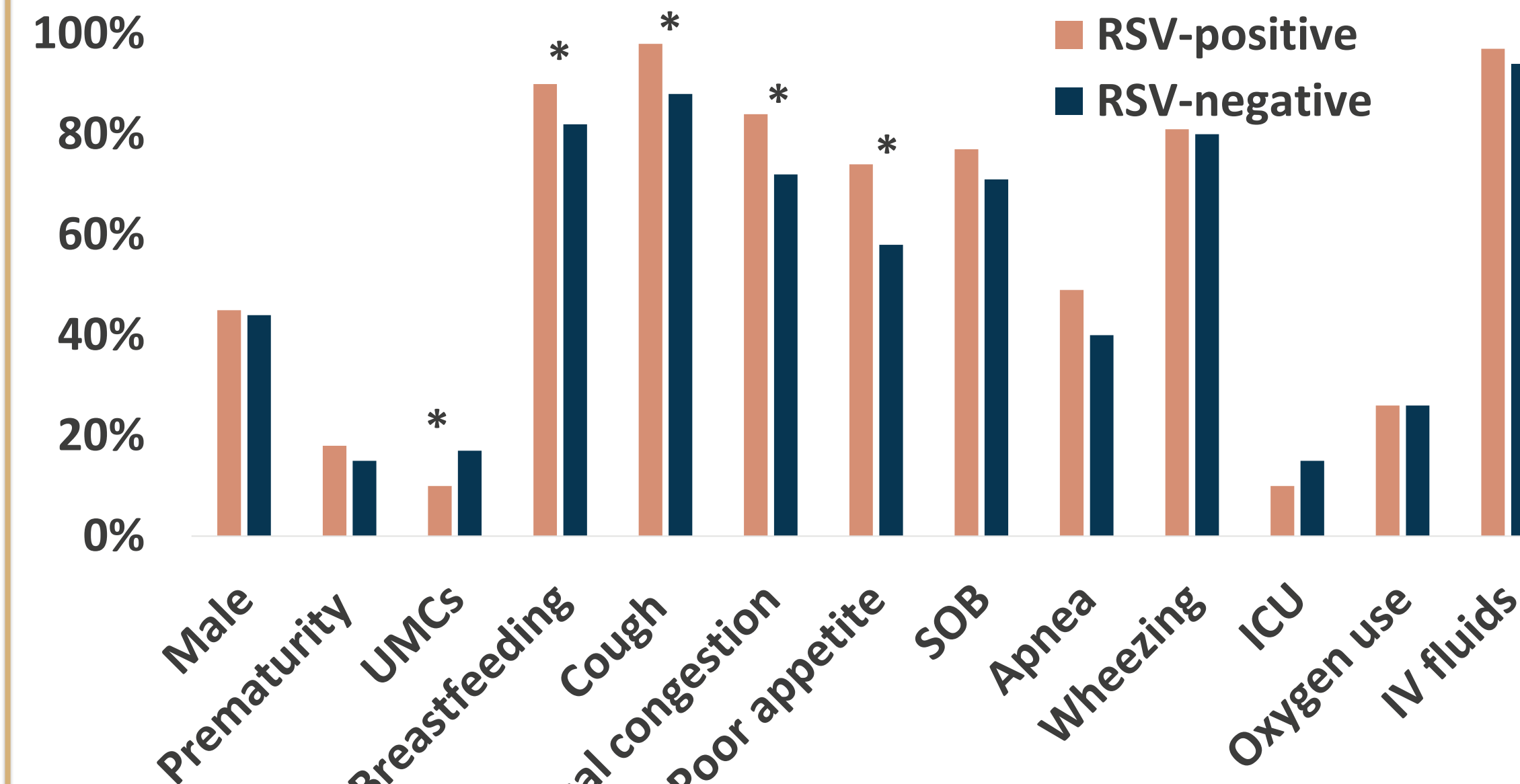
2. METHODS

- We enrolled children less than two years, with fever and/or respiratory symptoms within 72 hours of hospitalization at Al-Bashir Hospital, Amman, Jordan from January 8, 2020, to March 17, 2020
- Anterior nares swabs were collected and tested on site via Sofia-2 RSV fluorescent immunoassay
- Demographic and clinical characteristics were collected through parental interviews and medical chart abstraction. A severity score was used to assess disease severity at admission. The data included in this abstract/poster are preliminary

3. RESULTS

- Of 532 enrolled children, 458 (86%) subjects had nasal swabs tested by RDT
- Overall, 276 (60%) were RSV-positive, of which 96% received antibiotics during hospitalization
- Most RSV illnesses were mild on severity score (72%), and 26% received oxygen, 10% were admitted to ICU, and 1% were intubated

Figure 1. Demographic and Clinical Characteristics of RSV-positive vs. RSV-negative Children



UMCs: underlying medical conditions; SOB: shortness of breath; ICU: intensive care unit; IV: intravenous
* p<0.05, Pearson's Chi-Squared test was used to compare proportions between categorical data presented in percentages

Table 1. Clinical Characteristic of RSV-positive vs. RSV-negative Children

	RSV-positive (n=276)	RSV-negative (n=182)
Age, months	4.3±3.9*	5.5±5.4
Illness duration, days	3.6±2	3.8±2.3
Maximum RR	47±15.7	49.3±15.1
Minimum O2 Saturation	94.6±5.3	94.2±9.2
Severity score		
Mild	165 (72%)	113 (74%)
Moderate	54 (23%)	38 (25%)
Severe	12 (5%)	2 (1%)
Oxygen use, days	11.4±12.4	14.3±13.8
ICU admission, days	3.2±2.1	7.1±3.1

RR: respiratory rate; ICU: intensive care unit
Continuous data presented as mean ± standard deviation, categorical data presented in percentages
* p<0.05, T-test was used to compare means between continuous data, Pearson's Chi-Squared test was used to compare proportions between categorical data

4. CONCLUSIONS

- Overall, 60% of hospitalized children less than two years in Amman, Jordan were RSV-positive via Sofia-2 RSV fluorescent immunoassay
- Over 2/3 of RSV-positive children had a mild disease, and 96% received Abx
- Further comparison of the RSV-RDT to PCR is needed, to assess its utility and further validate these findings, which may help in decreasing unwarranted Abx use, and potentially defer unneeded hospitalizations for mild RSV illnesses

CONTACT INFORMATION AND AFFILIATIONS

Zaid Haddadin, MD. Postdoctoral Research Fellow
Email: zaid.haddadin@vumc.org

Affiliations:

- Department of Pediatrics, Vanderbilt University Medical Center, Nashville, Tennessee, USA
- Vanderbilt Epidemiology PhD Program, Vanderbilt University School of Medicine, Nashville, Tennessee, USA
- The School of Pharmacy, University of Jordan, Amman, Jordan
- Department of Pediatrics, Al Bashir Hospital, Amman, Jordan
- Department of Pediatrics, University of Jordan, Amman, Jordan

Funding: Investigator Initiated Grant supported by Quidel Corporation; National Institutes of Health and the CTSA award UL1TR000445 from the National Center for Advancing Translational Sciences

