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Preliminary epidemiological analysis on children and adolescents with novel coronavirus disease (2019-nCoV) in a central area of Calabria Region

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Sir,

In December 2019, a novel coronavirus (2019-nCoV) was detected in three patients with pneumonia connected to the cluster of acute respiratory illness cases from Wuhan, China (1). By the end of February 2020, several countries experienced sustained local transmission, including Europe. On 30 January 2020, the World Health Organization (WHO) declared that the outbreak of 2019-nCoV constitutes a public health emergency of international concern and on 11 February, 2020 the infectious disease was officially named "Corona Virus Disease 2019" (COVID-19) (2).

Currently available information indicates that children are infected like adults, however they experience mild clinical manifestations. About 2.4% of the total reported cases in China were children and adolescents under 19 years of age. A very small proportion of them developed a severe (2.5%) or critical disease (0.2%) (3).

The epidemiologic characteristics of suspected 2019-nCoV cases in children are limited. The defined criteria used for suspecting a 2019-nCoV case are: the presence of an epidemiological history (travel to or residence in a location reporting community transmission of COVID-19 disease during the 14 days prior to symptom onset or having been in contact with a confirmed or probable COVID-19 patient) and an acute respiratory illness (e.g., fever, cough, sore throat, runny nose, flu-like symptoms, shortness of breath). Some children may present diarrhea (8.8%) and/or vomiting (6.4%) (4).

In suspected cases, a nasal and pharyngeal swab specimens positive for 2019-nCoV nucleic acid using real-time reverse-transcriptase polymerase-chain-reaction (RT-PCR) assay is requested to confirm COVID-19 infection.

From 1 March 2020 to 9 April 9 2020, a total of 173 children (86 males and 87 females) meet the screening criteria of suspected 2019-nCoV infection, in three provinces of Calabria Region (Catanzaro, Vibo Valentia and Crotone). All the tests on nasal and pharyngeal swab specimens using a RT-PCR assay were performed in the Calabria Regional Reference Laboratory of Microbiology.

Ten children (5.8%) were confirmed to have COVID-19 infection. Among those patients, 60% were females, but the difference compared to males was not statistically significant (P: 0,7).

These data are in accordance with a recent report of Dong et al. (5).

The median age of the infected children and adolescents was 11.9 years (range 2.5-17.9 years), with a greater prevalence of the age group between 10-15 years (40%), in accordance with national italian data (6). The three enrolled provinces had the similar number of positive cases. Demographic data of our subjects are summarized in Table 1.

In conclusions, the most important finding to come from the present preliminary report is the confirmed evidence that children and adolescents are susceptible to SARS-CoV-2 infection, but frequently do not have notable disease, raising the possibility that

Table 1. Main demographic and clinical data of children and adolescents

Main data	Demographic data of children and adolescents and city of residence	Total number of suspected cases (n. 173)	Children and adolescents COVID-19 positive (n. 10)	P value
Sex	Male n. (%)	86 (49.7%)	4 (40%)	0,7
	Female n. (%)	87 (50.3%)	6 (60%)	
Age	Median, yrs (range)	8,8 (1 months -18 yrs)	11,9 (2.5 yrs-18 yrs)	
	0-5 yrs - n. (%)	48 (27.7%)	1 (10%)	0,39
	6-10 yrs - n. (%)	47 (27.3%)	2 (20%)	
	11-15 yrs - n. (%)	48 (27.7%)	4 (40%)	
	16-18 yrs - n. (%)	30 (17.3%)	3 (30%)	
Province	Catanzaro - n. (%)	86 (49.7%)	4 (40%)	0,67
	Crotone - n. (%)	34 (19.6%)	3 (30%)	
	Vibo Valentia-n. (%)	53 (30.7%)	3 (30%)	

they could be facilitators of viral transmission. The risk of transmission is thought to be greatest when patients are symptomatic since viral shedding is greatest at the time of symptom onset and declines over the course of several days to weeks. Therefore, infection control to limit transmission is an essential component of care in subjects with suspected or documented COVID-19 to protect vulnerable populations. Early isolation of identified cases and quarantine of suspected cases and close contacts is a key measure to minimise transmission of COVID-19 in the community. However, as COVID-19 presents as mild illness in the majority of cases, early identification and isolation of cases may be difficult to achieve. Further efforts should be made to collect follow- up data on the outcome of these patients.

Conflict of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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