



DOI: <https://doi.org/10.5554/22562087.e974>

# Associated risks with the use of surgical face mask in children during the COVID-19 pandemic

## *Riesgos asociados al uso de la mascarilla quirúrgica en niños durante la pandemia por COVID-19*

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### How to cite this article:

Trujillo Mejía A, Quintero Toro JC. Associated risks with the use of surgical face mask in children during the COVID-19 pandemic. Colombian Journal of Anesthesiology. 2021;49:e974.

The SARS-CoV-2 virus affects all age groups. According to the Colombian National Institute of Health, by November 5, 2020, nearly 83,698 children under 18 years of age had been infected by the virus in Colombia. The probability of viral transmission in this age group is similar to that found in adults, even in asymptomatic individuals (1,2). The World Health Organization has advocated social distancing, hand washing and the use of face masks as effective measures to mitigate contagion, and healthcare institutions have implemented measures for the protection of patients and healthcare workers in order to cope with this “new normal” at work (3-5). In accordance with national and international recommendations, our institution has implemented a new preoperative care protocol during the COVID-19 pandemic. Recommendations include the use of face mask in patients over 2 years of age during the process of admission to surgery. However, we would like to flag the risk associated with this practice. An 11-year-old male patient, assessed through telemedicine by the anesthesiologist and found to have no comorbidities, was premedicated in accordance with the institutional protocol based on the oral administration of 1 mg of lorazepam before surgery. After taking the medication, the patient used the face mask as a protective measure. Later, as he felt drowsy, he lay supine while he waited, in the company of his guardian, for his turn in surgery. A few minutes later, the plastic surgeon came to assess the patient before the surgery and finding him to be cyanotic, he activated the Code Blue.

The patient responded immediately to physical stimulation and oxygen administration through a face mask, with no sequelae.

The SARS-CoV-2 pandemic has affected pediatric surgical services. The biologic risk, plus overcrowding of inpatient services and shortages of medications and supplies, have required the implementation of preoperative screening and modifications in conventional pediatric anesthesia techniques (6,7). However, some reports have shown evidence of unforeseen complications with some techniques and devices, such as the use of breathing filters and aerosol boxes in the pediatric population (8,9).

The coronavirus disease has highlighted the importance of preoperative anxiolysis in children to avoid respiratory aerosol development due to agitation or crying when they are separated from their parents and during anesthesia induction. However, what happened to our patient shows how clinical surveillance is compromised by the face mask during the preoperative period, in particular after the administration of sedatives and anxiolytics. This requires the implementation of improved surveillance techniques, especially in preparation for surgery, as well as regular reviews of the efficacy and safety of the new care protocols. For this reason, we suggest continuous pulse-oximetry surveillance in all patients premedicated with anxiolytics from the time of admission to the operating room, as a safety measure in the context of pediatric care. Additionally, we suggest the adoption and tracking of any new recommendations that change our usual way of doing things during this COVID-19 pandemic.

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