Impact on Admittance of Children on Emergency Department of a Regional Hospital From North of Spain During the COVID-19 State of Alarm

To the Editors:

On January 30, 2020, the Severe acute respiratory syndrome coronavirus 2 outbreak was declared a public health emergency of international importance, and on March 11, 2020, the World Health Organization declared the pandemic situation by COVID-19. On March 14, the state of alarm was declared in Spain (Real Decreto 463/2020). Extraordinary measures to limit the movement of people and house confinement were established. Exceptions to this situation were also contemplated, including attendance at health centers. At the time of writing this project, according to official data provided by the Government of Spain, the numbers of confirmed cases reached 245,268 (Principado de Asturias, 2435 cases, 12 of them in children younger than 14 years).

We would like to present data from a sanitary area of Asturias, a region in the North of Spain with a population of 1,022,000. The Vital Álvarez-Buylla Hospital corresponds to the Sanitary Area VII of Asturias (population, 62,000). On March 11, the closure of all school activities was established. During the state of alarm (March 15, 2020–June 20, 2020), the pediatric population (<14 years) admitted on emergency department was 150 patients, compared with 627 admitted in the same period of 2019.

The distribution of the assistance by periods of the state of alarm and the same period of the year 2019 is shown in Figure 1. During the first period, we have analyzed and compared the clinical and epidemiological characteristics of all the patients in both periods (Table 1).

As in previously published studies,^{1–3} we observed a large decrease in attendance compared with the previous year, with less than a quarter of patients attended at the emergency service. We have observed a similar age (2019 months vs 2020 months) and sex (2019: 76 male/66 female vs 2020: 18 male/12 female) distribution. Likewise, the reasons for attendance, diagnosis at discharge, and admission rate were similar. The greatest decrease in incidence was

FIGURE 1. Patients admitted on the Emergency Department during the state of alarm.

observed in infectious diseases and their complications. A higher use of complementary tests has been verified. This is due to the protocols established during the state of alarm, which conditioned the performance of more chest radiographs, and the greater severity in the patients.

This phenomenon could have been caused by multiple reasons. The fear of the families to contagion of COVID-19 could condition that the emergency departments are not used for nonserious processes. On the other hand, from the primary care centers, it has been established a telephone assistance network that proved to be effective. Finally, the confinement has supposed a lower virus circulation among the population. In Spain, a similar phenomenon had been verified during a daycare strike in 2003.⁴

Despite the situation described, the search for health care by families with children with serious or urgent illnesses was not limited. Likewise, those patients with serious or urgent illnesses were treated at the

appropriate time, with no delay in diagnosis or treatment.

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TABLE 1. Clinical Characteristics of the Patients During Period 1 (March 15–March 29)

	Year 2020 (March 15–March 29)	Year 2019 (March 15–March 29)	Statistical Significance, <i>P</i>
n	30	142	
Age, median (IQR), y	29 (13–68)	39 (21–74)	
Age group, n (%)			
<1 y	6 (20%)	23 (16.2%)	
1–2 y	7 (23.3%)	18 (12.7%)	
2–3 y	6 (20%)	22 (15.5%)	
3–6 y	4 (13.3%)	42 (29.6%)	
6–14 y	7 (23.3%)	37 (26.1%)	
Male sex, n (%)	18 (60%)	76 (53.5%)	
Duration of symptoms, median (IQR), h	18 (6–44)	24 (10–48)	
Diagnosis, n (%)			
Upper respiratory infections	8 (26.7%)	24 (16.9%)	
Skin lesions	4 (13.3%)	8 (5.6%)	
Abdominal pain	4 (13.3%)	11 (7.7%)	
Febrile syndrome	3 (10%)	22 (15.5%)	
Traumatic head injuries	2 (6.7%)	2 (2.1%)	
Pneumonia	2 (6.7%)	2 (1.4%)	
Acute gastroenteritis	2 (6.7%)	33 (23.2%)	
Asthma/bronchiolitis	2 (6.7%)	11 (7.7%)	
Urinary tract infections	1 (3.3%)	1 (0.7%)	
Streptococcal tonsillitis/otitis media	1 (3.3%)	19 (13.4%)	
Others	1 (3.3%)	8 (5.6%)	
COVID-19 in health records, n (%)			
Suspected COVID-19 infection	12 (40%)		
Confirmed cases COVID-19 (positive PCR)	0		
Treatment, n (%)			
Antibiotic prescription	3 (10%)	23 (16.4%)	
Oral corticosteroids	0	9 (6.4%)	
Complementary tests, n (%)	17 (56.6%)	42 (29.6%)	0.005
Chest x-ray	5 (29.4%)	6 (6.5%)	0.013
Blood analysis	6 (35.3%)	23 (24.5%)	
Urine analysis	4 (23.5%)	8 (8.6%)	
Ultrasound	3 (17.6%)	6 (6.5%)	
Oropharyngeal or nasopharyngeal swabs for respiratory virus testing	7 (41.2%)	5 (5.4%)	<0.0001
Discharge/follow-up, n (%)			
Hospital admission	7 (23.3%)	26 (18.3%)	
Return within 15 d	0	10 (15.4%)	
Primary care follow-up	11 (36.7%)	53 (37.6%)	
Telephone follow-up	10 (90%)	1 (1.88%)	<0.0001

IQR, interquartile range; PCR, polymerase chain reaction.

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