



Reference of the Week

- Abdel-Mannan O. Neurologic and Radiographic Findings Associated With COVID-19 Infection in Children. JAMA neurology. 07.01.2020. <https://jamanetwork.com/journals/jamaneurology/fullarticle/2767979> pdf
Methods: 1. Single UK center retrospective study of subjects < 18 years of age with COVID-19 and neurologic symptoms. 2. The study ultimately analysed children with multisystem inflammatory syndrome in children (MIS-C) who had neurologic changes. 3. Primary outcome: description of neurologic findings in COVID-19 in children.
Findings: 1. 27 children with MIS-C were identified over a 2 month interval and 4 had neurologic symptoms: median age 12 (range, 8-15); and all required PICU, mechanical ventilation, and vasotonic meds. 2. Neuro symptoms: *encephalopathy, headache, dysarthria, dysphagia, meningism, and cerebeller ataxia*. 3. Radiologic findings: MRI signal changes in the splenium of the corpus callosum in all patients with restricted diffusion in 3 of 4 patients. 4. Patients had abnormal EEGs and electromyography (mild myopathic and neuropathic changes), but normal CSF. 5. Limited follow-up suggests improvement over time of central and peripheral neurologic abnormalities but 2 patients were still wheelchair bound.

Other References:

- Moore SE. Six feet apart or six feet under: the impact of COVID-19 on the Black community. Death Studies. 07.01.2020. <https://www.tandfonline.com/doi/full/10.1080/07481187.2020.1785053> pdf
Methods: 1. Literature scan supplemented with detailed case studies on the effect of COVID-19 on the Black community. 2. Case studies are in the form of interviews unpacked by experienced social workers commenting on the social and cultural disruptions that take place on a disenfranchised and low socioeconomic segment of the population.
Findings: 1. Hospital visitation and death rituals disrupted by the pandemic have created a growing populace of surviving family/friends with emotional trauma. 2. Death, dying, and grief practices are colored by a distrust of the healthcare system and the many complexities of family life that are challenging when no restrictions are in place. 3. The disproportionate effect of COVID-19 on Black communities has impact on many levels: the death of a family's primary provider, exposure and illness due to the inherent hazards of essential occupations (transit, waste removal, custodial, delivery, and others), and the cessation of low income service positions jeopardizing income. 4. An appeal to change through voting is made after a brief history of laws that have impeded the Black community vote over centuries.
- Thomas P. Vertical transmission risk of SARS-CoV-2 infection in the third trimester: a systematic scoping review. J of Maternal-Fetal & Neonatal Med. 07.01.2020. <https://www.tandfonline.com/doi/full/10.1080/14767058.2020.1786055?af=R&> pdf
Methods: 1. Medical literature search from January – May 2020. 2. Risk of bias assessment performed following review of each article. 3. Primary interest: evidence of vertical transmission during pregnancy/delivery.
Findings: 1. 18 articles, 157 hospitalized pregnant patients, and 160 neonates were reviewed. 2. 151 patients were PCR +; 6 had COVID-19 compatible courses; 67 had symptoms (72%) with 44 having pre-delivery symptoms; and 1 maternal death. 3. 5 (6%) neonates were PCR +; no neonate tested PCR + at birth but few were tested; 1 neonate died (PCR -). 4. Evidence of SARS-CoV-2 infection was not present in amniotic fluid, cord blood, placenta, neonatal gastric or anal swab, or breastmilk. 5. No evidence of vertical transmission in this retrospective literature review.
- Feldstein LR. Multisystem Inflammatory Syndrome [MIS-C] in U.S. Children and Adolescents. NEJM.06.29.2020. <https://www.nejm.org/doi/full/10.1056/NEJMoa2021680> pdf
Methods: 1. Targeted surveillance for MIS-C at 53 health centers in the U.S. from 03/15 – 05/20/2020. 2. Standardized form across all sites with data submitted into REDCap.
Results: 1. 186 patients identified: median age 8.3 yrs (IQR 3.3-12.5). 2. Most patients had 4 or more organ systems affected with the most common organs involved: GI (72%); CV (80%); heme (72%); mucocutaneous (74%); and resp (70%); 40% met KD or atypical KD definition. 3. Variable treatments used: IgG, steroids, IL-6 inhibitors, IL-1Ra inhibitor; 85% PICU care; 48% of patients required vasoactive medications; 20% mechanical ventilation. 4. 4 patients died (10-16 years) 3 of whom required ECMO. 5. Patients with MIS-C more commonly require CV support (50%) compared to KD patients (5%) and less commonly have coronary artery abnormalities.



SEE THE ARTICLE CABINET ON THE S: DRIVE, “COVID-19 ARTICLE RESOURCE CABINET” FOR CHILDREN’S FULL COLLECTION

- Tenforde MW. [Characteristics of Adult Outpatients and Inpatients with COVID-19: 11 Academic Medical Centers, United States, March-May 2020](https://www.cdc.gov/mmwr/volumes/69/wr/mm6926e3.htm). MMWR. 07.03.2020;69(26):841-846. <https://www.cdc.gov/mmwr/volumes/69/wr/mm6926e3.htm> pdf

Methods: 1. Multistate telephone survey of adult inpatients and outpatients who tested + for SARS-CoV-2. 2. Up to 7 call attempts made and interpreters for 8 languages available. 3. 97% of patients contacted within 3 weeks of a positive test.

Findings: 1. 271 outpatient (median age 42) and 79 inpatient (median age 54) respondents. 2. Inpatients were less likely to be white (19% versus 37%) and have incomes >\$25,000 /yr.

SYMPTOM	OUTPATIENTS N (%)	SYMPTOM	INPATIENTS N (%)
Fatigue	164 (70)	Fatigue	34 (65)
Pleuritic chest pain	43 (74)	Pleuritic chest pain	18 (82)
Cough	147 (62)	Cough	35 (69)
Headache	146 (62)	Shortness of breath	38 (72)
Loss of smell/taste	140 (59)	Fever	36 (68)

Symptoms of significant difference

Table 1. Most common symptoms: outpatient vs inpatient

SYMPTOM	OUTPATIENTS N (%)	INPATIENTS N (%)	p value
shortness of breath	32%	72%	< 0.001
loss of smell/taste	59%	43%	= 0.030
chest pain	42%	25%	= 0.014
vomiting	10%	21%	= 0.027
return to baseline	64%	39%	< 0.001

Table 2.

- Grandbastien M. SARS-CoV-2 pneumonia in hospitalized asthmatic patients did not induce severe exacerbation. J Allergy and Clin Immun in Practice. 06.27.2020 (pre-print). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7320869/> pdf
- Methods:** 1. Retrospective study at one Swiss hospital of adults hospitalized with COVID-19 alone COVID-19 with asthma over a 2 month interval. 2. Assessment of three discrete periods in all patients: pre-symptomatic SARS-CoV-2 infection, pre-hospitalization with symptoms, and hospitalization. 3. Demographics, clinical symptoms, labs, imaging, pulmonary function, and clinical course assessed. 4. Primary interest: relationship of COVID-19 and asthma severity.
- Findings:** 1. 106 COVID-19 patients assessed and compared: 83 non-asthmatics and 23 asthmatics similar in all demographic variables. 2. Asthma patients with COVID-19 had more sneezing, dyspnea, chest tightness, wheezing, and abnormal chest CT findings. 3. In all three assessment periods the asthma patients received more steroids. 4. There were minimal differences in all assessment parameters and it does not appear that SARS-CoV-2 induces asthma exacerbation and asthma does not appear to be a risk factor for poor outcome in patients with COVID-19.

Special Reference:

- Harris S and Scott D. *Why We Stay at Home*. A coronavirus book for children by two medical students. https://27d69637-7884-4b07-a860-4e86d8406e85.filesusr.com/ugd/22785a_4cd8e864678f485096b56f34ed0b56dc.pdf

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