Boletín de Alerta Bibliográfica

COVID-19
Unidad de Desarrollo de la Investigación, Tecnologías y Docencia
Coronavirus disease (COVID-19) is caused by SARS-CoV-2. Physicians in China reported what is believed to be the first adult case of a SARS-CoV-2 infection associated with acute Guillain-Barré syndrome (GBS), followed by five adult Italian patients and another case in the United States of America. In the current report we present one of the first descriptions of an association of GBS and SARS-CoV-2 infection within a child. In our facility, and eleven year old boy presented with typical features of GBS and after five days a morbilliform skin rash over the palms of both hands. Three weeks before the start of the neurological symptoms, the boy had experienced an episode of mild febrile illness with mild respiratory manifestations and a persisting cough. The diagnosis of the SARS-CoV-2 infection was confirmed by oropharyngeal swab on reverse transcription polymerase chain reaction assay. The disease course of our patient strongly suggests a possible relationship between the development of GBS and SARS-CoV-2 infection. The case is discussed in view of the previous case reports with the association of GBS and Covid-19.

Abstract

The COVID-19 pandemic potentially makes treatment of acute leukaemia more difficult. Most induction chemotherapy regimens for acute leukaemia lead to extended periods of cytopaenia and immunosuppression rendering patients vulnerable to opportunistic infections. As with many aspects of SARS-CoV-2, there is no universally accepted way of treating patients who present with acute leukaemia and associated infection.

Doi: 10.1111/camh.12405

Abstract

Italy was the first country in Europe to deal with COVID-19. Measures taken by the government to contain the spread of the virus were based mainly on quarantine and social distancing, with dramatic economic, social and psychological consequences. Since March, Italian children and adolescents are facing school closures, which have caused a disruption in the daily lives of millions of young people and their families. To date, despite the slow reopening, the government has decided to maintain school closures for the entire academic year, leaving the future of young people in uncertainty. There is already some evidence that quarantine and social isolation are having negative impact on children's and adolescents’ psychological well-being. Moreover, this situation will mainly affect those children and adolescents with pre-existing vulnerabilities and those suffering of mental disorders. It is imperative to keep young people’s needs at the core of reconstruction plans, allowing them to return to school safely, and providing them with some strategies to heal and dealing with this stressful and potentially traumatic situation.


Doi: 10.1093/tropej/fmaa044

Abstract

We report the case of a 15-year-old male patient presenting frontal headaches with retro-orbital pain accompanied by fever evolving to weakness and pain of the lower limbs, which ascended to upper limbs. A COVID-19 rapid test (IgG and IgM) and nasopharyngeal swab polymerase chain reaction (PCR) was positive for SARS-CoV-2. The blood tests, cerebral spinal fluid (CSF) analysis and CSF aerobic culture revealed no abnormalities. PCR testing of the CSF was negative for the most prevalent etiologies as well as for SARS-CoV-2. Electroneurography study was compatible with the acute motor axonal neuropathy variant of Guillain-Barré syndrome. No cases involving young patients have been presented to date. Therefore, this is the first reported pediatric case of SARS-CoV-2 infection associated with GBS. Evidence reveals that SARS-CoV-2 infection is not limited to the respiratory tract. Neurotropism could explain this important neurologic manifestation of COVID-19 in children.

   Perspective

   Doi: 10.3345/cep.2020.00955


   Doi: 10.1177/0883073820939387

   Abstract

   Children are susceptible to infection with the novel coronavirus SARS-CoV-2. In this time of uncertainty, this review attempts to compile information that may be helpful to pediatric neurologists. This review consolidates current data on the disease associated with SARS-CoV-2, called COVID-19, and information from past coronavirus epidemics, to discuss diseases of pediatric neurology including Guillain-Barre syndrome (acute inflammatory demyelinating polyradiculoneuropathy); central demyelinating diseases like multiple sclerosis and acute disseminated encephalomyelitis; infantile spasms; febrile seizures; and maternal-fetal transmission of virus.


   Doi: 10.1093/jpids/piaa065

   Abstract

   We evaluated severe acute respiratory syndrome coronavirus 2 RNA clearance in 22 children. The estimation of positivity at day 14 was 52% for nasopharyngeal swab and 31% for stool samples. These data underline the significance of nasopharyngeal and stoolsample for detecting infected children. Additional studies are needed for transmissibility.

Comment

Doi: 10.1080/24694193.2020.1788346


Doi: 10.1007/s00296-020-04645-x

Abstract

Concerns regarding the comorbidity as a significant risk factor for Coronavirus Disease-2019 (COVID-19), gave rise to an urgent need for studies evaluating patients with chronic conditions such as autoinflammatory diseases (AIDs). We prepared a web-based survey investigating the clinical findings and contact histories among pediatric patients with AIDs. Confirmed COVID-19 cases, patients with contact history and those with symptoms which were highly suggestive of COVID-19 were called via phone or recruited to a video or face to face appointment. Data of AIDs were obtained from their medical records, retrospectively. Laboratory and screening findings were confirmed by our national health registry website. There were 404 patients (217 female) eligible for the enrollment. During pandemic, 375 (93%) were on colchicine treatment and 48 (11.8%) were receiving biologic treatment. Twenty-four out of 404 patients were admitted to hospital due to COVID-19 suspicion. Severe acute respiratory syndrome coronavirus-2 (SARS CoV-2) was identified through rhinopharyngeal swabs in seven patients, six of whom were only on colchicine treatment. Only one patient with no finding of any severe respiratory complications was hospitalized. All of seven patients recovered completely. Among patients on biologic drugs, neither a symptom nor a positive polymerase chain reaction test for COVID 19 was detected. In conclusion, pediatric patients with AIDs, those receiving biologic treatment and/or colchicine, may not be at increased risk for neither being infected nor the severe disease course.


Clinical note

Doi: 10.3345/cep.2020.00850

Doi: [10.1007/s41999-020-00356-5](https://doi.org/10.1007/s41999-020-00356-5)

Abstract

**Purpose:** To compare and analyze the clinical and CT features of coronavirus disease 2019 (COVID-19) among four different age groups.

**Methods:** 97 patients (45 males, 52 females, mean age, 66.2 ± 5.0) with chest CT examination and positive reverse transcriptase-polymerase chain reaction test (RT-PCR) from January 17, 2020 to February 21, 2020 were retrospectively studied. The patients were divided into four age groups (children [0-17 years], young adults [18-44 years], middle age [45-59 years], and senior [≥60 years]) according to their age after the diagnosis was made based on PCR test and clinical symptoms.

**Results:** Comorbidities such as hypertension, diabetes mellitus, and heart disease are more common in the senior group. Cluster onset (two or more confirmed cases in a small area) is more common in the children group and senior group. Older patients were found to have a higher incidence of the highest clinical classification (severe or critical) in these four groups. Senior patients have a higher incidence of large/multiple ground-glass opacity (GGO). Child patients are mostly negative for chest CT or with involvement of only one lobe of the lung; while in older patients, there was a higher incidence of involvement of four or five lung lobes. The frequency of lobe involvement was also found to have significant differences in the four age groups.

**Conclusion:** The clinical and imaging features of patients in different age groups were found to be significantly different. A better understanding of the age differences in comorbidities, cluster onset, highest clinical classification, large/multiple GGO, numbers of lobes affected, and frequency of lobe involvement can be useful in the diagnosis of COVID-19 patients of different ages.


Doi: [10.1007/s10096-020-03964-y](https://doi.org/10.1007/s10096-020-03964-y)

Abstract

Viral infections are common complications of pregnancy, with a wide range of obstetric and neonatal sequelae. Currently, there are limited data on whether SARS-CoV-2 is vertically transmitted in pregnant women tested positive for the virus. Here we describe a case of a known SARS-CoV-2-positive woman giving preterm birth to two fetuses with SARS-CoV-2 positive testing in placental tissue and amniotic fluid. The placental histological examinations showed chronic intervillitis and extensive intervillous fibrin deposits with ischemic necrosis of the surrounding villi.

Doi: 10.1016/j.jiph.2020.06.036

Abstract

Background: The various clinical manifestations of COVID-19 with RT-PCR positive patients have been reported. However, the differences in the clinical presentation between children and adults were unclear. Thus, we aimed to investigate the differences in the clinical manifestations and imaging characteristics between Chinese children and adults with COVID-19 by systematically analyzing the data derived from some latest literatures.

Methods: An extensive search of COVID-19 papers was conducted in PubMed and Chinese medical journal network, and relevant articles were selected based on some standard requirements. The included papers were analyzed for differences in clinical manifestation between children and adults with COVID-19 after the quality evaluation with the QUADAS-2 tool. The differences in the clinical features and CT findings were analyzed using a Pearson $\chi^2$ test or Fisher's exact test. Patients who underwent CT examination were divided into the initial examination (0-4days) and follow-up examination groups (5-14 days).

Results: A total of 345 patients (70 children and 275 adults) with RT-PCR (+) were included in our study (5 papers for children and 5 papers for adult groups). Significant differences between children and adults were found in exposure history ($p < 0.001, \chi^2 = 166.890$), fever ($p = 0.016, \chi^2 = 5.757$), white cell count ($p < 0.001, \chi^2 = 14.043$), and CT features in the initial ($p < 0.001, \chi^2 = 60.653$) and follow-up stages ($p < 0.001, \chi^2 = 52.924$); and the involved lung in the follow-up stage ($p < 0.001, \chi^2 = 16.776$).

Conclusions: Some differences have been presented between children and adults with RT-PCR positive COVID-19, which are helpful in the management and protection of children with COVID-19.


Letter


Doi: 10.1007/s00431-020-03736-y

Abstract

The current outbreak of COVID-19 raging globally is taking a heavy toll on the adult population, with a rapidly growing number of newly infected and critically ill patients. However, to date, mortality rate among children is low as they mostly suffer from a mild disease. Yet, other more routinely encountered childhood diseases do not stand still and continue to be the main share of pediatricians’ everyday challenges. Here we describe a case series of routinely seen pediatric diseases with delayed diagnosis due to different aspects of what we call "Corona-phobia". These cases were easily collected within a 1-week period which implies that this is a more widespread phenomenon. In conclusion, this raises the possibility that measures taken to mitigate this pandemic may be more damaging to children overall than the virus itself. We believe that pediatricians as well as policy makers should take this important aspect into consideration.

What is Known: • COVID-19 manifests as a mild disease in most children; however, children are an important reservoir and may become spreaders of the disease. • Social distancing and isolation are important tools in mitigating COVID-19 transmission.

What is New: • This case series describes 7 cases with delayed diagnosis of every-day pediatric diseases that were not caused by COVID-19 but were highly influenced by different aspects of "Corona-phobia". • Our objective is to highlight the possibility that measures taken to mitigate this pandemic may lead to a substantial delay in the diagnosis of other non-COVID-19 related diseases.


Doi: 10.1016/j.jpeds.2020.07.032

Abstract

A 12-year-old female with SARS-CoV-2 infection presented as phlegmasia cerulea dolens with venous gangrene. Emergent mechanical thrombectomy was complicated by a massive pulmonary embolism and cardiac arrest for which extracorporeal cardiopulmonary resuscitation and therapeutic hypothermia were employed. Staged-ultrasound assisted catheter directed thrombolysis was employed for treatment of bilateral pulmonary emboli and the extensive lower extremity deep vein thrombosis while the patient received extracorporeal membrane oxygenation support. We highlight the need for heightened suspicion for occult SARS-CoV-2 infection among children presenting with unusual thrombotic complications.

Commentary
Doi: 10.1080/26410397.2020.1790090


Abstract
One of the most important current medical concerns across the globe is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic, which has been designated by the World Health Organization as a novel viral pneumonia named coronavirus disease 2019 (COVID-19). COVID-19 has substantially affected all aspects of human lives and forced most people to self-quarantine themselves and stay home in order to remain safe. As pediatric dentists as a part of the health care system deferring elective procedures, we are obliged to manage emergency situations such as cellulitis, severe tooth pain, and dental trauma. Therefore, we need to beware of the symptoms and risks of the emerging disease and, accordingly, change the policies in our offices to minimize the risk of transmission while checking up and treating our patients in the safest possible way.

Knowledge Transfer Statement: This article aims to acquaint clinicians treating pediatric patients with COVID-19 hazards and delineate the steps required for minimizing cross-infection in case of providing emergency treatment to children in dental offices.


Letter
Doi: 10.1016/j.cca.2020.07.025

Doi: 10.1542/peds.2020-009399

Abstract

Objective: To describe the epidemiological and clinical characteristics of Coronavirus disease2019 (COVID-19) pediatric cases aged below 18 years in Italy.

Methods: Data from the national case-based surveillance system of confirmed COVID-19 infections until May 8, 2020, were analyzed. Demographic and clinical characteristics of subjects were summarized by age groups (0-1, 2-6, 7-12, 13-18 years), and risk factors for disease severity were evaluated using a multilevel (clustered by region) multivariable logistic regression model. Furthermore, a comparison among children, adults and elderly was performed.

Results: Pediatric cases (3,836) accounted for 1.8% of total infections (216,305), the median age was 11 years, 51.4% were males, 13.3% were hospitalized, and 5.4% presented underlying medical conditions. The disease was mild in 32.4% of cases and severe in 4.3%, particularly in children ≤6 years old (10.8%); among 511 hospitalized patients, 3.5% were admitted in Intensive Care Unit (ICU), and four deaths occurred. Lower risk of disease severity was associated with increasing age and calendar time, whereas a higher risk was associated with pre-existing underlying medical conditions (OR=2.80, 95% CI 1.74-4.48). Hospitalization rate, admission in ICU, disease severity, and days from symptoms onset to recovery significantly increased with age among children, adults and elderly.

Conclusions: Data suggest that pediatric cases of COVID-19 are less severe than adults, however, age ≤1 year and the presence of underlying conditions represent severity risk factors. A better understanding of the infection in children may give important insights into disease pathogenesis, health care practices and public health policies.


Doi: 10.1080/24694193.2020.1787772

Abstract

Emeritus Professor Alan Glasper, from the University of Southampton, discusses what can be done to protect certain groups of children with long-term health conditions from catching SARS-Cov-2 disease caused by the novel coronavirus COVID-19. Furthermore, it is now being reported that a number of children appear to be reacting to the new coronavirus by developing a multisystem hyperinflammatory state with similar symptoms to that seen in toxic shock syndrome and which necessitates intensive care (Campbell & Sample, 2020).

Doi: 10.1159/000509677

Abstract

Children seem to be less severely affected by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) as compared to adults. Little is known about the prevalence and pathogenesis of acute kidney injury (AKI) in children affected by SARS-CoV-2. Dehydration seems to be the most common trigger factor, and meticulous attention to fluid status is imperative. The principles of initiation, prescription, and complications related to renal replacement therapy are the same for coronavirus disease (COVID) patients as for non-COVID patients. Continuous renal replacement therapy (CRRT) remains the most common modality of treatment. When to initiate and what modality to use are dependent on the available resources. Though children are less often and less severely affected, diversion of all hospital resources to manage the adult surge might lead to limited CRRT resources. We describe how these shortages might be mitigated. Where machines are limited, one CRRT machine can be used for multiple patients, providing a limited number of hours of CRRT per day. In this case, increased exchange rates can be used to compensate for the decreased duration of CRRT. If consumables are limited, lower doses of CRRT (15-20 mL/kg/h) for 24 h may be feasible. Hypercoagulability leading to frequent filter clotting is an important issue in these children. Increased doses of unfractionated heparin, combination of heparin and regional citrate anticoagulation, or combination of prostacyclin and heparin might be used. If infusion pumps to deliver anticoagulants are limited, the administration of low-molecular-weight heparin might be considered. Alternatively in children, acute peritoneal dialysis can successfully control both fluid and metabolic disturbances. Intermittent hemodialysis can also be used in patients who are hemodynamically stable. The keys to successfully managing pediatric AKI in a pandemic are flexible use of resources, good understanding of dialysis techniques, and teamwork.


Letter

Doi: 10.1002/ppul.24927

Letter

Doi: 10.1002/ppul.24927


Doi: 10.1177/0706743720940562

Abstract

Objectives: The current novel coronavirus disease of 2019 (COVID-19) pandemic presents a time-sensitive opportunity to rapidly enhance our knowledge about the impacts of public health crises on youth mental health, substance use, and well-being. This study examines youth mental health and substance use during the pandemic period.

Methods: A cross-sectional survey was conducted with 622 youth participants across existing clinical and community cohorts. Using the National Institute of Mental Health-developed CRISIS tool and other measures, participants reported on the impacts of COVID-19 on their mental health, substance use, and other constructs.

Results: Reports of prepandemic mental health compared to intrapandemic mental health show a statistically significant deterioration of mental health across clinical and community samples (P < 0.001), with greater deterioration in the community sample. A total of 68.4% of youth in the clinical sample and 39.9% in the community sample met screening criteria for an internalizing disorder. Substance use declined in both clinical and community samples (P < 0.001), although 23.2% of youth in the clinical sample and 3.0% in the community sample met screening criteria for a substance use disorder. Participants across samples report substantial mental health service disruptions (48.7% and 10.8%) and unmet support needs (44.1% and 16.2%). Participants report some positive impacts, are using a variety of coping strategies to manage their wellness, and shared a variety of ideas of strategies to support youth during the pandemic.

Conclusions: Among youth with histories of mental health concerns, the pandemic context poses a significant risk for exacerbation of need. In addition, youth may experience the onset of new difficulties. We call on service planners to attend to youth mental health during COVID-19 by bolstering the accessibility of services. Moreover, there is an urgent need to engage young people as coresearchers to understand and address the impacts of the pandemic and the short, medium, and long terms.

Doi: [10.1111/petr.13805](http://10.1111/petr.13805)

**Abstract**

**Objectives:** Pediatric transplant recipients may be at increased risk of developing serious infections due to Coronavirus disease (COVID) 19. We undertook a web-based survey among parents of post-liver transplant pediatric patients to assess knowledge and concerns regarding COVID-19 pandemic and impact of social media on them.

**Methods:** This cross-sectional online survey was conducted between 21st to 26th March 2020. A 19-item questionnaire was sent to 172 parents of post-liver transplant children.

**Results:** 106 (62%) of parents responded. Median time since transplant was 31 (12-52) months. The majority of parents had good understanding regarding symptomatology and routes of transmission. Only 27% were aware of feco-oral transmission and 34% knew about gastrointestinal symptoms of COVID-19. 100% of parents understood concept of social distancing and 70% knew that asymptomatic individuals can transmit the virus. Television followed by newspapers was the main source of their information, though over 40% claim to regularly receive information through social media. 87% would consult their doctor if the child had a flu-like symptoms rather than modify immunosuppression or try alternative medications. Parental concerns mainly revolved around early recognition of symptoms, queries on unconventional treatments circulating over social media and supply of medications during the lockdown period.

**Conclusions:** The Majority of parents had basic understanding of COVID-19 pandemic. Social media appeared to be an important source of information. Results from this survey helped us in modifying patient care protocols to ensure continuity of care while maintaining social distancing.


**Correspondence**

Doi: [10.1016/j.dld.2020.06.030](http://10.1016/j.dld.2020.06.030)

Doi: 10.1111/jth.15013

Abstract

We are overwhelmed by scientific publications on clinical observations, virology and epidemiology of SARS-CoV-2 infections. There is a growing body of evidence that hypercoagulability complicates COVID-19, probably contributing to poor prognosis.


Doi: 10.2215/cjn.03630320

Abstract

Background and objectives: During the coronavirus disease 2019 outbreak, the treatment of families with children on long-term KRT is challenging. This study was conducted to identify the current difficulties, worries regarding the next 2 months, and mental distress experienced by families with children on long-term KRT during the coronavirus disease 2019 outbreak and to deliver possible management approaches to ensure uninterrupted treatment for children on long-term KRT.

Design, setting, participants, & measurements: A multicenter online survey was conducted between February 10 and 15, 2020, among the families with children on long-term KRT from five major pediatric dialysis centers in mainland China. The primary caregivers of children currently on long-term KRT were eligible and included. Demographic information, severe acute respiratory syndrome coronavirus 2 infection status, current difficulties, and worries regarding the next 2 months were surveyed using a self-developed questionnaire. The Patient Health Questionnaire-9 and the General Anxiety Disorder Scale-7 were used to screen for depressive symptoms and anxiety, respectively.

Results: Among the children in the 220 families included in data analysis, 113 (51%) children were on dialysis, and the other 107 (49%) had kidney transplants. No families reported confirmed or suspected cases of coronavirus disease 2019. Overall, 135 (61%) and 173 (79%) caregivers reported having difficulties now and having worries regarding the next 2 months, respectively. Dialysis supply shortage (dialysis group) and hard to have blood tests (kidney transplantation group) were most commonly reported. A total of 29 (13%) caregivers had depressive symptoms, and 24 (11%) had anxiety. After the survey, we offered online and offline interventions to address their problems. At the time of the submission of this paper, no treatment interruption had been reported.

Conclusions: The coronavirus disease 2019 outbreak has had physical, mental, logistical, and financial effects on families with children on long-term KRT.

Letter

Doi: 10.1002/pbc.28595


https://www.indianpediatrics.net/COVID29.03.2020/SA-00208.pdf

Abstract

The pandemic of COVID-19 initially appeared to cause only a mild illness in children. However, it is now apparent that a small percentage of children can develop a hyperinflammatory syndrome labeled as Pediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2 (PIMS-TS). Features of this newly recognized condition may include persistent fever, evidence of inflammation, and single or multi organ dysfunction in the absence of other known infections. Some of these children may share features of Kawasaki disease, toxic shock syndrome or cytokine storm syndrome. They can deteriorate rapidly and may need intensive care support as well. The PCR test is more often negative although most of the children have antibodies to SARS-CoV-2. Although the pathogenesis is not clearly known, immune-mediated injury has been implicated. We herein provide current information on this condition, in order to raise awareness amongst pediatricians.


Doi: 10.1513/annalsats.202006-589ip

Letter

Doi: 10.1136/bmj.m2806


Doi: 10.1186/s12916-020-01692-w

**Abstract**

**Background:** School closures have been enacted as a measure of mitigation during the ongoing coronavirus disease 2019 (COVID-19) pandemic. It has been shown that school closures could cause absenteeism among healthcare workers with dependent children, but there remains a need for spatially granular analyses of the relationship between school closures and healthcare worker absenteeism to inform local community preparedness.

**Methods:** We provide national- and county-level simulations of school closures and unmet child care needs across the USA. We develop individual simulations using county-level demographic and occupational data, and model school closure effectiveness with age-structured compartmental models. We perform multivariate quasi-Poisson ecological regressions to find associations between unmet child care needs and COVID-19 vulnerability factors.

**Results:** At the national level, we estimate the projected rate of unmet child care needs for healthcare worker households to range from 7.4 to 8.7%, and the effectiveness of school closures as a 7.6% and 8.4% reduction in fewer hospital and intensive care unit (ICU) beds, respectively, at peak demand when varying across initial reproduction number estimates by state. At the county level, we find substantial variations of projected unmet child care needs and school closure effects, 9.5% (interquartile range (IQR) 8.2-10.9%) of healthcare worker households and 5.2% (IQR 4.1-6.5%) and 6.8% (IQR 4.8-8.8%) reduction in fewer hospital and ICU beds, respectively, at peak demand. We find significant positive associations between estimated levels of unmet child care needs and diabetes prevalence, county rurality, and race (p<0.05). We estimate costs of absenteeism and child care and observe from our models that an estimated 76.3 to 96.8% of counties would find it less expensive to provide child care to all healthcare workers with children than to bear the costs of healthcare worker absenteeism during school closures.

**Conclusions:** School closures are projected to reduce peak ICU and hospital demand, but could disrupt healthcare systems through absenteeism, especially in counties that are already particularly vulnerable to COVID-19. Child care subsidies could help circumvent the ostensible trade-off between school closures and healthcare worker absenteeism.

Doi: 10.1093/cid/ciaa977

Abstract

**Background:** Health-care workers (HCW) have paid a heavy toll to the coronavirus disease-19 (COVID-19) outbreak. Routes of transmission remain to be fully understood.

**Methods:** This prospective study compared a 1,500-bed adult and a 600-bed pediatric setting of a tertiary-care university hospital located in central Paris. From February 24th until April 10th, 2020, all symptomatic HCW were screened for severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) on a nasopharyngeal swab. HCW screened positive were questioned on their profession, symptoms, occupational and non-occupational exposures to SARS-CoV-2.

**Results:** Among 1344 HCW tested, 373 were positive (28%) and 336 (90%) corresponding questionnaires were completed. Three hospitalizations and no death were reported. Most HCW (70%) had patient-facing occupational activities (22% in COVID-19 dedicated units). The total number of HCW cases peaked on March 23rd, then decreased slowly, concomitantly with a continuous increase of compliance to preventive measures (including universal medical masking and personal protective equipment (PPE) for direct care to COVID-19 patients). Attack rates were of 3.2% and 2.3% in the adult and pediatric setting, respectively (p=0.0022). In the adult setting, HCW more frequently reported exposure to COVID-19 patients without PPE (25% versus 15%, p=0.046). Report of contacts with children attending out-of-home care facilities dramatically decreased over the study period.

**Conclusion:** Universal masking, reinforcement of hand hygiene, and PPE with medical masks for patients' care allowed protection of HCW and containment of the outbreak. Residual transmissions were related to persistent exposures with undiagnosed patients or colleagues and not to contacts with children attending out-of-home care facilities.


Doi: 10.1080/09674845.2020.1785102

Abstract

Typical presentations of Coronavirus Disease 2019 (Covid-19) including respiratory symptoms (cough, respiratory distress and hypoxia), fever and dyspnoea are considered main symptoms in adults, but atypical presentation in children could be a diagnostic challenge. We report three children whose initial presentation was gastrointestinal, and in whom Covid-19 infection was found, concluding that cases of acute appendicitis, mesenteric adenitis and flank tenderness may mask an infection with this virus, and should therefore be investigated.

DOI: 10.1016/j.jpeds.2020.07.039

Abstract

Objectives: To describe the clinical manifestations and outcomes of critically ill children with coronavirus disease-19 (COVID-19) in New York City.

Study design: Retrospective observational study of children 1 month to 21 years admitted March 14 to May 2, 2020 to 9 New York City pediatric intensive care units (PICUs) with SARS-CoV-2 infection.

Results: Of 70 children admitted to PICUs: median age 15 [IQR 9, 19] years; 61.4% male; 38.6% Hispanic; 32.9% Black; 74.3% with comorbidities. Fever (72.9%) and cough (71.4%) were the common presenting symptoms. Twelve patients (17%) met severe sepsis criteria; 14 (20%) required vasopressor support; 21 (30%) developed acute respiratory distress syndrome (ARDS); 9 (12.9%) met acute kidney injury criteria; 1 (1.4%) required renal replacement therapy, and 2 (2.8%) had cardiac arrest. For treatment, 27 (38.6%) patients received hydroxychloroquine; 13 (18.6%) remdesivir; 23 (32.9%) corticosteroids; 3 (4.3%) tocilizumab; 1 (1.4%) anakinra; no patient was given immunoglobulin or convalescent plasma. Forty-nine (70%) patients required respiratory support: 14 (20.0%) non-invasive mechanical ventilation, 20 (28.6%) invasive mechanical ventilation (IMV), 7 (10%) prone position, 2 (2.8%) inhaled nitric oxide, and 1 (1.4%) extracorporeal membrane oxygenation. Nine (45%) of the 20 patients requiring IMV were extubated by day 14 with median IMV duration of 218 [IQR 79, 310.4] hours. Presence of ARDS was significantly associated with duration of PICU and hospital stay, and lower probability of PICU and hospital discharge at hospital day 14 (P < .05 for all).

Conclusions: Critically ill children with COVID-19 predominantly are adolescents, have comorbidities, and require some form of respiratory support. The presence of ARDS is significantly associated with prolonged PICU and hospital stay.


Editorial

DOI: 10.3345/cep.2020.01074
 ⇒ Saha J, Chouhan P. Indoor air pollution (IAP) and pre-existing morbidities among under-5 children in India: are risk factors of coronavirus disease (COVID-19)? Environ Pollut. 2020 Jul 15;266(Pt 2):115250.

Doi: 10.1016/j.envpol.2020.115250

Abstract

Globally, the Coronavirus disease (COVID-19) outbreak is linked with air pollution of both indoor and outdoor environments and co-morbidities conditions of human beings. To find out the risk factor zones associated with Coronavirus disease among under-five children using pre-existing morbidity conditions and indoor air pollution (IAP) environmental factors and also with current fatality and recovery rate of COVID-19 disease in India. Data was utilized from the 4th round of the National Family Health Survey (NFHS), 2015-16, and from the Ministry of Health and Family Welfare (MoHFW) on 18th May 2020. Mean, standard deviation, and Z-score statistical methods have been employed to find out the risk factor zones i.e. to execute the objective. Findings of this study are, the states and UTs which have more likely to very higher to higher risk factors or zones of Coronavirus disease (COVID-19) are Mizoram (1.4), Meghalaya (1.27), Uttarakhand (0.92), West Bengal (0.73), Uttar Pradesh (0.66), Jammu and Kashmir (0.44), Odisha (0.33), Madhya Pradesh (0.21), Jharkhand (0.20), Bihar (0.19), Maharashtra (0.16 risk score), compared to UTs like Assam (-0.12), Rajasthan (-0.13), Goa (-0.14), Manipur (-0.17), Chandigarh (-0.19), Haryana (-0.22), Delhi (-0.27) have moderate risk factors of COVID-19, and the states and UTs like Daman and Diu (-1.18), Sikkim (-0.98), Andaman and Nicobar Islands (-0.84), Kerala (-0.69), Dadra and Nagar Haveli (-0.68), Arunachal Pradesh (0.53), Karnataka (-0.42), and Nagaland (-0.36) have very low-risk zones of COVID-19 deaths. From a research viewpoint, there is a prerequisite need for epidemiological studies to investigate the connection between indoor air pollution and pre-existing morbidity which are associated with COVID-19. Well-built public health measures, including rapidly searching in high focus areas and testing of COVID-19, should be performed in vulnerable areas of COVID-19.


Doi: 10.1038/s41390-020-1065-5

Abstract

At the time of writing, there are already millions of documented infections worldwide by the novel coronavirus 2019 (2019-nCoV or severe acute respiratory syndrome coronavirus 2 (SARS-CoV2)), with hundreds of thousands of deaths. The great majority of fatal events have been recorded in adults older than 70 years; of them, a large proportion had comorbidities. Since data regarding the epidemiologic and clinical characteristics in neonates and children developing coronavirus disease 2019 (COVID-19) are scarce and originate mainly from one country (China), we reviewed all the current literature from 1 December 2019 to 7 May 2020 to provide useful information about SARS-CoV2 viral biology, epidemiology, diagnosis, clinical features, treatment, prevention, and hospital organization for clinicians dealing with this selected population.

Doi: 10.1177/0883073820940189

Abstract

Objective: To evaluate the effect of the COVID-19 pandemic on global access to care and practice patterns for children with epilepsy.

Methods: We conducted a cross-sectional, online survey of pediatric neurologists across the world affiliated with the International Child Neurology Association, the Chinese Child Neurology Society, the Child Neurology Society, and the Pediatric Epilepsy Research Consortium. Results were analyzed in relation to regional burden of COVID-19 disease.

Results: From April 10 to 24, 2020, a sample of 212 respondents from 49 countries indicated that the COVID-19 pandemic has dramatically changed many aspects of pediatric epilepsy care, with 91.5% reporting changes to outpatient care, 90.6% with reduced access to electroencephalography (EEG), 37.4% with altered management of infantile spasms, 92.3% with restrictions in ketogenic diet initiation, 93.4% with closed or severely limited epilepsy monitoring units, and 91.3% with canceled or limited epilepsy surgery. Telehealth use had increased, with 24.7% seeing patients exclusively via telehealth. Changes in practice were related both to COVID-19 burden and location.

Conclusions: In response to COVID-19, pediatric epilepsy programs have implemented crisis standards of care that include increased telemedicine, decreased EEG use, changes in treatments of infantile spasms, and cessation of epilepsy surgery. The long-term impact of these abrupt changes merit careful study.


Doi: 10.1080/13561820.2020.1791809

Abstract

The COVID-19 pandemic has created multiple, complex and intense demands on hospitals, including the need for surge planning in the many locations outside epicenters such as northern Italy or New York City. We here describe such surge planning in an Academic Health Center that encompasses a children’s hospital. Interprofessional teams from every aspect of inpatient care and hospital operations worked to prepare for a COVID-19 surge. In so doing, they successfully innovated ways to integrate pediatric and adult care and maximize bed capacity. The success of this intense collaborative effort offers an opportunity for ongoing teamwork to enhance efficient, effective, and high-quality patient care.

Doi: 10.1016/j.aap.2020.105686

Abstract

Introduction: Understanding who heeds the driving-related COVID-19 restrictions is critical for assisting public health professionals improve response to this and future pandemic events. The purpose of the current study was to characterize driving behavior changes among adolescents as a function of COVID-19 restrictions. It was hypothesized that adolescent driving would be reduced by COVID-19 restrictions, especially for younger teens, non-minorities, females, non-working teens, and those with higher prosocial tendencies.

Methods: Participants were licensed drivers in "REACT," a longitudinal study of adolescent driving attention. Upon enrollment in REACT, drivers were required to be age 16 or 18, have been issued a driver’s license within the last two weeks, and be fluent in written/spoken English. The current observational cohort study was of drivers reporting driving exposure between February 8 and April 22, 2020. Linear mixed-effects models estimated differences in driving changes between COVID-19 periods.

Results: Results indicated a decrease across pre-COVID-19 period (February 8 - March 13, 2020) in days driven per week and vehicle miles driven (VMD) was explained by the change of slope post-COVID-19 restrictions (March 14 - April 22, 2020). Post-COVID-19, driving days per week decreased by 37 % and VMD decreased by 35 %. This decrease was lower in ethnic minorities, older adolescents, and employed adolescents. Those with greater dire prosocial tendencies showed greater post-COVID-19 driving decline.

Discussion: Findings provide early evidence of COVID-19 restriction-related adolescent driving changes suggesting older, employed, minority teens and teens with lower prosocial tendencies are less likely to reduce driving behavior. These observations provide a foundation for more extensive studies of adolescent drivers during various driving and contact restrictions and inform future public health campaigns for social distancing.


Doi: 10.1016/j.jpeds.2020.07.042
Coronavirus disease 2019 or COVID-19 is an emerging viral disease caused by a member of the betacoronavirus family, SARS-CoV-2. Since its' emergence in December 2019, it has rapidly caused close to half a million fatalities globally. Data regarding the impact of COVID-19 on pregnancy are limited. Here, we review pathological findings in placentas from women who tested positive for SARS-CoV-2 as well as information on pregnancy outcomes associated with related and highly pathogenic coronaviruses (i.e, severe acute respiratory syndrome (SARS-CoV) and the Middle East respiratory syndrome, MERS). We present immune-inflammatory correlates of COVID-19 in pregnancy and review the role of the Renin Angiotensin System in the pathogenesis of COVID-19 in pregnancy. Greater understanding of the pathogenesis of SARS-CoV2 in the placenta will yield important insight into potential therapeutic interventions for pregnant women with COVID-19.

Doi: 10.1111/camh.12408

Abstract

The coronavirus disease 2019 (COVID-19) pandemic has brought about healthcare, economic, and psychological crises around the world. The psychological impact on adolescents is likely going to be uneven across different societies, as cultures vary in terms of their dominant learning style that may influence how people cope with uncertainty and perceive their sense of control. We postulate that for adolescents in individualistic cultures where individual learning prevails, their sense of control might be undermined by societal disease-control regulations that restrict personal freedoms, while adolescents’ sense of control might increase via participating in societal preventive efforts in collectivistic cultures where social learning is more prevalent. Individual differences regarding one’s sense of control would, in turn, have implications for adolescents’ short-term adjustments to COVID-19-related challenges and their future development.


Doi: 10.1111/pai.13322

Abstract

The current pandemic of the novel SARS-CoV-2 infection has affected over 10 million humans around the planet. The clinical manifestations of Coronavirus disease 2019 (COVID-19) are diverse, ranging from asymptomatic or mild flu-like symptoms to atypical pneumonia, severe respiratory distress syndrome, systemic inflammation, immune dysregulation and coagulopathy.


Doi: 10.1111/apa.15491

Abstract

We complement the discussion by Brindisi et al. on the management of allergic rhinitis in children amid novel coronavirus disease 2019 (COVID-19) pandemic. Brindisi et al. presented a well-reasoned discussion on the use of intranasal corticosteroids and allergen immunotherapy in children with allergic rhinitis amid COVID-19 pandemic where they recommend continuation of the former while withholding of the latter upon risk-benefit assessment.

Doi: 10.1016/j.jadohealth.2020.06.018

Abstract

Purpose: The overarching goal of this study was to provide key information on how adolescents' substance use has changed since the corona virus disease (COVID)-19 pandemic, in addition to key contexts and correlates of substance use during social distancing.

Methods: Canadian adolescents (n = 1,054, Mage = 16.68, standard deviation = .78) completed an online survey, in which they reported on their frequency of alcohol use, binge drinking, cannabis use, and vaping in the 3 weeks before and directly after social distancing practices had taken effect.

Results: For most substances, the percentage of users decreased; however, the frequency of both alcohol and cannabis use increased. Although the greatest percentage of adolescents was engaging in solitary substance use (49.3%), many were still using substances with peers via technology (31.6%) and, shockingly, even face to face (23.6%). Concerns for how social distancing would affect peer reputation was a significant predictor of face-to-face substance use with friends among adolescents with low self-reported popularity, and a significant predictor of solitary substance use among average and high popularity teens. Finally, adjustment predictors, including depression and fear of the infectivity of COVID-19, predicted using solitary substance use during the pandemic.

Conclusions: Our results provide preliminary evidence that adolescent substance use, including that which occurs face to face with peers, thereby putting adolescents at risk for contracting COVID-19, may be of particular concern during the pandemic. Further, solitary adolescent substance use during the pandemic, which is associated with poorer mental health and coping, may also be a notable concern worthy of further investigation.


Letter

Doi: 10.1016/j.pedn.2020.06.016


Abstract

Background: Over 4.2 million confirmed cases and more than 285,000 deaths, COVID-19 pandemic continues to harm significant number of people worldwide. Several studies have reported the impact of COVID-19 in general population; however, there is scarcity of information related to pharmacological management and maternal and perinatal outcomes during the pandemic. Altered physiological, anatomical, and immunological response during pregnancy makes it more susceptible to infections. Furthermore, during pregnancy, a woman undergoes multiple interactions with the health care system that increases her chance of getting infected; therefore, managing pregnant population presents a unique challenge.

Research questions: This systematic review seeks to answer the following questions in relation to COVID-19: What are the different clinical characteristics presented in maternal and perinatal population? What are the different maternal and perinatal outcome measures reported? What are the distinct therapeutic interventions reported to treat COVID-19? Is it safe to use "medications" used in the treatment of COVID-19 during antenatal, perinatal, postnatal, and breastfeeding?

Method: The search will follow a comprehensive, sequential three step search strategy. Several databases relevant to COVID-19 and its impact on pregnancy including Medline, CINAHL, and LitCovid will be searched from the inception of the disease until the completion of data collection. The quality of this search strategy will be assessed using Peer Review of Electronic Search Strategies Evidence-Based Checklist (PRESS EBC). An eligibility form will be developed for a transparent screening and inclusion/exclusion of studies. All studies will be sent to RefWorks, and abstraction will be independently performed by two researchers. Risk of bias will be assessed using Cochrane Risk of Bias tool for randomized controlled trials, Newcastle-Ottawa Quality Assessment Scale for non-randomized studies, and for case reports, Murad et al. tool will be used. Decision to conduct meta-analysis will be based on several factors including homogeneity and outcome measures reported; otherwise, a narrative synthesis will be deemed appropriate.

Discussion: This systematic review will summarize the existing data on effect of COVID-19 on maternal and perinatal population. Furthermore, to the best of our knowledge, this is the first systematic review addressing therapeutic management and safety of medicines to treat COVID-19 during pregnancy and breastfeeding.

Systematic review registration: This systematic review has been registered and published with Prospero ( CRD42020172773 ).
Abu Raya B, Giles ML, Sadarangani M. Vertical Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 From the Mother to the Infant. JAMA Pediatr. 2020 Jul 20.


Doi: 10.1111/pedi.13084

Abstract

Background: COVID-19 is an infectious disease that started in Wuhan, China in late 2019 and later spread around the world. Diabetes has been recognized as a possible risk factor for COVID-19 complications.

Objective: ISPAD investigated perceptions, challenges and experience of healthcare professionals (HCP) taking care of children and young people with diabetes world-wide during COVID-19 pandemic.

Methods: From 21st April to 17th May 2020, during COVID-19 pandemic, a web-based survey was sent to ISPAD members and former participants of ISPAD conferences by email.

Results: Responders from 215 diabetes centres from 75 countries completed the survey. Majority were from UK (35; 16.3%), USA (20; 9.3%) and India (15; 7%). HCP were mostly pediatric endocrinologists (64%). During COVID-19 pandemic, 16.5% of responders continued face-to-face consultation while most changed to telephone (32%) or video (18%) consultations. 19% reported a shortage of medical supplies. 22% reported a delay in diagnosis of patients with new-onset diabetes, while 15% reported a higher incidence of DKA. 12% reported having one or more patients with COVID-19. Most of the 86 children and adolescents with diabetes and COVID-19 had only mild/moderate symptoms, while 5 required admission to an intensive care unit. No deaths were reported.

Conclusions: This large global survey during COVID-19 pandemic showed that many HCP adapted to the pandemic by resorting to telemedicine. One fourth of HCP reported delays in diagnosis and an increased rate of DKA. The emergence of COVID-19 pandemic had an important impact on family's behaviour that might have led to increase in DKA presentation. This article is protected by copyright.

Doi: 10.1002/jmv.26310

Abstract

Brunei Darussalam documented its first pediatric (≤ 12 years) case of the novel Corona Virus Disease 2019 (COVID-19) on the 10th March 2020 and to date, there is a total of 12 confirmed cases. All were diagnosed through contact tracing of family members, typically fathers. All remained stable during their hospitalization. Most (75%) had mild symptoms and did not require specific treatment for COVID-19. The median length of hospitalization was 14 days (the duration of required isolation). In summary, we reported a higher incidence of COVID-19 in children, but with mild manifestations and no sequelae or complications on follow up. This article is protected by copyright.


Comment & Response


Doi: 10.3346/jkms.2020.35.e255

Abstract

Quarantine often provokes negative psychological consequences. Thus, we aimed to identify the psychological and behavioral responses and stressors of caregivers quarantined with young patients after a close contact to a coronavirus disease 2019 case at a children’s hospital. More than 90% of the caregivers reported feelings of worry and nervousness, while some of them reported suicidal ideations (4.2%), and/or homicidal ideations (1.4%). Fear of infection of the patient (91.7%) and/or oneself (86.1%) were most frequently reported stressors. A multidisciplinary team including infection control team, pediatrician, psychiatrist, nursing staff and legal department provided supplies and services to reduce caregiver’s psychological distress. Psychotropic medication was needed in five (6.9%), one of whom was admitted to the psychiatry department due to suicidality. Quarantine at a children's hospital makes notable psychological impacts on the caregivers and a multidisciplinary approach is required.
Lo Vecchio A. Vertical Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 From the Mother to the Infant. JAMA Pediatr. 2020 Jul 20.
Comment & Response

Comment
Doi: 10.1038/s41390-020-1067-3

Comment & Response

Owa AB, Owa OT. Vertical Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 From the Mother to the Infant. JAMA Pediatr. 2020 Jul 20.
Comment & Response

Editorial

Doi: 10.1007/s00383-020-04721-0

Abstract

Covid-19 pandemic has significantly challenged the healthcare delivery across the world. Surgery departments across the country responded to this challenge by halting all non-emergency procedures. This delay in diagnosis and management of surgical disease could result in significant mortality and morbidity among the most vulnerable population-the children. In this manuscript, we discuss the measures adopted as well as the challenges faced by the pediatric surgery department at Aga Khan University Hospital, Karachi (AKUH), Pakistan, which is a private, not-for-profit entity and providing optimum surgical care to the patients. We also underscore the need for global strategies for tackling such crisis.


Doi: 10.37201/req/064.2020

Resumen

Antecedentes: La aparición de nuevas enfermedades infecciosas, como el COVID-19, supone un reto en el seguimiento de la gestación y la prevención de complicaciones obstétricas y neonatales. La revisión exploratoria tiene el objetivo de revisar la información disponible en mujeres embarazadas infectadas por los coronavirus MERS-CoV, SARS-CoV, SARS-CoV-2 para evaluar las similitudes y diferencias en las características clínicas de las madres y los resultados neonatales.

Métodos: Realizamos una búsqueda bibliográfica (revisión exploratoria) acorde a las pautas de PRISMA entre marzo y abril del 2020 en las bases de datos de MEDLINE, SciELO, y CUIDEN y el Centro de Información sobre el COVID-19 de Elsevier.

Resultados: Analizamos 20 artículos con un total de 102 casos: 9 de MERS-CoV, 14 de SARS-CoV y 79 de SARS-CoV-2. La fiebre (75,5%) y la neumonía (73,5%) resultaron ser los síntomas más frecuentes en las gestantes infectadas. Las complicaciones obstétricas más frecuentes fueron la amenaza de parto prematuro (23,5%) y la cesárea (74,5%). No se documentó ninguna transmisión vertical en los neonatos.

Conclusiones: Los tres coronavirus producen una neumonía con sintomatología muy similar, resultando más leve en el caso de SARS-CoV-2. A pesar de las complicaciones obstétricas documentadas, los resultados neonatales son favorables en su mayoría. Es preciso aumentar el conocimiento para mejorar y prevenir las complicaciones obstétricas y neonatales de estas infecciones en mujeres embarazadas.

Letter

Doi: 10.1093/jpids/piaa087

⇒ Schwartz DA. Vertical Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 From the Mother to the Infant. JAMA Pediatr. 2020 Jul 20.

Comment & Response


Doi: 10.1007/s00431-020-03747-9

Abstract

Given COVID-19 pandemic periodic outpatient assessment of otitis-prone children regularly followed at our tertiary outpatient clinic of upper respiratory tract infections was discontinued since 9 March. In order to avoid leaving the patients to themselves just during the winter months, which are the most critical ones for these children, we kept in touch with the families of 102 children (mean age 41.4 ± 14.0 months) who had had a follow-up visit scheduled during the lockdown, and compensated with telemedicine assessment. This incidentally leads to the unexpected but not at all negative finding that a consistent clinical improvement had been occurred in most (82.3%) of children. A statistically significant reduction in the mean number of documented acute otitis media episodes, otorrhea episodes, and systemic antibiotic treatments during the February-April 2020 period compared with February-April 2019 was attested. Clinical evaluation performed in 27.4% cases revealed normal middle ear findings in all but three (89.3%) children. Conclusion: Our data document a global improvement of otitis-prone children in Milan during the Italian lockdown, as a fortuitous and incidental positive effect of the national lockdown. What is Know: • During COVID-19 pandemic in Italy any non-urgent medical activity including periodic outpatient assessment of otitis-prone children was discontinued. • Otitis-prone children experience acute infectious exacerbations mainly in winter. What is New: • Most of children reached by means of a telemedicine assessment during lockdown experienced a subjective clinical improvement; clinical assessment at the end of the lockdown revealed normal otoscopic findings in most cases. • Exceptional circumstances during COVID-19 pandemic had a fortuitous positive effect on otitis-prone children's clinical conditions.
Abstract

Introduction and aim: Hydroxychloroquine alone or in combination with azithromycin has been increasingly used for patients with coronavirus disease 2019, in both children and adults. Drugs are generally well tolerated in clinical practice; however, both can cause corrected QT prolongation. We aimed to report our experience of QT interval evaluation associated with the use of hydroxychloroquine with concurrent azithromycin among children testing positive for coronavirus disease 2019.

Methods: Our single-centre, retrospective, study evaluated children with coronavirus disease 2019 disease admitted to the Pediatric Department at Sancaktepe Training and Research Hospital Istanbul, Turkey from 10 March, 2020 to 10 April, 2020. The data including demographics, clinical symptoms, co-morbid diseases, laboratory, radiological findings as well as electrocardiographs of the patients were obtained from our records. Electrocardiograms were evaluated before, one day after and at the termination of the treatment.

Results: 21 patients aged 9 to 18 years were evaluated. The median age was 170 months (range 112-214), 51.1% of them were girls and 48.9% were boys. Their laboratory results did not reveal any abnormalities. None of them needed intensive care. We did not detect QT prolongation during or at the termination of the treatment.

Conclusion: We did not detect QT prolongation during or at the termination of the treatment in our patients due to the fact that they were not severely affected by the disease. Patients were treated in our inpatient clinic and none of them required intensive care. Laboratory results were also insignificant. Furthermore, they did not need other medications.


Comment & Response


Comment & Response


Doi: 10.1515/jpm-2020-0228

Abstract

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2)-associated infection (COVID-19) is affecting populations worldwide. This statement may serve as guidance for infection prevention and safe ultrasound practices during the COVID-19 pandemic. Ultrasound examination is a fundamental part of obstetric care, yet it is a potential vector for transmission of SARS-CoV-2. Decontamination methods should always be implemented for ultrasound equipment, especially in the presence of suspected or confirmed COVID-19 cases. There must be workflow policies to protect pregnant women and healthcare providers from nosocomial cross transmission of SARS-CoV-2. Cleaning and disinfecting of equipment must be in accordance with their potential of pathogen transmission. Consider using telemedicine and genetic technologies as an adjunctive of obstetric ultrasound to reduce patient crowding. Patient triage and education of healthcare providers of infection prevention are crucial to minimize cross contamination of SARS-CoV-2 during obstetric ultrasound.


Letter

Doi: 10.1111/cch.12797


Comment & Response

Doi: 10.1001/jama.2020.12267

Doi: 10.1007/s00404-020-05573-8

Abstract

Objective: To investigate the maternal and infant outcomes of full-term pregnant patients in Wuhan, China, who were infected with 2019 severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that is responsible for coronavirus disease 2019 (COVID-2019).

Design: Retrospective case series.

Setting: The Central Hospitals of Wuhan, Tongji Medical College, Huazhong University of Science and Technology in Wuhan, China.

Participants: Twenty one full-term pregnant patients who were admitted to the Central Hospital of Wuhan, Tongji Medical College, Huazhong University of Science and Technology, confirmed SARS-CoV-2 infection and COVID-2019 with laboratorial and clinical methods, were reviewed by our medical team, and the data were collected from January 20, 2020 to February 29, 2020.

Main clinical data collection: Clinical data had been collecting using a standard case report form, such as epidemiological history, clinical manifestations, auxiliary examination of major laboratory and clinic, etc. All the information was collected and confirmed by our medical team.

Results: Twenty one full-term pregnant patients were reviewed (median age 29 years), and no patients were admitted to intensive care unit (ICU), and died during the treating progress. According to our review, all the cases were infected by human to human transmission, and the most common symptoms at onset of illness were cough in 17 (80.95%), fatigue in 10 (47.62%), fever in 7 (33.33%), expectoration in 1 (4.76%), and only one patient (4.76%) developed shortness of breath on admission. The median time from exposure to onset of illness was 10 days (interquartile range 7 -2 days), and from onset of symptoms to first hospital admission was 1 day (interquartile range 1-2 days).

Conclusions: As of February 29, 2020, all the patients who were full-term pregnancy combined with COVID-2019 were cured and delivered successfully, and all the newborns were not infected with SARS-CoV-2, and there were no evidence of mother-to-child transmission.


Letter

Doi: 10.1111/dth.14043

Doi: 10.1093/tropej/fmaa045

Abstract

Background: The majority of the children with SARS-CoV-2 infection present with respiratory symptoms, hence various chest imaging modalities have been used in the management. Knowledge about the radiological findings of coronavirus disease (COVID-19) in children is limited. Hence, we systematically synthesized the available data that will help in better management of COVID-19 in children.

Methods: Four different electronic databases (MEDLINE, EMBASE, Web of Science and CENTRAL) were searched for articles reporting radiological findings in children with COVID-19. Studies reporting thoracic radiological findings of COVID-19 in patients aged <19 years were included. A random-effect meta-analysis (wherever feasible) was performed to provide pooled estimates of various findings.

Results: A total of 1984 records were screened of which forty-six studies (923 patients) fulfilled the eligibility criteria and were included in this systematic review. A chest computed tomography (CT) scan was the most frequently used imaging modality. While one-third of the patients had normal scans, a significant proportion (19%) of clinically asymptomatic children had radiological abnormalities too. Unilateral lung involvement (55%) was frequent when compared with bilateral and ground-glass opacities were the most frequent (40%) definitive radiological findings. Other common radiological findings were non-specific patchy shadows (44%), consolidation (23%), halo sign (26%), pulmonary nodules and prominent bronchovascular marking. Interstitial infiltration being the most frequent lung ultrasound finding.

Conclusion: CT scan is the most frequently used imaging modality for COVID-19 in children and can detect pneumonia before the appearance of clinical symptoms. Undefined patchy shadows, grand-glass opacities and consolidation are commonly observed imaging findings in COVID-19 pneumonia.


Doi: 10.1111/bjd.19413

Abstract

During the COVID-19 pandemic of Spring 2020, Denmark was one of the first countries to introduce lockdown measures. This included closing of all schools throughout Denmark by 16 March 2020. Primary schools were reopened on 15 April 2020 for grades zero to five. Specific hand hygiene guidelines were issued by the Danish Health Authorities to prevent the transmission of coronavirus: children were instructed to wash their hands for 45-60 seconds with water and soap at least every two hours and specifically upon arrival at school, before and after meals, after toilet visits, after coughing/sneezing, and whenever hands were visibly dirty.

Doi: 10.1007/s12250-020-00265-8

Abstract

Children with Coronavirus Disease 2019 (COVID-19) were reported to show milder symptoms and better prognosis than their adult counterparts, but the difference of immune response against SARS-CoV-2 between children and adults hasn't been reported. Therefore we initiated this study to figure out the features of immune response in children with COVID-19. Sera and whole blood cells from 19 children with COVID-19 during different phases after disease onset were collected. The cytokine concentrations, SARS-CoV-2 S-RBD or N-specific antibodies and T cell immune responses were detected respectively. In children with COVID-19, only 3 of 12 cytokines were increased in acute sera, including interferon (IFN)-γ-induced protein 10 (IP10), interleukin (IL)-10 and IL-16. We observed an increase in T helper (Th)-2 cells and a suppression in regulatory T cells (Treg) in patients during acute phase, but no significant response was found in the IFN-γ-producing or tumor necrosis factor (TNF)-α-producing CD8+ T cells in patients. S-RBD and N IgM showed an early induction, while S-RBD and N IgG were prominently induced later in convalescent phase. Potent S-RBD IgA response was observed but N IgA seemed to be inconspicuous. Children with COVID-19 displayed an immunophenotype that is less inflammatory than adults, including unremarkable cytokine elevation, moderate CD4+ T cell response and inactive CD8+ T cell response, but their humoral immunity against SARS-CoV-2 were as strong as adults. Our finding presented immunological characteristics of children with COVID-19 and might give some clues as to why children develop less severe disease than adults.


Doi: 10.1080/14767058.2020.1786526

Abstract

Over the past 4 months, SARS-CoV-2 pandemic has spread all over the world. The lack of understanding of this pandemic epidemiological characteristics, clinical implications and long term consequences have raised concern among healthcare workers. Pregnant women and newborns are a particularly worrisome population since data referring to real infection impact in these patients are scarce and management controversial. We report on the perinatal management of the first consecutive ten mother-infant dyads of SARS-CoV-2 infection complicated pregnancy. All mothers were included in newborn management planning prior to delivery and decided on separation from their newborns; nine decided on postponing breastfeeding until SARS-CoV-2 negativity while maintaining lactation stimulation. No evidence of vertical transmission was found (all NP swab and bronchial secretions SARS-CoV-2 RT-PCR were negative). No newborn developed clinical evidence of infection. In the face of current scientific uncertainty, decisions of perinatal management, such as mother-infant separation and breastfeeding, must involve parents in a process of shared decision making.

Doi: 10.1002/cncr.33098

Abstract

Background: Because of the global spread of coronavirus disease 2019 (COVID-19), oncology departments across the world have rapidly adapted their cancer care protocols to balance the risk of delaying cancer treatments and the risk of COVID-19 exposure. COVID-19 and associated changes may have an impact on the psychological functioning of patients with cancer and survivors. This study was designed to determine the impact of the COVID-19 pandemic on young people living with and beyond cancer.

Methods: In this cross-sectional study, 177 individuals, aged 18 to 39 years, were surveyed about the impact of COVID-19 on their cancer care and psychological well-being. Participants also reported their information needs with respect to COVID-19. Responses were summarized with a content analysis approach.

Results: This was the first study to examine the psychological functioning of young patients and survivors during the first weeks of the COVID-19 pandemic. A third of the respondents reported increased levels of psychological distress, and as many as 60% reported feeling more anxious than they did before COVID-19. More than half also wanted more information tailored to them as young patients with cancer.

Conclusions: The COVID-19 pandemic is rapidly evolving and changing the landscape of cancer care. Young people living with cancer are a unique population and might be more vulnerable during this time in comparison with their healthy peers. There is a need to screen for psychological distress and attend to young people whose cancer care has been delayed. As the lockdown begins to ease, the guidelines about cancer care should be updated according to this population's needs.


Commentary

Doi: 10.1007/s12098-020-03457-y

Doi: 10.1136/bmjopen-2020-038004

Abstract

Introduction: An outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) occurred in Wuhan, China starting in December 2019. Yet the clinical features and long-term outcomes of neonates with SARS-CoV-2 exposure are lacking. The purpose of this study is to describe the clinical course and prognosis of the neonates exposed to SARS-CoV-2.

Methods and analysis: This is a multicentre observational study conducted at the designated children and maternal and child hospitals in the mainland of China. Neonates exposed to SARS-CoV-2 infection will be recruited. The data to be collected via case report forms include demographic details, clinical features, laboratory and imaging results, as well as outcomes. Primary outcomes are the mortality of neonates with COVID-19 and SARS-CoV-2 infection of neonates born to mothers with COVID-19. Secondary outcomes are the birth weight, premature delivery and neurological development of neonates exposed to SARS-CoV-2. The neurological development is assessed by the Chinese standardised Denver Developmental Screening Test at the corrected age of 6 months.

Ethics and dissemination: This study has been approved by the Children's Hospital of Fudan University ethics committee (No. (2020)31). The study findings will be disseminated in peer-reviewed journals and presented at national and international conferences in order to improve the understanding of the clinical course among neonates exposed to SARS-CoV-2 and to provide evidence-based treatment and prevention strategies for this group.

Trial registration number: NCT04279899.


Doi: 10.1097/inf.0000000000002802


Doi: 10.1097/inf.0000000000002735

Doi: 10.1097/inf.0000000000002777

Abstract

We describe 5 children with severe SARS-CoV-2 infection, hemodynamic instability and suspected acute abdomen. This form of the disease has not been previously documented. Four of the cases were confirmed SARS-CoV-2 infection and 1 probable. All of them were previously healthy and needed a pediatric critical care unit admission. The respiratory symptoms were not dominant or were absent. Also, fever was observed. Laboratory testing revealed lymphopenia and high levels of C-reactive protein and procalcitonin with D-dimer, ferritin and interleukin-6 usually elevated. Respiratory support and inotropic support were almost always necessary. In all of them, deterioration occurred on the day of admission.


Doi: 10.1097/INF.0000000000002769

Abstract

Coronavirus disease 2019 (COVID-19) symptoms in children are incompletely described. We present the first case of orchiepididymitis associated with COVID-19 in a boy and discuss pathways of testicular involvement by SARS-CoV2 virus. This case underlines the need for further study of the clinical presentation of pediatric COVID-19 and the potential association with nonrespiratory symptoms.


Letter

Doi: 10.1097/inf.0000000000002756

**Doi:** [10.1097/inf.0000000000002718](https://doi.org/10.1097/inf.0000000000002718)

**Abstract**

Since the emergence of a cluster of viral pneumonia cases in Wuhan, Hubei Province, People’s Republic of China, at the end of December 2019, caused by severe acute respiratory syndrome coronavirus (SARS-CoV-2), a novel coronavirus also known as “coronavirus disease 2019 (COVID-19),” as of 7 April 2020, more than 1,214,466 cases of COVID-19 have been reported in more than 200 countries and territories, resulting in more than 67,767 deaths. The disease was recognized by World Health Organization (WHO) as a pandemic on 11 March 2020. Published reports of adult patients with COVID-19 infection described symptoms including fever, cough, fatigue, sputum production, headache, dyspnea and diarrhea. Children usually showed milder respiratory symptoms or were asymptomatic, while loss of taste or sensation of smell were seldom reported. In this paper, we report three cases of pediatric patients with COVID-19 infection who presented with anosmia and/or ageusia.


**Letter**

**Doi:** [10.1097/inf.0000000000002779](https://doi.org/10.1097/inf.0000000000002779)


**Doi:** [10.1097/inf.0000000000002804](https://doi.org/10.1097/inf.0000000000002804)

**Abstract**

Pediatric inflammatory multisystem syndromes associated with Severe Acute Respiratory Syndrome Coronavirus 2 are emerging in recent reports. We describe a patient with critical illness consistent with atypical Kawasaki disease with cardiac dysfunction and abdominal involvement presenting weeks after Severe Acute Respiratory Syndrome Coronavirus 2 infection. Our patient showed unique central nervous system involvement with small vessel vasculitis and profound hypocomplementemia, both not previously reported in case descriptions and may hint at possible disease mechanisms.

Doi: 10.1097/inf.0000000000002783

Abstract
We examined the dynamics of coronavirus 2019 (COVID-19) transmission within families. Our investigation demonstrated significantly lower rates of COVID-19 positivity in children compared with adults residing in the same household. Children of 5-17 years of age were 61% and children of 0-4 years of age were 47% less likely to have positive polymerase chain reaction results compared with adults residing in the same household.


Letter
Doi: 10.1002/ppul.24891
NEJM CATALYST COLLECTION:
COVID-19: MANAGING THE SURGE

Enlace de Descarga
NICE (The National Institute for Health and Care Excellence)

CORONAVIRUS (COVID-19)

https://www.nice.org.uk/guidance/published?type=coa,coa
Ediciones Anteriores

Boletín Edición Nº 1

Boletín Edición Nº 2

Boletín Edición Nº 3

Boletín Edición Nº 4

Boletín Edición Nº 5

Boletín Edición Nº 6

Boletín Edición Nº 7

Boletín Edición Nº 8