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Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Lindan CE, Mankad K, Ram D, et al. Neuroimaging manifestations in children with SARS-CoV-2 infection: a multinational, multicentre collaborative study. *Lancet Child Adolesc Health* 2020; published online Dec 15. http://dx.doi.org/10.1016/S2352-4642(20)30362-X.

Appendix
Neuroimaging Manifestations in Children with SARS-CoV-2: A Multi-National Multi-Centre Collaborative Study

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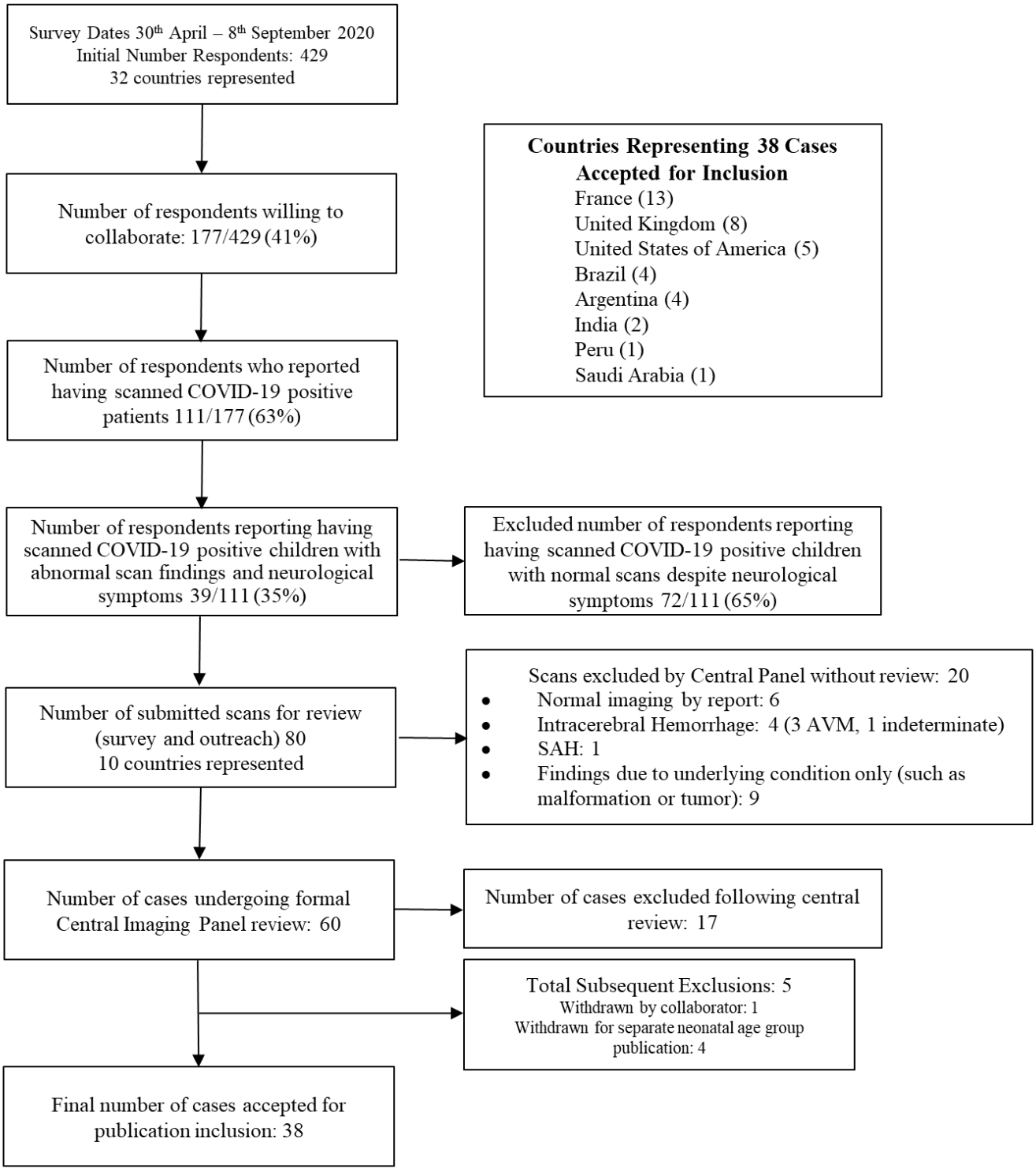
Category 1	Acute COVID-19	• Clinical criteria for acute SARS-CoV-2 infection fulfilled* • RT-PCR or antigen test positive for current SARS-CoV-2 infection • Serology for SARS-CoV-2 Ab positive, negative, or not tested ¶ • Does not meet CDC criteria of MIS-C (PIMS-TS) § • Neurologic symptoms
Category 2	Asymptomatic acute or subacute COVID-19 infection	• Clinical criteria for acute SARS-CoV-2 infection NOT fulfilled* • RT-PCR or antigen test positive for current SARS-CoV-2 infection • Serology for SARS-CoV-2 positive, negative, or not tested ¶ • Does not meet CDC criteria for MIS-C (PIMS-TS) § • Neurologic symptoms
Category 3	MIS-C (PIMS-TS)	• CDC Criteria for MIS-C (PIMS-TS) fulfilled § • Serology for SARS-CoV-2 positive ¶ • RT-PCR or antigen test for SARS-CoV-2 positive, negative, or not tested • Neurologic symptoms
Category 4	Indeterminate	• Serology for SARS-CoV-2 positive ¶ • RT-PCR or antigen test for SARS-CoV-2 negative or not tested • Does not meet CDC Criteria for MIS-C ·(PIMS-TS) § • Neurologic symptoms

Table 1: Clinical Categorization Criteria. *Confirmation of Acute COVID infection made based on CDC clinical criteria only: Coronavirus Disease 2019 (COVID-19) 2020 Interim Case Definition, Approved April 5, 2020 https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/ ¶ IgG or total serology if assay does not differentiate IgG; positive IgM with negative IgG does not meet this criterion § Criteria for MIS-C (PIMS-TS) is made based on criteria detailed in the following site: Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with Coronavirus Disease 2019 (COVID-19) https://emergency.cdc.gov/han/2020/han00432.asp

Submitting Neuroradiologist	Free Text
Additional Collaborators	Free Text
Patient Age	Years/months
Gender	Free Text
Ethnicity	Free Text
Clinical Presentation History	Free Text
Co-morbidities	Free Text
Date of Onset of Neurological Symptoms	Date
Acute Covid CDC Criteria Fulfilled	Y/N
MIS-C Criteria Fulfilled	Y/N
Dates of CT imaging #1,2,3….	Date
Dates of MRI imaging #1,2,3…	Date
PCR antigen testing	Y/N
PCR antigen testing dates	Date
PCR antigen testing results	+ve/-ve
Covid serology testing	Y/N
Covid serology testing date	Date
Covid Serology testing result	+ve/-ve
CSF testing	Y/N
CSF testing dates	Date
CSF testing results	WCC and differential, protein, glucose, Next Generation Sequencing if available, additional infectious studies with results
Date of patient assessment	Date
Patient clinical outcome	Free Text
Date of patient discharge	Date
Status at discharge	Normal, neurological deficit (specify) or death

Table 2: Data Response Headers and Field Types



Supplemental figure 1: Survey responses, case inclusion and exclusion diagram.

Case Number	Institution
1	Bai Jerbai Wadia Hospital for Children's Hospital, Mumbai, India
2, 26	Royal Manchester Children's Hospital, Manchester, UK
3	Hospital Israelita Albert Einstein , São Paulo, Brazil
4	Hospital Nacional Edgardo Rebagliati Martins, Jesús María, Peru
5	University of New Mexico Hospital, Albuquerque, NM, USA
6, 9, 11, 24 ,25, 31, 32, 33, 35, 36, 38	Hôpital Necker Enfants Malades, Assistance Publique Hôpitaux de Paris, APHP, Université de Paris, France
7	King Saud bin Abdulaziz university for health science King Abdullah Specialized children hospital, Riyadh, KSA
8*	William Beaumont Hospital, Royal Oak , MI, USA
10, 14, 15, 17	Garrahan Hospital, Buenos Aires, Argentina
12, 19	Instuto Dr José Frota, Fortaleza, Ceará, Brazil
13	Rainbow Children's Hospital, Hyderabad, India
16*	Lucile Packard Children's Hospital, Stanford, CA, USA
18	Ann & Robert H. Lurie Children's Hospital of Chicago, IL , USA
20	Children's National Hospital, Washington, DC, USA
21	La Timone University Hospital, APHM, Marseille, France
22, 23, 27, 28, 30, 37	Great Ormond Street Hospital for Children, London, UK
29*	Holtz Children's Hospital, University of Miami Miller School of Medicine, Miami, FL, USA
34	Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo Brazil

*Institutional confirmation that IRB approval is not required for single case submission

Table 3: Institutions supplying cases and associated IRB approval

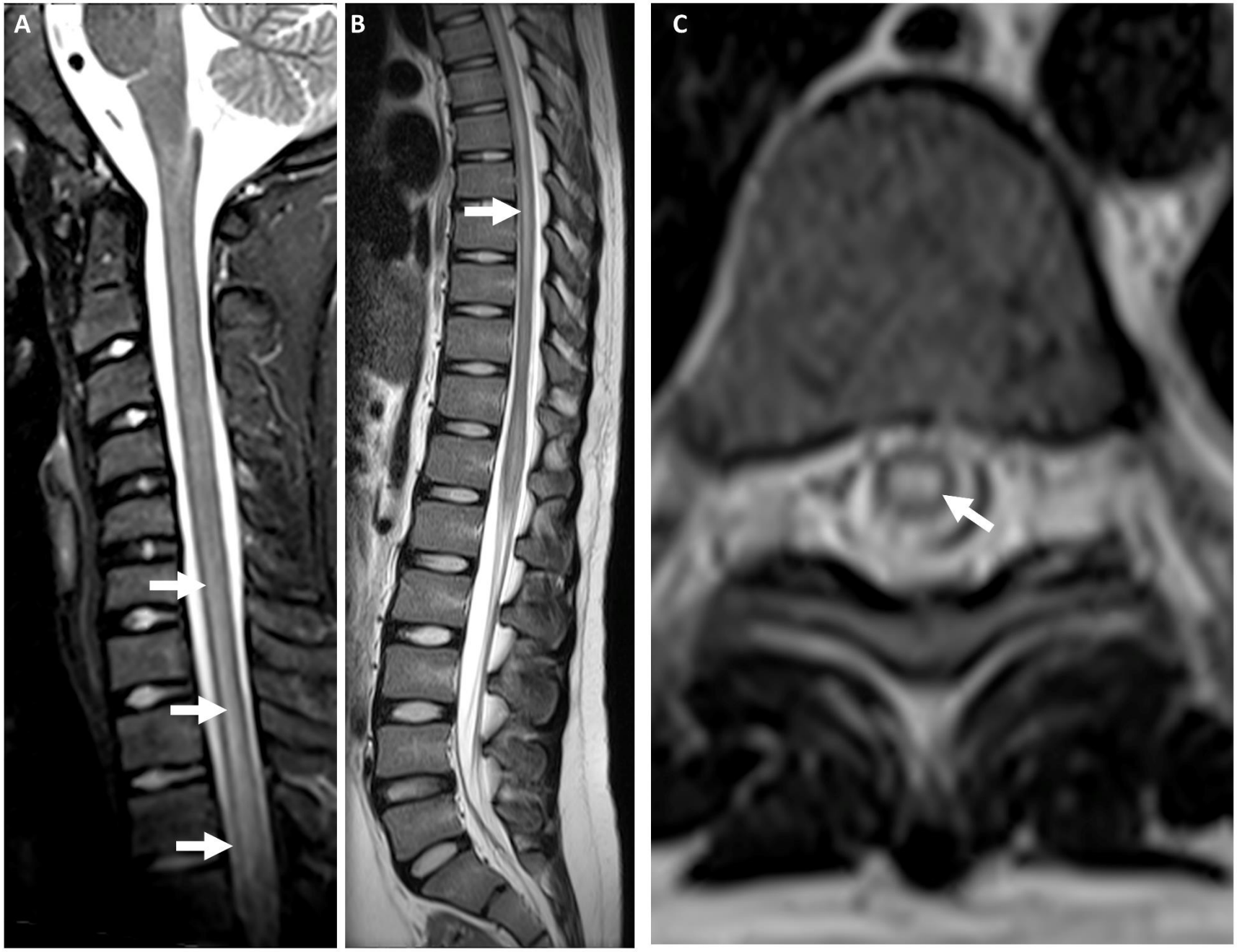
Clinical Category	**Number (%)**	**Male (%)**	**Age Range, years (Median)**
1	12 (32%)	58	0·17-16 (6)
2	8 (21%)	50	0.25-16 (12)
3	11 (29%)	45	1·5-16 (10)
4	7 (18%)	71	0.83 – 14.25 (7)

Table 4: Demographics of cases by clinical categorization.

Patient identifier	Age (years) & Sex	Co-Morbidity	Clinical Presentation	Onset-Imaging (days)	Imaging Findings	Disease Pattern	Clinical Management	Clinical Outcome & Additional information
1	0.17 M	None	Fever, Cough, Seizures	1	Brain: Multifocal T2 hyperintensity throughout bilateral thalami.	ADEM-like	Supportive measures in ICU, Anti-epileptic drugs (AED's)	Normal at discharge 8 days after presentation.
2	1.17 F	None	Fever, encephalopathy, dystonic posturing, seizures	2	BRAIN: Confluent areas of T2 hyperintensity and restricted diffusion in the central gray, pons, and subcortical white matter. Splenial lesion. SPINE: Normal	ADEM-like	Intubated, supportive measures in ICU, AED's	Normal at discharge 1 month after presentation.
3	9 M	Mild asthma	Fever, cough, headache, encephalopathy, photophobia, phonophobia, seizures	5	BRAIN: *Presentation:* Diffuse leptomeningeal enhancement. Patchy T2 hyperintensity of cerebral white matter and cerebellum. Cortical, thalamic and splenial signal abnormalities. *Follow-up 2.5 weeks:* Extension of T2 signal abnormalities. Hyperintensity of optic chiasm and bilateral CST. *Follow-up 4.5 weeks:* Progressive optic chiasm T2 hyperintensity. Resolved CST, brainstem and splenial signal changes. Global atrophy.	ADEM-like	Intubated, supportive measures in ICU, intravenous immunoglobulin (IVIG).	Normal at discharge 5 weeks after presentation.
4	13 M	None	Fever, headache, lower limb weakness	1	BRAIN: Extensive patchy white matter and basal ganglia T2 hyperintensities, Associated mass effect and mild enhancement R frontal lobe. SPINE: Long segment mildly expansive central cord T2 hyperintensity. No post contrast imaging of spine.	ADEM-like Myelitis	IV high dose steroids	Normal at discharge 2 weeks after presentation.
5 *	3 F	None	Upper and lower extremity weakness, acute respiratory failures, confusion. Family members recently deceased from COVID-19.	1	BRAIN: Normal SPINE: *Presentation:* Expansile T2 hyperintense signal from obex to mid-thoracic cord with mild enhancement. *Follow-up 4 days:* Worsening cord edema with extensive restricted diffusion, hemorrhagic change & enhancement *Follow-up 3 weeks*: Interval myelomalacia with persistent restricted diffusion	Myelitis	Supportive measures in ICU, intubated. CSF cultures negative.	Quadriplegic, tracheostomy, ventilator dependent, G-tube at time of manuscript submission, six months after presentation
6	5.5 M	Sickle cell post bone marrow transplant	Acute facial paralysis, respiratory failure	21	BRAIN: Enhancement of CN VII and XII	Neuritis: CN	IVIG	Normal cranial nerve exam at discharge 1 month after presentation
7	9 M	None	Dysarthria, ophthalmoplegia gait disturbance, back pain, reduced lower limb reflexes.	2	BRAIN: Enhancement of CN V-VIII SPINE: Enhancement of cauda equina and cervical nerve roots.	Neuritis: CN and cauda equina	IVIG	Normal at discharge 1 month after presentation.
8*	5 F	None	Fever, headache, seizures. Parents both positive for COVID-19 and negative for TB.	2	BRAIN: *Presentation:* Small left frontal infarction, minimal leptomeningeal enhancement. *Follow-up 3 days:* Hydrocephalus *Multiple follow-up MRI exams:* Progressive basilar meningitis, hydrocephalus, herniation. Diffuse cerebral edema and absent cerebral arterial flow on MRA 3.5 weeksks after presentation. SPINE 3.5 weeks after presentation: Central gray abnormal signal and extensive cervical cord edema	Co-infection: TB Vasculitic/ Thrombotic Myelitis	Supportive measures with multiple medications, intubated in ICU. EVD insertion. Suboccipital craniectomy with cerebellar brain biopsy. Brain biopsy: TB positive necrotizing granulomata, vasculitis & electron	Death one month after presentation

							microscopy positive for viral inclusions compatible with COVID-19.	
9	5.67 F	None	Fever, encephalopathy, acute respiratory distress following 5 day history of varicella and cough.	1	BRAIN: Scattered microhemorrhages and small infarcts in the superficial and deep white matter and in the CC	Co-infection: Bacterial and viral Vasculitic/ Thrombotic	Intubated, supportive measures in ICU. CT chest COVID-19 infiltrates. After 2 weeks, neurological decline, failed extubation. EEG with no activity. In addition to PCR COVID positive: MRSA cultures positive in CSF & blood. VZV positive by serology & CSF PCR.	Death fifteen days after neurological symptom onset
10	6 M	None	Fever, headache, vomiting, right hemiparesis. No family history of TB.	1	BRAIN: *Presentation:* Enhancing choroid plexus in left lateral ventricle & bilateral foramina of Luschka. Ependymal enhancement lateral ventricle with DWI restricting material in occipital horn. Small enhancing cerebral abscesses with reduced diffusion. *Multiple follow-up Brain CT and MRI exams:* Progressive hydrocephalus, extensive thick periventricular T2 hyperintensity and diffusion restriction. Improved abscesses and plexitis on treatment for TB and steroids.	Co-infection: TB	Supportive measures in ICU. Brain biopsy positive for TB granuloma. Aggressive medical treatment for TB.	Death one month after presentation
11	16 M	None	Fever, sinusitis, meningismus, encephalopathy	8	BRAIN: Sinusitis, rapidly progressive cavernous sinus thrombosis, ophthalmic vein thrombosis, leptomeningitis, CN enhancement, multivessel vasculitis with vessel wall enhancement. Multiterritory ischemic infarction.	Co-infection: Bacterial Vasculitic/ Thrombotic	Supportive measures in ICU, antibiotics. Blood and CSF cultures: fusobacterium necrophorum and streptococcus constellatus infection.	Death two weeks following presentation.
12	15 F	Pregnant	27 weeks pregnant, fever, seizures and hypertension. Subsequent respiratory symptoms day 4.	6	BRAIN: *Presentation Head CT:* Subcortical edema bilateral occipital, posterior temporal, frontal lobes. *Follow-up Brain MRI day 7:* Bilateral parasagittal and deep white matter T2 hyperintensity with restricted diffusion. Left occipital acute cortical infarction.	Vasculitic/ Thrombotic	Supportive measures in ICU. Mother delivered of baby at presentation, born at 27 weeks gestation. Chest CT day 4: COVID-19 pattern infiltrates	Normal at discharge 2 weeks after presentation.

Table 5: Category 1. Cases of acute COVID-19 infection with classic respiratory symptoms and a positive nasopharyngeal PCR. White: ADEM-like with or without myelitis. Light gray: Acute necrotizing myelitis. Intermediate gray: Neuritis. Dark gray: Co-infection. Darkest gray: Vasculitic-thrombotic. *Case published as case reports in clinical-based journal. Freij BJ, Gebara BM, Tariq R, Wang AM, Gibson J, El-Wiher N, et al. Fatal central nervous system co-infection with SARS-CoV-2 and tuberculosis in a healthy child. BMC pediatrics. 2020;20(1):429. & Kaur H, Mason JA, Bajracharya M, McGee J, Gunderson MD, Hart BL, et al. Transverse Myelitis in a Child With COVID-19. Pediatric neurology. 2020;112:5-6.



Supplemental figure 2: Myelitis – 13-year-old boy (Case 4) who presented with fever, headache and lower limb weakness in the acute COVID-19 category. Extensive ADEM-like brain changes seen in figure 2, (panels C and D). He also had long segment, mildly expansive cord T2 hyperintensity as shown on the sagittal T2-weighted images (panels A and B; arrows). Note on the axial T2-weighed image (panel C) how these changes are centrally located in the cord (arrow).

Patient identifier	Age (years) Sex	Co-Morbidity	Clinical Presentation	Onset-Imaging (days)	Imaging Findings	Disease Pattern	Clinical Management	Clinical Outcome & Additional information
13	0.25 M	None	Lower > upper limb spasticity and brisk DTR's, reduced weight bearing. 20 days prior to neurologic symptoms: Cough without fever, positive PCR & family exposure to COVID-19.	12	BRAIN: T2 hyperintensity brainstem SPINE: Long segment cord T2 hyperintensity with central gray matter predominance. No post contrast imaging.	ADEM-like Myelitis	IVIG	Resolved motor findings with residual delayed bladder emptying at 2.5 months following presentation.
14	1.58 F	None	Irritability, gait impairment, constipation.	3	BRAIN: Punctate and linear T2 hyperintense foci and enhancement in subcortical white matter SPINE: Long segment T2 hyperintensity with central gray matter predominance and patchy enhancement. Enhancement of cauda equina.	ADEM-like Neuritis: cauda equina Myelitis	High dose steroids	Normal at discharge 2 weeks after presentation
15	12 M	None	Fever, diarrhoea, urinary retention, hyperreflexia	3	SPINE: Long segment T2 hyperintensity from the obex through the mid thoracic cord, with central predominance. No post contrast imaging.	Myelitis	High dose steroids	Improvement at follow-up 2 weeks after presentation, requires urinary catheter.
16	14 F	None	Fever, encephalopathy, seizures, subsequent respiratory failure due to aspiration (not COVID-19 pattern on chest CT)	2	BRAIN: *Presentation:* Normal *Follow-up 4 weeks:* Patchy T2 hyperintensity white matter and basal ganglia, brainstem, cerebellar peduncles. No restricted diffusion or enhancement. *Follow-up 8 weeks:* Global atrophy, otherwise normal	ADEM-like	Intubated, supportive measures in ICU. Diagnosed with COVID-19 triggered anti-NMDAR auto-immune encephalitis. Numerous immunomodulatory therapies.	Remains an inpatient 6 months following presentation. Tracheostomy, ventilator dependent, G-tube, dysautonomia.
17	9 M	None	Gait difficulty High CSF protein	2	SPINE: Enhancement and thickening of cauda equina & cervical spinal nerve roots	Neuritis: CN, cauda equina and spinal nerve roots	IVIG	Normal at follow-up 3 weeks after presentation.
18	14 M	None	Bilateral facial palsy, myalgias, diarrhea, blurred vision. High CSF protein	15	BRAIN: Enhancement CN III, V-VII, XII SPINE: Enhancement and thickening of cauda equina. Enhancement of spinal nerve roots.	Neuritis: CN and cauda equina	IVIG	Improvement but incomplete resolution at follow-up visit 6 weeks after presentation.
19	16 F	Pes Cavus	Diarrhea, crural paraesthesia & hypoesthesia progressing to T8 sensory level within hours High CSF protein	3	BRAIN: Enhancement of CN III, VI-VIII SPINE: Enhancement of cauda equina	Neuritis: CN and cauda equina	High dose steroids IVIG	Normal at discharge 3.5 weeks after presentation.
20	15 F	None	Fever, headache, confusion	2	Brain: Complete thrombosis superior sagittal sinus. Bilateral haemorrhagic venous infarctions left frontal and right parietal lobes.	Vasculitic/Thrombotic	Therapeutic anticoagulation	Normal neurologic exam 6 weeks after presentation

Table 6: Category 2. Cases of acute or subacute COVID-19 infection with positive nasopharyngeal PCR, without clinically acute COVID-19 symptoms by established CDC criteria. White: ADEM-like with/without/or myelitis. Light gray: Neuritis. Intermediate gray: Vasculitic-thrombotic.

Patient identifier	Age (years)	Co-Morbidity	Clinical Presentation	Onset-Imaging (days)	Imaging Findings	Disease Pattern	Clinical Management	Clinical Outcome & Additional information
21	5 F	None	MISC-C syndrome with encephalopathy, fever, abdominal pain, diarrhoea. No seizures.	1	BRAIN: T2 hyperintensity cerebral white WM. Focal CC and splenial lesions CC T2 hyperintensity and restricted diffusion	ADEM-like Splenial lesion	Supportive measures in ICU	Normal at discharge 8 days after presentation.
22	9 M	None	MIS-C syndrome with encephalopathy, gait impairment.	11	BRAIN: T2 hyperintensity cerebral white WM. Myositis: Enhancement of upper cervical musculature.	ADEM-like Myositis	Supportive measures in ICU	Normal at follow-up 5 weeks after presentation.
23*	9 M	None	MIS-C syndrome with fever, headache, neck pain, encephalopathy, cerebellar signs, weakness.	2	BRAIN: T2 hyperintensity cerebral WM. Splenial lesion T2 hyperintensity and restricted diffusion Myositis: Upper cervical soft tissues & muscles of mastication.	ADEM-like Splenial lesion Myositis	Supportive measures in ICU. Intubated. Hypotensive shock.	Improvement at follow-up 3 months after presentation with residual lower limb weakness.
24	13.25 F	None	MIS-C syndrome with fever, headache encephalopathy, facial paralysis	1	BRAIN: T2 hyperintensity hypothalamus. Neuritis: Bilateral CN VII	ADEM-like Neuritis: CN	Supportive measures in ICU	Improvement at discharge 10 days after presentation with mild facial palsy.
25	13.83 F	Asthma	MIS-C syndrome with cardiac dysfunction, stupor, pyramidal signs	6	BRAIN: T2 hyperintensity hypothalamus. SPINE: Focal T2 hyperintensity in T-cord with central predominance	ADEM-like Myelitis	Supportive measures in ICU	Normal at discharge 2 weeks after presentation.
26	14.5 M	None	MIS-C syndrome with fever, diarrhoea, encephalopathy, rash, hypotension.	8	BRAIN: T2 hyperintensity cerebral WM. Splenial lesion T2 hyperintensity and restricted diffusion	ADEM-like Splenial lesion	Supportive measures ICU, intubated	Normal at follow up 6 weeks after presentation
27*	15 F	Obese	MIS-C syndrome with fever, cough, dyspnea, encephalopathy, myalgias, leg swelling.	18	BRAIN: *Presentation:* T2 hyperintensity cerebral WM. Splenial lesion T2 hyperintensity and restricted diffusion Innumerable microthrombi cerebrum, brainstem, cerebellum. *Follow-up 3 weeks:* Partial resolution of microthrombi. Complete resolution of WM and splenial lesions.	ADEM-like Splenial lesion Vasculitic/Thrombotic	Supportive measures ICU, intubated. Nephrotic. HLH haematologically confirmed	Normal at follow up 3 months after presentation.
28*	8 M	None	MIS-C syndrome with fever, headache, sore throat, visual hallucinations, abdominal pain, diarrhoea, vesicular palmar rash. Meningismus, shock.	17	BRAIN: Splenial lesion T2 hyperintensity and restricted diffusion Focus of restricted diffusion right ventricle occipital horn. Punctate enhancement left temporal WM. Myositis: Suboccipital soft tissues	Splenial lesion Myositis	Supportive measures in ICU. Intubated. Hypotensive shock.	Improvement at follow-up 6 weeks after presentation with residual mild encephalopathy, myopathy, emotional lability.
29	10 M	None	MIS-C syndrome with fever, abdominal pain, altered mental status, gait impairment	4	BRAIN: Splenial lesion with T2 hyperintensity. Enhancement left CN III	Splenial lesion Neuritis: CN	Supportive measures in ICU. Intubated.	Improvement at discharge 2 weeks after presentation with mild residual encephalopathy, cerebellar signs and left sided weakness. Lost to further follow-up
30*	15 F	None	MIS-C syndrome with fever, sore throat, neck swelling, sores on tongue, diarrhoea, vomiting, weakness, incoherent speech.	10	BRAIN: Splenial lesion T2 hyperintensity and restricted diffusion Myositis: Suboccipital soft tissues	Splenial lesion Myositis	Supportive measures in ICU	Improvement at follow-up 3 months after presentation. Mild residual peripheral neuropathy.
31	1.5 F	None	MIS-C syndrome with fever, rash, cough, four limb motor and bladder dysfunction	3	BRAIN: Normal SPINE: Enhancement and thickening of the cauda equina	Neuritis: Cauda equina	Supportive measures in ICU.	*Improvement at 4 month follow up. Improved motor function, swallowing difficulties, requires bladder catheterization.*

Table 7: Category 3. Cases fulfilling the MIS-C clinical criteria. White: ADEM-like changes and/or splenial lesions with our without myelitis, microthorombi or myositis. Intermediate gray: Neuritis. *Cases previously published as clinical case series. Abdel-Mannan O, Eyre M, Lobel U, Bamford A, Eltze C, Hameed B, et al. Neurologic and Radiographic Findings Associated With COVID-19 Infection in Children. JAMA neurology. 2020.

Patient identifier	Age (years) Sex	Co-Morbidity	Clinical Presentation	Imaging Findings	Disease Pattern	Clinical Management	Clinical Outcome & Additional information
32	2.67 F	None	3 days prior to neurologic presentation: Fever, pharyngeal pain. Presentation: ophthalmoplegia, cerebellar ataxia PCR SARS-CoV2 negative. Serology SARS-CoV2 positive.	**BRAIN:** Left midbrain infarction. Thrombus anterior perforator artery with arterial wall enhancement.	Vasculitic/Thrombotic	Anticoagulation (LMWH)	Normal at follow-up 3 months after presentation.
33	13 M	None	Vertigo, decreased hearing. COVID serology positive at onset of symptoms. PCR not tested.	BRAIN: Loss of normal labyrinthine T2 signal and abnormal enhancement	Neuritis: Vestibular Labyrinthitis	High dose steroids	Improvement but incomplete resolution at 3 months. Additional follow-up scheduled.
34	7 M	None	8 weeks prior to neurologic presentation: COVID-19/flu like symptoms of fever, cough, headache. PCR not available at presentation. Resolved with ongoing anosmia. Presentation: Flaccid paralysis upper and lower limbs	BRAIN: Normal SPINE: Enhancement & thickening cauda equina.	Neuritis: cauda equina	High dose steroids	Improvement at discharge 3 weeks after presentation, residual sensory-motor polyneuropathy.
35	12 F	None	Acute four limb and brainstem dysfunction. Anti-GM2 and PCR positivity for CMV. PCR for SARS-CoV-2 not available. Symptoms and MRI obtained when COVID-19 endemic. Serology testing performed when clinically available 3 months following.	BRAIN: Enhancement CN III, V, VII SPINE : Enhancement cauda equina.	Neuritis: CN and cauda equina	High dose steroids	Normal follow-up 6 months after presentation with residual mild fatigue.
36	14.25 M	None	Headache, ataxia, cerebellar signs, meningismus. PCR not available. Serology positive.	BRAIN: Swollen cerebellar hemisphere without restricted diffusion. Enhancement of bilateral CN VII	Neuritis: CN Cerebellitis	High dose steroids	Full recovery at three months
37	0.83 M	None	1 week prior to neurologic presentation: Mild febrile illness. Presentation: right ptosis, hypotonia, encephalopathy PCR negative at presentation. Serology positive 1 week following.	BRAIN: Presentation: Patchy T2 hyperintensities in cerebral WM, thalami, brainstem and cerebellum. Associated foci of enhancement and restricted diffusion. Enhancement CN III Follow-up 3 days: Restricted diffusion in basal ganglia and temporal lobe. Follow-up 10 days: Evolving focal lesions. Cerebellar and temporal lobe volume loss SPINE: Presentation: Long segment cord T2 hyperintensity with central gray predominance and without enhancement. Follow-up 10 days: Atrophy thoracic cord	ADEM-like Neuritis:CN Myelitis	Supportive measures including high dose steroids. Extensive workup for alternate diagnoses negative	Incomplete resolution at discharge with facial weakness, ptosis, ophthalmoplegia, dysphagia, not standing without support. Relapse at 3 months after weaning steroids.
38	4.17 M	None	Seizures, facial palsy, four limb dysfunction, skin rash. PCR negative.	BRAIN: T2 hyperintense lesions cerebral cortex and thalamus. No enhancement.	ADEM-like	High dose steroids Anti-MOG positive	Improvement 2.5 months after presentation with mild cerebellar ataxia.

Table 8: Category 4 indeterminate time period cases not fulfilling either acute COVID-19 or MIS-C (PIMS-TS) criteria. White: Vasculitic-thrombotic. Light gray: Neuritis with or without cerebellitis. Intermediate gray: ADEM-like with or without neuritis and myelitis.

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