IMMUNIZATION WITH NIRSEVIMAB: IMPACT ON RSV SEASON IN A PEDIATRIC HOSPITAL

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BACKGROUND AND IMPORTANCE

- ✓ **Respiratory syncytial virus (RSV)** is the leading cause of acute lower respiratory tract infections in children, having a considerable impact on healthcare system and later comorbidities.
- ✓ **Nirsevimab** is a recently approved monoclonal antibody that provides passive immunity against RSV infection.

AIM AND OBJECTIVES

Describe the **characteristics of patients** admitted for **RSV bronchiolitis** during the first immunization campaign with nirsevimab (conducted from October/2023 to March/2024).

MATERIAL AND METHODS

Retrospective and **observational** study

- ➢ Patients admitted for RSV infection who were eligible for nirsevimab

Patients eligible for nirsevimab included:
- Infants under 6 months at the start,
- born during the campaign
- high-risk patients aged 6 months to 2 years

Data sources
Electronic Health Record (HCIS)®, Modulab®

Collected variables
Demographics (age, sex, high-risk factors)
Inmunization with nirsevimab
Type of respiratory support
Length of stay and of oxygen therapy
Suspected bacterial superinfection
Admission in Pediatric Intensive Care Unit (PICU)

Statistical analysis
Median and frequency distribution (%)

RESULTS

PATIENTS < 6 MONTHS OLD

Hospital admissions due to RSV infection:

2022-2023 RSV season: 172 patients

2023-2024 RSV season: **57 patients** → **67% HOSPITAL ADMISSIONS**

19% inmunized patients with nirsevimab

81% non inmunized patients

	Immunized Patients (N=11)	Non-Immunized Patients (N=46)
Maximum respiratory support required		
Nasal cannula	22%	58%
High-flow nasal cannula	33%	23%
CPAP	22%	10%
BIPAP	11%	6%
Median (range) days with respiratory support	4 (1-10)	4 (0-7)
Admission in PICU (N=17)	76%	24%
Median (range) length of stay	5 (3-7)	5 (2-12)

PATIENTS 6 MONTHS – 2 YEARS OLD

Hospital admissions due to RSV infection:

2023-2024 RSV season: **84 patients**

99% non inmunized patients
(7% were elegible for nirsevimab)

	Non-Immunized Patients (N=83)
Maximum respiratory support required	
Nasal cannula	2%
High-flow nasal cannula	77%
BIPAP	2%
Mechanical ventilation	1%
Median (range) days with respiratory support	4 (0-28)
Admission in PICU (N=15)	100%
Median (range) length of stay	4 (1-37)

CONCLUSION AND RELEVANCE

Our study shows a **decrease in admissions among immunized patients**; however, it does **not seem to modify the course of the disease** compared to non-immunized patients in terms of oxygen therapy needs and length of hospital stay, although there is a tendency to shorten them.

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