

2021

## Clinical presentations associated with SARS-CoV-2 in a Covid pediatric intensive care unit of a national hospital in Lima

Edgar Coila Paricahua

*Hospital Nacional Edgardo Rebagliati Martins, Lima-Perú, edcopa@gmail.com*

Ricardo Rodriguez Portilla

Liliana Cieza Yamunaqué

Pedro Baique Sánchez

Claudia Guerra Ríos

Follow this and additional works at: <https://inicib.urp.edu.pe/rfmh>



Part of the [Health Information Technology Commons](#), and the [Public Health Commons](#)

---

### Recommended Citation

Coila Paricahua, Edgar; Rodriguez Portilla, Ricardo; Cieza Yamunaqué, Liliana; Baique Sánchez, Pedro; and Guerra Ríos, Claudia (2021) "Clinical presentations associated with SARS-CoV-2 in a Covid pediatric intensive care unit of a national hospital in Lima," *Revista de la Facultad de Medicina Humana*: Vol. 21: Iss. 1, Article 31.

Available at: <https://inicib.urp.edu.pe/rfmh/vol21/iss1/31>

This Letter to the Editor is brought to you for free and open access by INICIB-URP. It has been accepted for inclusion in *Revista de la Facultad de Medicina Humana* by an authorized editor of INICIB-URP.



# CLINICAL PRESENTATIONS ASSOCIATED WITH SARS-COV-2 IN A COVID PEDIATRIC INTENSIVE CARE UNIT OF A NATIONAL HOSPITAL IN LIMA

PRESENTACIONES CLÍNICAS ASOCIADAS AL SARS-COV-2 EN UNA UNIDAD DE CUIDADOS INTENSIVOS PEDIÁTRICOS COVID DE UN HOSPITAL NACIONAL DEL PERÚ

Edgar Coila-Paricahua<sup>1</sup>, Ricardo Rodríguez-Portilla<sup>1</sup>, Liliana Cieza-Yamunaqué<sup>1</sup>, Pedro Baique-Sánchez<sup>1</sup>, Claudia Guerra-Ríos<sup>1</sup>

## Mr. Editor

Coronavirus disease 2019 (COVID-19) affects more adults than children(1). Then the multisystem inflammatory syndrome in children (MIS-C) associated with SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2) was described, with an incidence peak of around 4 weeks after the peak of contagion. Therefore, it is postulated that this is a postinfectious entity, which is characterized by affecting multiple organs and systems (2,3). In response to this new necessity, the Pediatric Intensive Care Unit (PICU) in Hospital Nacional Edgardo Rebagliati Martins provided a separate two-bed room for the care of children with SARS-CoV-2 infection to reduce the risk of nosocomial infections. In order to describe the clinical presentations associated with SARS-CoV-2 infection, it was conducted a retrospective evaluation of the electronic medical records of patients admitted to the COVID PICU from April to October 2020. Data were collected, such as serologic and molecular test for SARS-CoV-2, age, sex, nutritional status, admission priority (4), length of stay in PICU, some comorbidity, and death. A three-group classification was carried out based on the clinical diagnosis and test results for SARS-CoV-2. COVID-19 group (acute respiratory distress syndrome (ARDS), record of contact with COVID-19 cases and testing for SARS-CoV-2); MIS-C group, according to WHO criteria (5); and Non-COVID-19/Non-MIS-C group, patients admitted for a condition unrelated to SARS-CoV-2, but on suspicion of the disease, they had to go to the separate area. This last group has been divided into two subgroups: SARS-CoV-2(+) with at least one positive SARS-CoV-2 test, and SARS-CoV-2(-) subgroup.

The first patient was seen on April 20th and the last patient was released on October 23rd, 2020. Thirty-six patients were seen (Table 1), three patients (8.3%) had COVID-19, with acute respiratory affection and two of them contracted the disease during their hospital stay in a non-COVID area. Thirteen patients (36.1%) had MIS-C, with hemodynamic impairment, and as reported in other studies, all had negative molecular test and positive serologic test, mainly IgG. One of the patients with a final diagnosis of MIS-C, who was the first seen, was admitted with a diagnosis of COVID-19 at the end of April, when the definition of MIS-C had not been disseminated, so the diagnosis was made after reviewing the clinical record. In Non-COVID-19/Non-MIS-C group (55.5%), in the SARS-CoV-2(+) subgroup (38.9%), the main problem of care was not related to the SARS-CoV-2 infection, but they were admitted to the COVID PICU to take precautionary measures against the possibility of spreading the infection. They were admitted as patients with suspected COVID-9 or suspected MIS-C that were finally ruled out; and in the SARS-CoV-2(-) subgroup (19.4%), all were admitted for respiratory failure and suspected COVID-19, however,

<sup>1</sup> Hospital Nacional Edgardo Rebagliati Martins, Lima-Perú.

**Cite as:** Edgar Coila-Paricahua, Ricardo Rodríguez-Portilla, Liliana Cieza-Yamunaqué, Pedro Baique-Sánchez, Claudia Guerra-Ríos. Clinical presentations associated with SARS-CoV-2 in a COVID Pediatric Intensive Care Unit of a National Hospital in Lima. Rev. Fac. Med. Hum. January 2021; 21(1):240-242. DOI 10.25176/RFMH.v21i1.3595

Journal home page: <http://revistas.urp.edu.pe/index.php/RFMH>

Article published by the Magazine of the Faculty of Human Medicine of the Ricardo Palma University. It is an open access article, distributed under the terms of the Creative Commons License: Creative Commons Attribution 4.0 International, CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>), that allows non-commercial use, distribution and reproduction in any medium, provided that the original work is duly cited. For commercial use, please contact [revista.medicina@urp.pe](mailto:revista.medicina@urp.pe)





infection was ruled out and other causes were found to explain the respiratory problem, mostly related to comorbidity.

In our experience, we have mainly attended patients with suspicion and/or record of SARS-CoV-2 or MIS-C infection. Acute SARS-CoV-2 infectious disease, which can spread up to 10 days after symptom

onset when mild or moderate, or up to 10-20 days when severe<sup>(6)</sup>, has been uncommon considering the magnitude of care in the adult population and could accelerate the normalization of care for other non-infectious diseases in the pediatric population affected by the pandemic.

**Table 1.** Epidemiological and laboratory characteristics of children based on clinical presentations associated with SARS-CoV-2 in a COVID Pediatric Intensive Care Unit.

		COVID-19†	SIMS ††	No COVID-19/No SIMS		Total
		n (%)	n (%)	SARS-CoV-2(+)	SARS-CoV-2(-)	n (%)
				n (%)	n (%)	
Cases		3(8.3)	13(36.1)	13(36.1)	7(19.4)	36(100)
Age, years *		0.7 [0.4-12.3]	8 [7-10.5]	9.7 [4.3-11.4]	1.5 [0.3-9.3]	8.2 [3-10.7]
Sex	F	1(33.3)	6(46.2)	5(38.5)	5(71.4)	17(47.2)
	M	2(66.7)	7(53.8)	8(61.5)	2(28.6)	19(52.8)
Nutritional status	Emaciated	1(33.3)	1(7.7)	0(0)	0(0)	2(5.6)
	Normal	2(66.7)	4(30.8)	7(53.8)	4(57.1)	17(47.2)
	Overweight	0(0)	3(23.1)	0(0)	2(28.6)	5(13.9)
	Obesity	0(0)	2(15.4)	2(15.4)	0(0)	4(11.1)
Admission priority	I	0(0)	13(100)	10(76.9)	2(28.6)	25(69.4)
	II	1(33.3)	0(0)	2(15.4)	1(14.3)	4(11.1)
	III	1(33.3)	0(0)	1(7.7)	4(57.1)	6(16.7)
	IV	1(33.3)	0(0)	0(0)	0(0)	1(2.8)
Length of stay in PICU *		4 [3-18]	6 [5-6]	5 [2-8]	6 [3-15]	5 [3-8]
Serologic test	IgM(-)/IgG(-)	2(66.7)	0(0)	2(15.4)	7(100)	11(30.6)
	IgM(-)/IgG(+)	0(0)	9(69.2)	7(53.8)	0(0)	16(44.4)
	IgM(+)/IgG(-)	1(33.3)	1(7.7)	1(7.7)	0(0)	3(8.3)
	IgM(+)/IgG(+)	0(0)	3(23.1)	3(23.1)	0(0)	6(16.7)
Molecular test	Negative	1(33.3)	13(100)	8(61.5)	7(100)	29(80.6)
	Positive	2(66.7)	0(0)	3(23.1)	0(0)	5(13.9)
Mechanical ventilation		3(100)	10(76.9)	8(61.5)	7(100)	28(77.8)
With comorbidity		3(100)	0(0)	4(30.8)	5(71.4)	12(33.3)
Dead		2(66.7)	1(7.7)	1(7.7)	1(14.3)	5(13.9)

\* Median [interquartile range]

† COVID-19: Coronavirus 2019 Infectious Disease

†† MIS-C: multisystem inflammatory syndrome in children

LETTERS TO THE EDITOR

**Authorship contributions:** The authors conceived and designed the article, collected the data, analyzed and interpreted the data, wrote the article and approved its final version.

**Financing:** Self-financed.

**Conflict of interest:** The authors declare that they have no conflicts of interest in the publication of this article.

**Received:** November 25, 2020

**Approved:** December 15, 2020

**Correspondence:** Edgar Juan Coila Paricahua.

**Address:** Av. Boulevard de Surco 322 Dpto. 101, San Borja, Lima-Perú.

**Telephone number:** 996300108

**E-mail:** edcopa@gmail.com

## BIBLIOGRAPHIC REFERENCES

1. Zimmermann P, Curtis N. Coronavirus Infections in Children Including COVID-19: An Overview of the Epidemiology, Clinical Features, Diagnosis, Treatment and Prevention Options in Children. *Pediatric Infectious Disease Journal*. 2020;39(5):355-68. DOI: 10.1097/INF.0000000000002660
2. Feldstein LR, Rose EB, Horwitz SM, Collins JP, Newhams MM, Son MBF, et al. Multisystem Inflammatory Syndrome in U.S. Children and Adolescents. *New England Journal of Medicine*. 23 de julio de 2020;383(4):334-46. DOI: 10.1056/NEJMoa2021680
3. Belot A, Antona D, Renolleau S, Javouhey E, Hentgen V, Angoulvant F, et al. SARS-CoV-2-related paediatric inflammatory multisystem syndrome, an epidemiological study, France, 1 March to 17 May 2020. *Euro Surveill*. junio de 2020;25(22). DOI: 10.2807/1560-7917.ES.2020.25.22.2001010
4. Normas para las Prestaciones Asistenciales en los Servicios de Cuidados Intensivos e Intermedios del Seguro Social de Salud-ESSALUD [Internet]. [citado 25 de octubre de 2020]. Disponible en: [https://ww1.essalud.gob.pe/compendio/pdf/0000003468\\_pdf.pdf](https://ww1.essalud.gob.pe/compendio/pdf/0000003468_pdf.pdf)
5. Multisystem inflammatory syndrome in children and adolescents with COVID-19 [Internet]. [citado 5 de septiembre de 2020]. Disponible en: <https://www.who.int/publications-detail-redirect/multisystem-inflammatory-syndrome-in-children-and-adolescents-with-covid-19>
6. Centers for Disease Control and Prevention. Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings [Internet]. 2020 [citado 25 de octubre de 2020]. Disponible en: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html>

Indexado en:



<https://alicia.concytec.gob.pe/vufind/>

