Validation for a proven benefit of antibiotic at the onset of the COVID 19 infection.

British paediatric allergy immunity and infection group

675 SYMPTOMS OF SARS-COV-2 INFECTION IN THE UK PAEDIATRIC POPULATION

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10.1136/archdischild-2021-rcpch.135

Background During the first wave of the pandemic in 2020, Covid-19 symptoms of cough, fever and loss of taste/smell were identified in the adult population and aided diagnostic PCR testing. However, children with similar symptoms appeared less likely to test positive or to develop severe disease. As part of a multi-centre observational cohort study from 16th April 2020 to 3rd July 2020, 992 paediatric participants aged 2–15 years, were recruited and underwent SARS-CoV-2 antibody testing and provided symptom data.

Objectives To identify the proportion of healthy children who demonstrated antibody response to SARS-CoV-2 infection in this cohort of healthcare worker's children.

To identify the symptoms experienced by participants who had the presence of SARS-CoV-2 antibodies.

To assess if there was correlation between different symptoms experienced and SARS-CoV-2 antibody titres in a paediatric population.

Methods 1007 participants were enrolled and 992 were included in the final analysis. Participants were identified across 5 UK sites-Belfast, Glasgow, Cardiff, Manchester and London. All participants were healthy children of NHS healthcare workers. Participants underwent phlebotomy and provided blood samples for SARS-CoV-2 antibody testing and information on their symptoms in the form of an electronic case report form (CRF). Serum and/or plasma was tested for antibodies to SARS-CoV-2 using nucleocapsid and spike protein assays. Study data was recorded on a CRF using REDCap and information recorded included age, sex, previous health, recent symptoms and potential predictors of presence of SARS-CoV-2 antibodies including contact with confirmed or suspected cases.

Results Of the 992 patients included, 962/992 (97%) had complete CRFs. The median age of study participants was 10.1 years (2.03–15.99yrs) and 51% were male. There were 68/992 participants with positive SARS-CoV-2 antibodies, giving a seroprevalence of 6.9%. Of those with positive SARS-CoV-2 antibody tests, 34/68 (50%) were asymptomatic. In the symptomatic participants (34/68), the most commonly reported symptoms were fever 21/68 (31%), gastrointestinal symptoms 13/68 (19%) and headache 12/68 (18%). The presence of fever, cough or change in smell/taste was reported by 26/68 (38%) of antibody positive participants.

None of the participants experienced severe symptoms requiring hospital admission.

One of the assays (Abbott Architect SARS-CoV-2 IgG assay), indicated a small but significant increase in mean antibody titres between asymptomatic 4.3 S/C (95% CI 3.4 to 5.2) and symptomatic participants 5.5 S/C (95% CI 4.7

to 6.2), but this was not replicated with Roche Elecsys or DiaSorin LIAISON assays which found no significant difference.

Conclusions Following the first wave of the pandemic, 68/992 (6.9%) of children of healthcare workers in UK had evidence of previous SARS-CoV-2 infection. Importantly, only 50% of these children experienced symptoms and this highlights the potential for asymptomatic children to be missed by current NHS testing guidelines. The symptoms which adults often experience, namely pyrexia, cough and loss of taste/smell, were only experienced by 38% of children who had SARS-CoV-2 antibodies. These children were more likely to experience gastrointestinal symptoms or lethargy and headache and therefore raises the question of whether this should be factored into current symptomatic testing guidelines.

Paediatric educators' special interest group

676 PAEDIATRIC VIRTUAL SIMULATION

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10.1136/archdischild-2021-rcpch.136

Background Simulation has multiple benefits in paediatrics – experiential learning, hands-on skills practice, communication, task prioritisation and human factors challenges to name but a few. We also recognise the significant value of the debrief, and how supporting a peer-led learning conversation helps to both further and consolidate knowledge. During COVID-19, routine face-to-face simulation delivery in our Trust has stopped, begging the question of how we can continue to support our colleagues' clinical knowledge and skills, bearing in mind that many are now shielding at home.

Objectives Our solution was to design paediatric emergency simulated scenarios and deliver them virtually to remote learners via video conferencing software, as we believed that this could lead to both effective teaching and learning. We set out to explore the different ways in which this could feasibly be achieved, and through feedback from our learners, establish which methods were most effective. Our goal was to ensure real-time interactivity through engagement from the learners, as this has been a criticism of observing and our involvement with remote simulation in the past.

Methods We developed 3 distinct forms of virtual simulation:

1. Simulation By-Proxy: The set-up was as per traditional face-to-face simulation, with a high-fidelity manikin in a hospital bed surrounded by medical equipment and visible monitoring. The remote learners were shown a webcam view and were asked to work as a team to clearly instruct an in-situ confederate nurse and doctor (with no initiative of their own) to manage a complex child with pneumonia and sepsis.

2. Real-time Input: No manikin or bed-space were used. Remote learners were shown a power-point-type presentation which described an evolving clinical case of a paediatric burn. Integrated software allowed real-time group participation in word clouds, prioritisation tasks and multiple-choice questions with anonymous results visible within the presentation (like asking the audience in Who Wants To Be A Millionaire).

3. Direct Facilitation: No manikin or bed-space were used. Remote learners were shown a power-point presentation which described an evolving clinical case of paediatric toxic shock syndrome. Learners were numbered upwards from