Results A total of 1293 infants were identified over a 5 year period between the two sites. Subgroup analysis of infants with a length of stay ≥ 28 days showed 424 out of 809 infants met biochemical criteria for MBDP (52.4%). The median time to meeting biochemical criteria was 16 days.

Only 54 infants had a documented diagnosis of metabolic bone disease on BadgerNet (4% of all high-risk infants and 6.7% of infants with a length of stay ≥ 28 days); 8 of these babies did not meet biochemical criteria for MBDP.

There were 5 documented fractures (2 humeral and 3 rib fractures), described as incidental findings on routine radiographs.

Conclusions

- The percentage of infants meeting biochemical criteria for MBDP is consistent with published incidence data. Using these biochemical criteria does not overestimate the incidence in this population.
- The median time to meeting biochemical criteria is consistent with published literature and highlights the key period to screen at-risk infants.
- Biochemical MBDP is under-reported on the BadgerNet database. This suggests that increased awareness of MBDP may be required or that biochemical criteria are not being routinely used to make the diagnosis. Caution should be exercised when interpreting BadgerNet data in view of this.
- The documented incidence of fracture related to biochemical MBDP was 1%, well below the published incidence of 10%. This may be due to suboptimal data entry but may also be related to under-recognition of such fractures.

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SERONEGATIVE NMOSD – A POST SARS-COV-2 NEUROLOGICAL COMPLICATION ASSOCIATED WITH PAEDIATRIC MULTISYSTEM INFLAMMATORY SYNDROME (PIMS)?

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Background Neuromyelitis Optica Spectrum Disorder (NMOSD) is an inflammatory demyelinating disease of the central nervous system (CNS) primarily affecting the optic nerves and spinal cord, but also involving other regions of the CNS including the area postrema, periaqueductal gray matter, and hypothalamus. There are limited cases describing the development of NMOSD post SARS-COV-2.

Objectives We present a case of seronegative NMOSD meeting the diagnostic criteria with coronary artery involvement and the probable association of Paediatric Multisystem Inflammatory Syndrome (PIMS)/SARS-COV-2.

Methods A 13-year-old female of Chinese descent met the diagnostic criteria for sero-negative NMOSD:

- Optic neuritis (presented initially with decreased vision right eye, progressed to complete blindness involving both eyes;

optic discs swelling bilaterally) + enhancing focus in left parieto-occipital region

- Area postrema syndrome (intractable vomiting) + enhancing lesion in the left aspect of the dorsal medulla
- Acute brainstem syndrome (autonomic dysfunction, respiratory distress with new-onset squint) + enhancing foci in medulla
- Symptomatic cerebral syndrome (left arm weakness, headache, behaviour change) + several enhancing foci within the cerebral hemisphere and sulcal thickening/oedema enhancement in the right fronto-temporal lobe

She presented initially with headache and behaviour change x8 days; weakness left arm x6 days; loss of vision right eye x6 days; facial numbness x6 days; vomiting x2 days but no preceding viral illness/vaccine. She was initially managed as ADEM/ADS with steroids (imaging at this time revealed cerebral lesions). However, a protracted illness persisted with intractable nausea/vomiting, and development of new symptoms (squint, autonomic dysfunction, respiratory distress). Repeat imaging showed new involvement of the dorsal and ventral medulla. IVIG and rituximab treatment were then commenced.

Results CSF pleocytosis (22 white cells) and elevated protein concentration (131mg/dL) were present.

Anti-MOG and Aquaporin-4 antibodies testing post steroids were negative.

ESR increased to 82 mm/hr and ANA titre was mildly elevated during her illness. ENA, dsDNA titres normal.

COVID-19 IgM antibody level rose to 0.921. Infectious screen negative (Hepatitis studies, HIV, HSV, ASOT).

Neoplastic workup negative (Antineuronal antibodies, CEA, CA-125, AFP, Blood film). MRI pelvis was normal.

Anticardiolipin and lupus anticoagulant antibodies negative.

Interestingly, ECHO done post steroids, IVIG and during rituximab treatment showed moderately dilated left middle coronary artery and severely dilated left anterior descending artery.

Her neurological function has improved post IVIG and rituximab.

Conclusions Due to the evidence of inflammation and neurological and cardiac dysfunction, we question whether this could be a post SARS-COV-2 related presentation of PIMS.

This is our 3rd case in Trinidad & Tobago linking coronary artery and neurological involvement in the same patients possibly in relation to SARS-COV-2.

The other cases:

1) 20-month-old with corpus callosal lesions and right coronary artery ectasia post-treatment

2) 2-year 7-months-old with long segment of cord enlargement with heterogenous appearance from C1 to C6 and dilated coronary arteries/mild mitral regurgitation/pericardial effusion

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OXYGEN SATURATION TARGETING IN INFANTS ON THE NEONATAL UNIT

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