

Correspondence: early identification of COVID-19 positive outpatient children, is it useful?

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“For the physical and mental health of the children and their families and to allow Primary Care Pediatricians to fulfill their duty, it is important to look for less invasive tools to perform the proper diagnosis.”

Keywords

Primary Care Pediatrician, COVID-19, nasopharyngeal swab, risk score.

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Dear Editor,

Every day, more than once a day, Primary Care Pediatricians (PCPs) have to face parents' question, "...are my child's symptoms the COVID-19 ones?" The answer is very hard, and sometimes really impossible.

Some school organizations send home children with common cold, or allergic cough, or mild respiratory symptoms with no fever. The differential diagnosis is not easy neither for the PCP. In fact, according to the official Italian report "*Rapporto ISS COVID-19 n. 58/2020*" of August 21st 2020 (issued by the Italian National Institute of Health), all children with COVID-19 common symptoms and/or corporal temperature higher than 37.5°C are considered as suspected cases, and have to be tested with a nasopharyngeal swab [1].

Economic consequences on social drivers, such as costs, unemployment, industrial productivity, and investments, are dramatic, as well as the impact on the psychic development of children. All the proceedings to reduce the COVID-19 pandemic, such as school closure and the different rules to obtain social care and PCPs access, are also a real harm to teenagers and children's health [2]. School closure and social isolation have a notable effect on young people's mental health [3].

However, keeping PCPs safe should be a priority, as stated in the Royal College of Paediatrics and Child Health (RCPCH) recommendations [4]. Also, recommendations by the Federal Office of Public Health (FOPH) of the Swiss Confederation state that if children have not been in contact with someone with COVID-19 symptoms, but have runny nose, sore throat, light coughing, with good general conditions, they can continue to attend school. If the children have fever but are in good general conditions, they must stay at home, and the parents must call the doctor after three days, or they can go back to school 24 hours after the fever has gone away [5]. Anyway, it should be taken into consideration that fever represents a very common symptom of bacterial and viral infection in pediatric age, and it has an extremely nonspecific value.

During the lockdown period, we observed that the number of cases with COVID-19-like symptoms was greater in areas with high infection rates than in areas with medium/low rates. This finding confirms the considerable importance to know the epidemiology of COVID-19 in a given population before any data interpretation and strategic decision. It was important to have an

accurate medical history. This risk was not affected by gender, but increased with increasing age [6].

In our clinical experience, we observed that children living in families with confirmed COVID-19 cases had a higher prevalence of diarrhea and fatigue, and a lower prevalence of sore throat/earache and abnormal skin signs than children with no family cases [6]. As expected, fever and cough are common among children living in families with suspected COVID-19 cases. A possible explanation is that they are more common in the early phase of COVID-19 infection, while diarrhea and fatigue prevail later on.

Given the great importance to early identify COVID-19 positive outpatient children, and to help PCPs in clinical practice, we suggest that fatigue, cough and diarrhea could be suggestive of suspected cases. If they are simultaneously present, they indicate the importance of addressing children to a proper diagnosis (nasopharyngeal swab). Fever alone is not a "COVID-19 wake-up call" because of its nonspecific value in children. The risk is lower in children with either sore throat/earache or skin symptoms, but the medical history is still important (home area and COVID-19 cases in the family). Our analysis has been performed on the basis of observational detection of symptoms, and is intended to be a first approach to the subject [6]; further research could be performed to statistically validate a risk score in order to provide it with a diagnostic value.

As we reported before, the official Italian report "*Rapporto ISS COVID-19 n. 58/2020*" suggests that every child presenting at least one of the typical COVID-19 symptoms, even if mild ones, should have the nasopharyngeal swab performed. However, this process is painful for both children and their family, and also creates stress with PCPs. Therefore, for the physical and mental health of the children and their families and to allow PCPs to fulfill their duty, it is important to look for less invasive tools to perform the proper diagnosis [7]. In this context, saliva sampling could be a valid alternative to nasopharyngeal swab in pediatric age, since it is totally unpainful, more simple and more rapid in the diagnostic process, and it has been demonstrated to be as accurate as a nasopharyngeal swab in results [8]. This should also allow children to go to school and to go on with their daily life.

Declaration of interest

The Authors declare that there is no conflict of interest.

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