



Characteristics of Patients hospitalized for Severe Acute Respiratory Infections In two sites in Tunisia, During the Season 2017-2018

Jalila BEN KHELIL¹; Mounir BEN JEMAA²; Rihab YAZIDI³; Aicha BOUKTHIR³; Amine SLIM⁴; Afif BEN SALAH^{3,5}

1 : Department of intensive care A. Mami hospital, Ariana; 2 Department of infectious disease, Hedi Chaker hospital Sfax; 3 :Department of épidemiology Pasteur institute, Tunis; 4 : NIC Charles Nicolle Hospital, Tunis, 5 : Department of Family and Community Medicine , College of Medicine and Medical Sciences, Arabian Gulf University, Manama, Bahrain

Site presentation

Syndromic surveillance of severe acute respiratory infections (SARI) is important to assess seriousness of disease as recommended by WHO for influenza. Tunisia, a North African country, has installed a SARI surveillance system since 2014 based on six university hospital departments.

Methods

According to the GIHSN protocol, Nasopharyngeal and pharyngeal swabs were taken from Non-institutionalized patients responding to case definition of influenza like-illness (ILI) and their symptoms appear within 7 days before being hospitalized. Study questionnaires were filled out with the information obtained from admission enrolment lists and hospital registries and, after informed consent, through face to face interviews with the patients, through the review of clinical records and through consultations with the patients' physicians and nurses. For detection of Influenza virus subtype or lineage, reverse transcription polymerase chain reaction (RT-PCR) was used.

The aim of this analysis was to describe the characteristics and outcome of patients among acute admissions with SARI during the 2017-2018 season in selected SARI sites in Tunisia.

Results

During the season 2017-2018, 78 SARI cases were enrolled from tow sites implicated in this study. There was no difference in terms of gender (females, 50% vs. 50%).

The influenza positivity rate was 33.3 % (n= 26).

Patients had a high disease burden (Figure 1) and 74 (95%) reported that never hospitalization within the previous year. The rate of influenza vaccine among those patients was very low with only 5%.

The number and the distribution of different strains are described in Figure 2, which shows the predominance of influenza A H1N1 and especially in the age group from 65 to 80 years (Figure 3).

The characteristics and outcomes of patients are described in Table 1.

One third of patients were admitted to the intensive care unit, while one fourth required at list one mode of mechanical ventilation and 9% of them died in the hospital in this season.

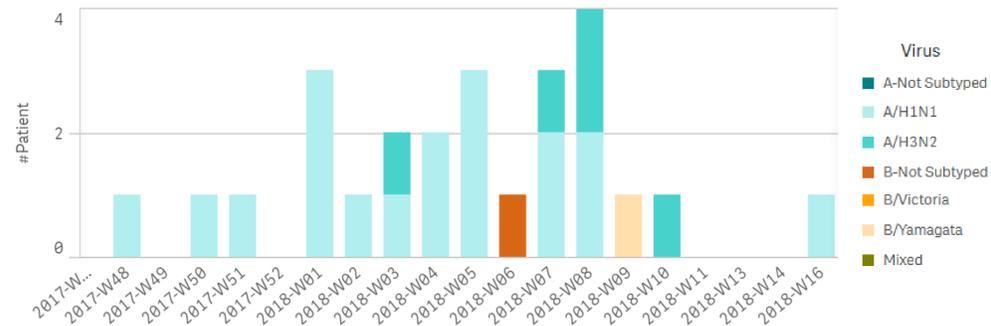


Figure 2: Virus distribution per time during season 2017-2018

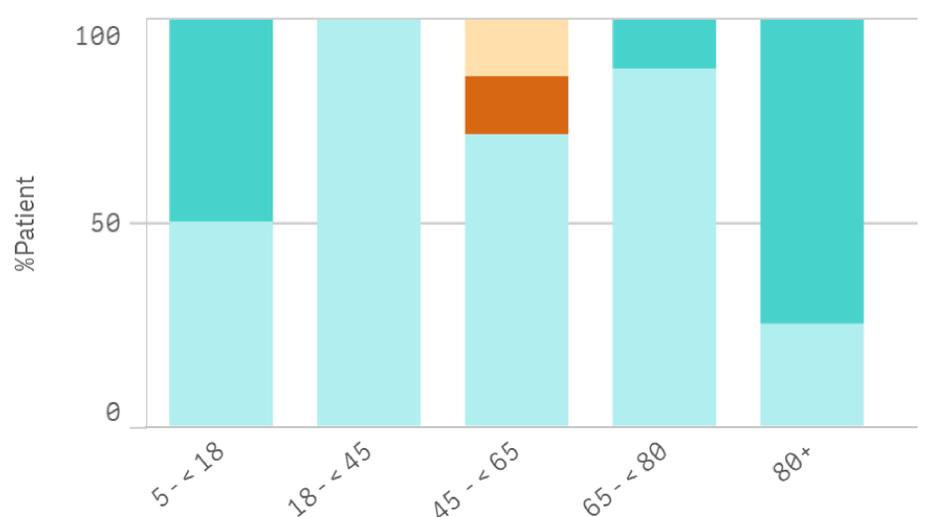


Figure 3: Virus distribution per age groups

Table1: Characteristics and outcomes of patients

	Number of Patients			
	5 - < 18 n (%)	18 - < 65 n (%)	65 - < 80 n (%)	Total n (%)
Gender				
male	2 (2%)	25 (32%)	13 (17%)	39 (50%)
female	2 (2%)	15 (19%)	21 (27%)	39 (50%)
Virus Distribution by Age Groups				
A(H1N1)pdm09	1 (1%)	12 (15%)	7 (9%)	20 (26%)
A(H3N2)	1 (1%)	0 (0%)	4 (5%)	5 (6%)
B/Yamagata-lineage	0 (0%)	1 (1%)	0 (0%)	1 (1%)
Vaccination Status				
Flu vaccine 2017-18	1 (1%)	0 (0%)	3 (4%)	4 (5%)
Flu vaccine 2016-17	0 (0%)	1 (1%)	1 (1%)	2 (2%)
Flu vaccine 2015-16	0 (0%)	0 (0%)	1 (1%)	1 (1%)
Smoking Habit				
Current smoker	0	9 (11%)	6 (8%)	15 (19%)
Ex-smoker	0	1 (1%)	4 (5%)	5 (6%)
Never	4 (5%)	31 (40%)	23 (29%)	69 (88%)
Outcome				
Ventilation	0 (0%)	15 (19%)	9 (11%)	24 (30%)
Death	0 (0%)	4 (5%)	3 (4%)	7 (9%)
ICU admission	0 (0%)	18 (23%)	6 (8%)	24 (30%)

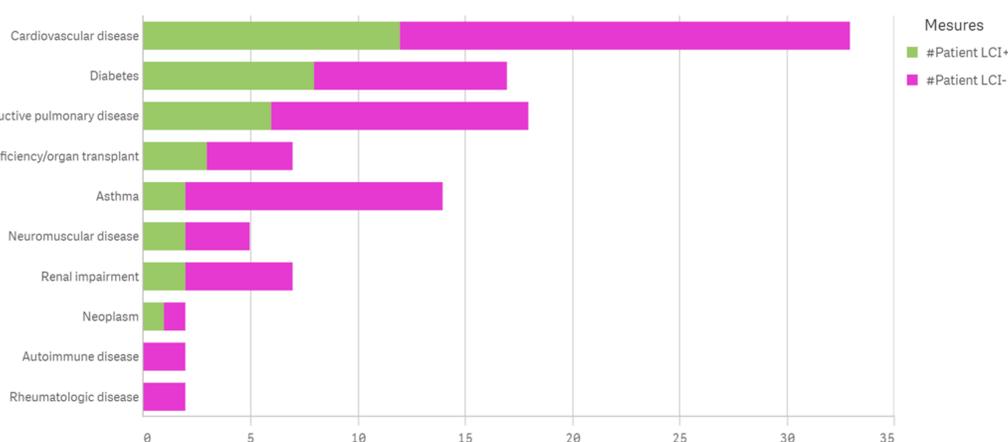


Figure 1: Patients distribution by chronic diseases

Key aspects & challenges

This season is characterized by the predominance of influenza A H1N1 and the severity of the clinical pictures with a mortality rate (9%) that is considered a little high which allows us to consider it as a severe season.