

LETTER TO THE EDITOR

COVID-19 in pediatric oncology from French pediatric oncology and hematology centers: High risk of severe forms?

To the Editor:

The rapid spread of the coronavirus disease 2019 (COVID-19) pandemic has rapidly led to the establishment of social distancing measures on a global scale to try to protect the general population as well as patients.¹ An unprecedented wave of dedicated preclinical and clinical research projects has also been launched.²

While children seem to be less at risk than adults, infants and younger children ≤ 5 years are more likely to develop a severe form of COVID-19 compared with children ≥ 6 years.³ The specific risks for patients in pediatric oncology patients are not well known. However, due to treatment-induced immune depression, the risks may be higher in this population, and recommendations have been proposed.⁴ However, no alarming reports have emerged from countries that have been facing the COVID-19 epidemic so far, such as China, Spain, or Italy.⁵ A recent review reported two severe pediatric cases of COVID-19 in China but these children were not treated for malignancies.⁶

France is currently fighting the pandemic and has nearly 140 000 cases of COVID-19 and 15 000 deaths.⁷ The French society of pediatric oncology (*Société Française de lutte contre les cancers et leucémies de l'Enfant et de l'adolescent* [SFCE]) is initiating a prospective national survey among its 30 centers to learn more about the impact of COVID-19 in pediatric oncology patients. Up to April 16, 2020, an initial report from the French pediatric oncology centers has identified 33 polymerase chain reaction (PCR) and/or computed tomography (CT) scan confirmed cases of COVID-19 currently being managed. We want to focus here on five of these 33 children who are in intensive care units (ICU). Three patients (two boys aged 4 and 13 years, and a 19-year-old girl) were diagnosed with relapsed B-cell acute lymphoblastic leukemia and were immunocompromised by the chemotherapeutic or immunosuppressive drugs they received. Among them, the 13-year-old boy recently received an allogeneic hematopoietic stem cell transplantation (HSCT). The fourth patient is a 5-year-old girl and also recently underwent an allogeneic HSCT for a sickle cell disease. The last patient is a 7-year-old girl diagnosed with a progressive high-grade glioma with an altered general condition. All patients have been transferred to ICU for a rapid respiratory degradation, mostly after a first phase with mild symptoms. At the time of writing, there was no death to report. One patient has recovered and was discharged from ICU. It is too early to give definitive outcomes for these patients. We will be able to gain more insight of the impact of COVID-19 in pediatric oncology as COVID-19 continues to spread and more data are collected.

While the first data collected by the SFCE are preliminary, we thought they should be quickly shared with the pediatric oncology community. Our first data are consistent with a previous report in which, among 171 children diagnosed with COVID-19, one patient with leukemia required intensive care support and invasive mechanical ventilation.⁸ Although COVID-19 in pediatric oncology patients appears to be rare, all stakeholders from physicians to patients and their families should be aware of a higher risk of severe forms compared to immunocompetent children.

AUTHOR CONTRIBUTIONS

Nicolas André, Jérémie Rouger-Gaudichon, and Virginie Gandemer conceived the work and wrote the manuscript.

Sophie Pertuisel, Benoît Brethon, Eric Thebault, and Aurélie Phulpin shared data about the patients described, helped to improve, and approved the manuscript.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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