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Letter to the Editor

Imaging abnormalities in pediatric neuro-COVID are more diverse than specified

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Letter to the Editor

We eagerly read the review by Wong and Toh about the neuroimaging findings in pediatric SARS-CoV-2 infections [1]. It was found that pediatric COVID-19 patients can manifest on neuroimaging with encephalitis, AHNE, ADEM, cytotoxic lesion of the corpus callosum, PRES, venous sinus thrombosis, cerebral vasculitis, GBS, transverse myelitis, and myositis [1]. The study is appealing but raises concerns that require discussion.

Several neuro-imaging abnormalities in pediatric COVID-19 patients were not included.

Not addressed in the review was SARS-CoV-2 associated ischemic stroke [2]. SARS-CoV-2 associated ischemic stroke has been reported in a 15yo and 16yo female and being attributed to multisystem inflammatory syndrome in children (MIS-C), which results from the global immune response to the virus. Both patients responded favourably to immunoglobulins and prednisolone [2].

Not addressed was Wernicke encephalopathy secondary to anosmia and dysgeusia after a SARS-CoV-2 infection [3]. A 15yo female developed intolerability of food intake due to dysgeusia and three months later horizontal gaze palsy, vertical nystagmus, disturbed coordination, and gait ataxia, being attributed to marked thiamine deficiency [3]. FLAIR and DWI modalities of cerebral MRI revealed hyperintensities in the peri-aqueductal grey and dorso-medial thalami, suggesting Wernicke encephalopathy [3].

Not addressed either was pseudotumor cerebri, which has been reported in an 11yo SARS-CoV-2 infected female and manifested with headache, diplopia due to abducens palsy, and papilledema [4].

There was no mentioning of SARS-CoV-2 associated meningitis, which frequently develops in association with encephalitis [5]. or of intra-cerebral haemorrhage and reversible cerebral vaso-constriction syndrome as reported in an 18yo male with COVID-19.

Not discussed was SARS-CoV-2 associated cerebellitis as has been reported in an 11yo male.

Not discussed either was optic neuritis as the presenting manifestation of MIS- C.

Furthermore, there is no reference to subarachnoid bleeding and microbleeds in pediatric COVID-19.

Overall, the interesting review is incomplete and lacks discussion of a number of neuroimaging findings in pediatric COVID-19 patients.

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Conflicts of interest

The authors declare no conflicts of interest.

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