

Lung mechanics in pediatric acute respiratory distress syndrome associated to acute COVID-19 and MIS-C: implications for therapies and outcomes

Mecánica pulmonar en el síndrome de distrés respiratorio agudo pediátrico asociado a COVID-19 aguda y MIS-C: implicaciones para las terapias y los resultados

Table Supplementary 1. Case definitions for groups according to diagnostics tests available

	COVID-19 rt-PCR	MIS-C criteria	COVID-19 IgM	COVID-19 IgG
C-PARDS	(+)	(-)	N/A	N/A
	(-)	(-)	(+)	(-)
MIS-PARDS	(-)	(+)	(-)	(-)*
	(+)	(+)	(-)	(+)
	(-)	(+)	(+)	(+)

C-PARDS, pediatric acute respiratory syndrome associated to COVID-19 infection; MIS-PARDS, pediatric acute respiratory syndrome associated to multisystem inflammatory syndrome; rt-PCR, reverse transcription-polymerase chain reaction; MIS-C, multisystem inflammatory syndrome in children. *epidemiologic contact.

Table Supplementary 2. Echocardiogram findings in C-PARDS and MIS-PARDS

	All n = 30	MIS-PARDS n = 14	C-PARDS n = 16
Abnormal Coronaries	2	2	0
LV Dysfunction	4	4	1
EF < 50%	0	0	0
No Echocardiogram	10	1	9

C-PARDS, pediatric acute respiratory syndrome associated to COVID-19 infection; MIS-PARDS, pediatric acute respiratory syndrome associated to multisystem inflammatory syndrome; LV, left ventricular.

Table Supplementary 3. Test results in both groups

	ALL	MIS-PARDS	C-PARDS
SARS-CoV-2 testing			
Viral test, positive	10/26	0/14*	10/16
(Not tested)	4 (13)	3 (21)	1 (6)
Antibody test			
IgM [+]/IgG [+]	12/26	4/14	8/12
IgM [-]/IgG [+]	12/26	10/14*	2/12
(Not tested)	4 (13)	0 (0)	4 (25)

Table Supplementary 4. Lung mechanics and PARDS characteristics associated to mortality

	All n. 30	Survivors n. 23	Non-survivors n. 7
Oxygenation			
FiO ₂	60 (45-100)	55 (45-60)	100 (45-100)
PaO ₂ , mmHg	80 (60-100)	85 (60-100)	77 (56-80)
PaO ₂ /FIO ₂	130 (85-228)	130 (98-230)	80 (70-171)
PaO ₂ /FIO ₂ < 100	12 (40)	15 (65)	3 (43)
P(A-a) O ₂ , mmHg	246 (165-399)	240 (141-330)	547 (182-580)
Oxygenation index	9.7 (6.1-19.9)	8.4 (4.3-15)	22.5 (8.6-24)
PARDS severity			
Mild (4 to < 8)	6 (20)	6 (26)	0 (0)
Moderate (8 to < 16)	15 (50)	12 (52)	3 (43)
Severe (≥ 16)	9 (30)	5 (22)	4 (57)
Prone Position	9 (30)	6 (26)	3 (43)
Prone duration, hours	48 (48-48)	48 (48-48)	48 (48-96)
Neuromuscular blocker	13 (43)	8 (35)	5 (71)
Arterial Blood Gas			
pH	7.33 (7.19-7.39)	7.35 (7.22-7.42)	7.18 (6.9-7.39)
PaCO ₂ , mmHg	44 (33-51)	38 (33-51)	51 (45-59)
Bicarbonate, mmol/L	21 (17-24)	21 (18-24)	17 (11-27)
Hemoglobin, g/dL	10.3 (9.6-11.0)	10.0 (9.6-12.0)	10.6 (9.0-11.0)
Lactate, mmol/L	1.6 (1.0-3.0)	1.6 (0.9-3.0)	2 (1.0-7.9)
Lung mechanics			
PIP, cmH ₂ O	28 (24-32)	25 (23-28)*	33 (32-35)
Pplat	20 (16-30)	18 (15-22)*	30 (28-30)
PEEP, cmH ₂ O	7 (6-11)	7 (6-11)	10 (7-12)
Paw	12.7 (11.0-16.4)	12.2 (10.0-16.3)	16 (12.1-18.3)
V _T , ml/kg	7 (6-8)	7 (6-8)	7 (6-9)

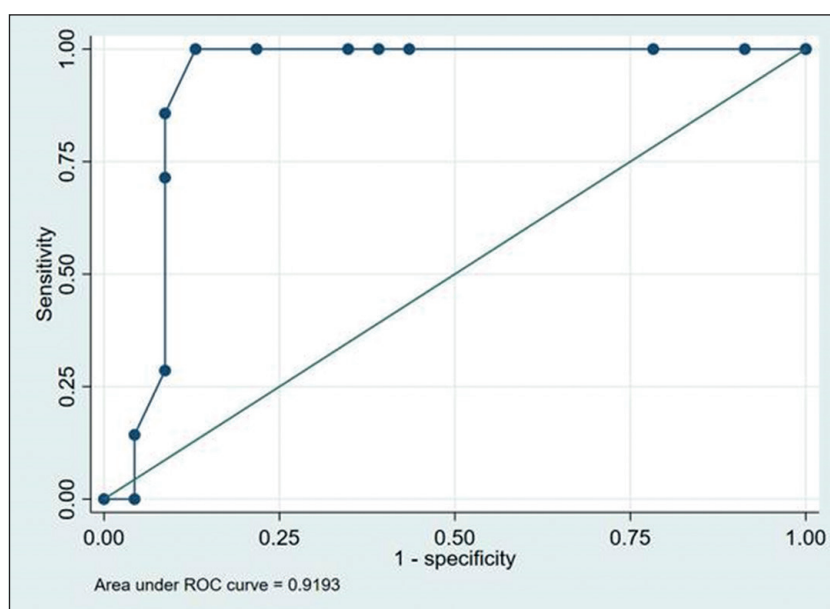


Figure Supplementary 1. Receiver operator curve analysis for driving pressure and mortality. Area under the ROC curve was 0.91 (95% CI 0.81-1.00), and the best cut point was 15 cmH₂O (100% sensitivity and 87% specificity).