



Legend: AC:Acre; AL:Alagoas; AP:Amapá; AM:Amazonas; BA:Bahia; CE:Ceará; DF:Distrito Federal; ES:Espírito Santo; GO:Goiás; MA:Maranhão; MT:Mato Grosso; MS:Mato Grosso do Sul; MG:Minas Gerais; PA:Pará; PB:Paraíba; PR:Paraná; PE:Pernambuco; PI:Piauí; RJ:Rio de Janeiro; RN:Rio Grande do Norte; RS:Rio Grande do Sul; RO:Rondônia; RR:Roraima; SC:Santa Catarina; SP:São Paulo; SE:Sergipe; TO:Tocantins.

Supplementary Material 1 – Cases and incidence of multisystemic inflammatory syndrome in children temporally associated with COVID-19 (MIS-C), by Federative Unit, Brazil, 2020

Supplementary Material 2 – Frequency distribution of demographic, clinical and laboratory characteristics, according to case progression during hospitalization (death or discharge from hospital), in cases of multisystemic inflammatory syndrome in children temporally associated with COVID-19, Brazil, 2020

Characteristics	Total cases ^a	Deaths	Hospital discharge	OR _c (95%CI) ^c	p-value ^d
	(N = 652)	(N = 42)	(N = 525)		
	n (%)	n (%)	n (%)		
Age group (in years)					
<1	70 (10.7)	10	44 (8.4)	4.61 (1.99;10.69)	0.001
1-9	419 (64.3)	17	352 (67.0)	Reference	
<20	163 (25.0)	15	129 (24.6)	2.4 (1.16;4.94)	
Sex					
Male	372 (57.1)	19	307 (58.5)	Reference	0.101
Female	280 (42.9)	23	218 (41.5)	1.69 (0.9;3.19)	
Presence of prior comorbidity (reference: No)					
Yes	131 (20.1)	16	105 (20.0)	2.59 (1.32;5.08)	0.007
Signs and symptoms presented (reference: No)					
Gastrointestinal	571 (87.6)	35	459 (87.4)	0.72 (0.31;1.68)	0.453
Abdominal pain	389 (59.7)	19	316 (60.2)	0.55 (0.29;1.03)	0.056
Nausea or vomiting	358 (54.9)	22	290 (55.2)	0.89 (0.47;1.67)	0.697
Diarrhea	317 (48.6)	18	255 (48.6)	0.79 (0.42;1.50)	0.467

a) Includes cases that died (n=42), hospital discharge (n=525) and with no case progression (n=85); b) OR : crude odds ratio; c) 95%CI: 95% confidence interval; d) Likelihood ratio test p-value; e) Such as rash and exanthema; f) Such as paleness and cyanosis; g) ESR: erythrocyte sedimentation rate; h) NT-proBNP: N-terminal pro-B-type natriuretic peptide; i) IL-6: interleukin 6; j) BNP: B-type natriuretic peptide; k) LDH: lactate dehydrogenase; l) AST: aspartate transaminase; m) ALT: alanine transaminase; n) TT: thrombin time; o) aPTT: activated partial thromboplastin time; p) CPK-MB: creatinine phosphokinase MB.

Note: ORc were not calculated for variables with <90% completeness in both comparison groups (death and hospital discharge), indicated with ‘-’.

To be continued

Continuation

Supplementary Material 2 – Frequency distribution of demographic, clinical and laboratory characteristics, according to case progression during hospitalization (death or discharge from hospital), in cases of multisystem inflammatory syndrome in children temporally associated with COVID-19, Brazil, 2020

Characteristics	Total cases ^a (N = 652)	Deaths (N = 42)	Hospital discharge (N = 525)	OR _c ^b (95%CI) ^c	p-value ^d
	n (%)	n (%)	n (%)		
Dermatocutaneous	472 (72.4)	12	403 (76.8)	0.12 (0.06;0.25)	<0.001
Conjunctivitis	407 (62.4)	7	352 (67.0)	0.1 (0.04;0.23)	<0.001
Red blotches on body ^e	315 (48.3)	10	313 (59.6)	0.21 (0.1;0.44)	<0.001
Respiratory	430 (66.0)	39	339 (64.6)	7.13 (2.18;23.39)	<0.001
Dyspnea	240 (36.8)	31	178 (33.9)	5.49 (2.70;11.20)	<0.001
O ₂ saturation <95%	208 (31.9)	29	152 (29.0)	5.47 (2.77;10.81)	<0.001
Cough	147 (22.5)	14	116 (22.1)	1.76 (0.90;3.46)	0.105
Runny nose	105 (16.1)	7	79 (15.0)	1.13 (0.48;2.63)	0.769
Sore throat	92 (14.1)	4	76 (14.5)	0.62 (0.22;1.79)	0.359
Circulatory and hemodynamic	402 (61.7)	39	312 (59.4)	9 (2.75;29.5)	<0.001
Tachycardia	245 (37.6)	25	184 (35.0)	2.73 (1.43;5.18)	0.002
Hypotension/shock	235 (36.0)	35	173 (33.0)	10.17 (4.43;23.37)	<0.001
Skin color alterations ^f	208 (31.9)	20	154 (29.3)	2.19 (1.16;4.12)	0.017
Neurological	366 (56.1)	29	289 (55.0)	1.82 (0.93;3.58)	0.075
Headache	164 (25.2)	11	132 (25.1)	1.06 (0.52;2.16)	0.886
Lethargy	158 (24.2)	14	121 (23.0)	1.67 (0.85;3.27)	0.140
Irritability	138 (21.2)	9	106 (20.2)	1.08 (0.50;2.32)	0.881
Mental confusion	57 (8.7)	7	41 (7.8)	2.36 (0.99;5.65)	0.071
Edema	295 (45.1)	8	245 (46.7)	0.27 (0.12;0.58)	<0.001
Hand or foot edema	206 (31.6)	6	167 (31.8)	0.36 (0.15;0.86)	0.010
Lymphadenopathy	127 (19.5)	2	113 (21.5)	0.18 (0.04;0.77)	0.003
Myalgia	152 (23.3)	12	121 (23.0)	1.34 (0.66;2.69)	0.448
Oliguria	129 (19.8)	14	93 (17.7)	2.32 (1.18;4.58)	0.023
Altered results in imaging tests (reference: No)					
Chest radiography or tomography	n=467	n=35	n=362		
Infiltrate	163 (34.9)	16	119 (32.9)	–	–
Pleural effusion	109 (23.3)	6	82 (22.7)	–	–
Ground-glass opacity	81 (17.3)	11	58 (16.0)	–	–
Condensation	65 (13.9)	10	44 (12.2)	–	–
Echocardiography	n=352	n=11	n=306		
Myocardial dysfunction	69 (19.6)	4	58 (19.0)	–	–
Coronary abnormalities	77 (21.9)	4	66 (21.6)	–	–
Pericarditis	80 (22.7)	5	67 (21.9)	–	–
Valvulitis	28 (8.0)	–	26 (8.5)	–	–

a) Includes cases that died (n=42), hospital discharge (n=525) and with no case progression (n=85); b) OR : crude odds ratio; c) 95%CI: 95% confidence interval; d) Likelihood ratio test p-value; e) Such as rash and exanthema; f) Such as paleness and cyanosis; g) ESR: erythrocyte sedimentation rate; h) NT-proBNP: N-terminal pro-B-type natriuretic peptide; i) IL-6: interleukin 6; j) BNP: B-type natriuretic peptide; k) LDH: lactate dehydrogenase; l) AST: aspartate transaminase; m) ALT: alanine transaminase; n) TT: thrombin time; o) aPTT: activated partial thromboplastin time; p) CPK-MB: creatinine phosphokinase MB.

Note: ORc were not calculated for variables with <90% completeness in both comparison groups (death and hospital discharge), indicated with '–'.

To be continued

Continuation

Supplementary Material 2 – Frequency distribution of demographic, clinical and laboratory characteristics, according to case progression during hospitalization (death or discharge from hospital), in cases of multisystem inflammatory syndrome in children temporally associated with COVID-19, Brazil, 2020

Characteristics	Total cases ^a (N = 652)	Deaths (N = 42)	Hospital discharge (N = 525)	OR _c ^b (95%CI) ^c	p-value ^d
	n (%)	n (%)	n (%)		
Abdominal ultrasound	n=196	n=8	n=154		
Ascitis	48 (24.5)	2	38 (24.7)	–	–
Hepatomegaly	39 (19.9)	4	26 (16.9)	–	–
Limphadenitis	39 (19.9)	2	34 (22.1)	–	–
Splenomegaly	28 (14.3)	1	20 (13.0)	–	–
Colitis	6 (3.1)	–	6 (3.9)	–	–
Ileitis	4 (2.0)	–	4 (2.6)	–	–
Altered markers of inflammation, coagulopathy or organ dysfunction (Reference: No)					
C-reactive protein	590/622 (94.9)	39/40	478/502 (95.2)	1.96 (0.26;14.85)	0.477
D-dimer	493/526 (93.7)	31/31	401/430 (93.3)	–	–
ESR ^g	379/427 (88.8)	18/20	316/355 (89.0)	–	–
NT-proBNP ^h	126/149 (84.6)	02/04	110/127 (86.6)	–	–
Ferritin	303/404 (75.0)	21/22	257/346 (74.3)	–	–
IL-6 ⁱ	23/32 (71.9)	01/01	21/28 (75.0)	–	–
BNP ^j	37/58 (63.8)	–	32/50 (64.0)	–	–
LDH ^k	258/424 (60.8)	19/24	207/348 (59.5)	–	–
Albumin	269/454 (59.3)	24/31	217/369 (58.8)	–	–
Fibrinogen	188/328 (57.3)	13/19	155/277 (56.0)	–	–
Procalcitonin	34/63 (54.0)	02/04	26/51 (51.0)	–	–
AST ^l	301/588 (51.2)	31/39	235/477 (49.3)	3.99 (1.80;8.86)	<0.001
ALT ^m	273/590 (46.3)	22/38	216/477 (45.3)	1.66 (0.85;3.24)	0.132
Lactate	141/310 (45.5)	22/26	101/243 (41.6)	–	–
TT ⁿ	226/529 (42.7)	27/32	170/430 (39.5)	–	–
Troponin	190/454 (41.9)	20/26	151/375 (40.3)	–	–
aPTT ^o	203/523 (38.8)	25/32	154/425 (36.2)	–	–
CPK-MB ^p	125/346 (36.1)	01/11	97/280 (34.6)	–	–
Urea	151/588 (25.7)	25/38	107/481 (22.2)	6.72 (3.33;13.59)	<0.001
Creatinine	150/592 (25.3)	21/40	110/480 (22.9)	3.72 (1.93;7.16)	<0.001
Sodium	142/559 (25.4)	16/35	108/456 (23.7)	–	–
Potassium	117/556 (21.0)	17/35	80/449 (17.8)	–	–
Treatment (reference: No)					
Immunoglobulin	418 (67.9)	15	357 (71.3)	0.26 (0.13;0.52)	<0.001
Corticoid	376 (62.3)	30	300 (60.8)	2.12 (0.99;4.57)	0.043
Anticoagulant	335 (55.7)	14	281 (57.7)	0.43 (0.22;0.85)	0.013
Antiviral therapy	96 (16.0)	11	74 (15.2)	2.27 (1.08;4.77)	0.039

a) Includes cases that died (n=42), hospital discharge (n=525) and with no case progression (n=85); b) OR : crude odds ratio; c) 95%CI: 95% confidence interval; d) Likelihood ratio test p-value; e) Such as rash and exanthema; f) Such as paleness and cyanosis; g) ESR: erythrocyte sedimentation rate; h) NT-proBNP: N-terminal pro-B-type natriuretic peptide; i) IL-6: interleukin 6; j) BNP: B-type natriuretic peptide; k) LDH: lactate dehydrogenase; l) AST: aspartate transaminase; m) ALT: alanine transaminase; n) TT: thrombin time; o) aPTT: activated partial thromboplastin time; p) CPK-MB: creatinine phosphokinase MB.

Note: ORc were not calculated for variables with <90% completeness in both comparison groups (death and hospital discharge), indicated with '–'.

	Conjunctivitis	Red blotches on body	Skin alterations	Dyspnea	O ₂ saturation	Mental confusion	Tachycardia	Hypotension/shock	Hand or foot edema	Lymphadenopathy	Oliguria
Conjunctivitis	1										
Red blotches on body	0.49	1									
Skin alterations	-0.02	0.04	1								
Dyspnea	-0.13	-0.11	0.28	1							
O ₂ saturation	-0.1	-0.06	0.32	0.6	1						
Mental confusion	-0.06	0	0.2	0.41	0.17	1					
Tachycardia	-0.08	0	0.21	0.37	0.43	0.08	1				
Hypotension/shock	-0.12	-0.09	0.19	0.28	0.41	0.15	0.38	1			
Hand or foot edema	0.3	0.25	0.11	0.05	0	-0.04	0.11	-0.04	1		
Lymphadenopathy	0.02	0.16	0.02	-0.01	0.02	0.02	-0.02	-0.03	0.02	1	
Oliguria	-0.02	0.02	0.19	0.25	0.28	0.05	0.25	0.32	0.08	0.01	1

Supplementary Material 3 – Matrix of correlation between signs/symptoms in cases of multisystemic inflammatory syndrome in children temporally associated with COVID-19 (MIS-C) that demonstrated association with the outcome ‘death’ in a simple regression model, with a significance level of up to 10% (p-value<0.10)