



Corrigendum

Corrigendum to ‘Encephalopathy in COVID-19 patients; viral, parainfectious, or both?’ [eNeurologicalSci(Volume 21), December 2020, 100275]



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The authors regret the following:

1) Omission in the spinal fluid data, listed in [Table 1](#) <SARS-CoV 2 RT-PCR, please insert “Not detected” for case 3>

2) [Table 2](#), in the first column for Case 3 this sentence should be deleted <No neurological symptoms during viraemia period>.

3) Fig. A in appendix, Case 3’s timeline the phrase “persistent delirium” has been placed wrongly. It should be after the marker for day 23 and not before. We would like to clarify that for Case 1, the SARS-

CoV-2 RT-PCR results on days 11 and 14 were in serum. Endotracheal RT-PCR became negative on day 32. 4) And for Case 3, the days depicted were calculated from date of hospital admission; patient’s symptoms started about 2 days before admission. Hence, the median latency from onset of respiratory symptoms to the point when encephalopathy was suspected should be 25 not 23 days in Section 5.

The authors would like to apologise for any inconvenience caused.

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Table 1

Summary of relevant investigations.

	Case 1		Case 3
Spinal fluid analysis			
Cell count (cells/uL)	Day 30 RBC -22 Nucleated cells –6 Neutrophils 0% Lymphocytes 41% Monocytes 59%	Day 37 RBC -9 Nucleated cells – 6 Neutrophils 0% Lymphocytes 57% Monocytes 42%	Day 67 RBC -1 Nucleated cells <1
Protein (0.10–0.40 g/L)	0.56	0.76	0.49
Glucose (2.5–5.5 mmol/L)	2.7	3.8	5.3
Microscopy	Clear and colourless	Clear and colourless	Clear and colourless
SARS-CoV RT-PCR	Not detected	Not detected	Not detected
SARS-CoV viral culture		Not detected	
SARS-CoV IgG		Not detected	
HSV DNA PCR	Not detected		Not detected
CMV DNA PCR	Not detected		Not detected
VZV DNA PCR	Not detected		Not detected
VDRL	Not done		Negative
Oligoclonal bands	Negative		Not done
Autoimmune encephalitis panel (CSF)	Negative		Not done
- NMDAR			
- CASPR2			

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Table 1 (continued)

	Case 1	Case 3
- LGI1		
- AMPAR1/2		
- DPPX		
- GABA _B R		
Blood tests		
Syphilis IgG and RPR	Negative	Negative
Autoimmune encephalitis panel (Serum)	Negative	Negative
- NMDAR		
- CASPR2		
- LGI1		
- AMPAR1/2		
- DPPX		
- GABA _B R		
MOG and AQP4 antibodies	Negative	Not done
Paraneoplastic panel (Hu, Yo, Ri, CV2, Amphiphysin, PNMA2/Ta, recoverin, SOX1, titin, zic4, GAD65 and Tr (DNER)	All Negative	Not done
Systemic autoimmune markers		
Anti-nuclear antibodies (ANA) (Normal <80)	Not done	320 titre, Nucleolar pattern
Anti-ds-DNA (0–25 IU/mL)	Normal	40
Anti-Ro (RU/mL)	Negative	Negative
Anti-La (RU/mL)	Negative	Negative
Anti-Sm (RU/mL)	Negative	Negative
Anti-RNP (RU/mL)	Not done	Negative
Anti-Jo1 (RU/mL)	Not done	Negative
Anti-Scl 70 (RU/mL)	Not done	Negative
C3 (0.80–1.60)	1.14	0.67 (low)
C4 (0.17–0.60)	0.15 (low)	0.14 (low)
Anti TPO and antithyroglobulin	Negative	Negative
Pro-thrombotic markers		
Lupus anticoagulant	Inconclusive	Weakly positive
Anti-cardiolipin IgM	Negative	Negative
Anti-cardiolipin IgG (<20 GPL units)	Negative	25
Anti beta2 glycoprotein Ig M	Negative	Negative
Anti beta2 glycoprotein Ig G	Negative	Negative
Protein C, Protein S, Anti thrombin III	Normal	Normal
VWF Antigen (56–160%)	286%	362%
Factor VIII (60–150%)	405%	357%
PT (11.7–14 s)	15	14.2
APTT (27–37 s)	32.9	39.6
D-Dimer (<0.5 µg/mL)	>4	>4
Fibrinogen (1.8–4.5 g/L)	5.7	5.1

Table 2

Pointers that supported direct viral encephalitis versus parainfectious process for the patients' encephalopathy.

	For direct viral invasion	For parainfectious process
Case 1	<p>Patient developed illness close to the time of his documented viremia (Viraemia, at cycle threshold value of 32.22 was documented on day 11; patient noted to be drowsy day 15)</p> <p>Most serological markers of autoimmunity were negative (anti ds DNA, anti-Ro, anti La, Anti-Sm, Anti TPO Ab, Anti thyroglobulin, anti-cardiolipin IgG and IgM)</p> <p>Equivocal olfactory nerve, bulb hyperintensity</p> <p>Spinal cord MRI changes were only subtle</p> <p>RT-PCR and COVID-19 IgG have not been validated in spinal fluid</p> <p>Spinal fluid: no oligoclonal bands</p>	<p>Patient did not improve in spite of clearing virus (ETT SARS-CoV-2 RT-PCR negative 32 and 33 of illness)</p> <p>Some serological markers of autoimmunity were positive (transient lupus anticoagulant positive, mildly low C4)</p> <p>MRI features suggestive of acute disseminated encephalomyelitis</p> <p>Absence of SARS-CoV RT-PCR, and IgG in CSF. Viral culture negative in CSF.</p> <p>Spinal fluid: Only mild increase in cells, protein and borderline low glucose</p>
Case 3	<p>SARS-CoV RT-PCR and serology have not been validated in spinal fluid</p>	<p>Persistent delirium 2 months into illness although SARS CoV-2 RT-PCR negative in ETT on day 12 and stool day 21</p> <p>Serological markers of autoimmunity, ANA, DsDNA, anticardiolipin IgG and Lupus anticoagulant were positive; C3/C4 low</p> <p>MRI lesions suggestive of autoimmune coagulopathy</p> <p>Absence of SARS-CoV-RT- PCR in CSF</p> <p>Spinal fluid: Normal except for mild increase in protein</p>