Oral presentations

1 COVID-19 IN CHILDREN TREATED WITH IMMUNOSUPPRESSIVE MEDICATION FOR KIDNEY DISEASES

¹Matko Marlais, ²Tanja Wlodkowski, ²Franz Schaefer, ¹Kjell Tullus. ¹Paediatric Nephrology, Great Ormond Street Hospital for Children NHS Foundation Trust; ²Division of Pediatric Nephrology, Heidelberg University Hospital, Germany

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Background The impact of immunosuppressive therapy on children with COVID-19 is unclear. The aim of this study was to describe the clinical course of COVID-19 in children with kidney disease taking immunosuppressive medication and to assess the severity of their disease course.

Methods Prospective registry study hosted by the European Rare Kidney Disease Reference Network and supported by the European, Asian, and International paediatric nephrology societies. Anonymised data were submitted online for any child (age <20 years) with COVID-19 taking immunosuppressive medication for a kidney condition. The study was open for 16 weeks from 15/03/2020 – 05/07/2020. Primary outcome was Severity of COVID-19, graded 1–5. Secondary outcomes included impact of the underlying kidney condition and immunosuppressive medication on disease severity.

Results 113 children were reported in this study from 30 different countries. The median age was 13 years (49% male). The main underlying reasons for immunosuppressive therapy were; kidney transplant (47%), nephrotic syndrome (27%), SLE (10%), other glomerular disease or vasculitis (11%). Main immunosuppressive medications used include; glucocorticoids (76%), MMF (54%), tacrolimus/cyclosporine A (58%), Rituximab/Ofatumumab (11%). 78% required no respiratory support during their COVID-19 illness, 5% required BiPAP or ventilation. Four children died; all deaths reported were from low income countries and with associated co-morbidities. The mean severity of infection grade (1–5) was 2.4 in those where immunosuppression was reduced and 1.7 in those where it was not ($p=0.001$). There was no significant difference in the severity of COVID-19, based on gender, dialysis status, underlying kidney condition, and type or number of immunosuppressive medications.

Conclusions This global study shows most children with a kidney disease needing treatment with immunosuppressive medication have mild disease with SARS-CoV-2 infection. We therefore suggest that children on immunosuppressive therapy should not be more strictly isolated than children who are not on immunosuppressive therapy.

2 SIMULATION@DISTANCE – CONTINUING SIMULATION TRAINING ALONGSIDE SOCIAL DISTANCING GUIDELINES

Eli Gumble, Emma Broughton. Great Ormond Street Hospital

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Social distancing guidelines brought about in response to the pandemic made the normal operation of a simulation centre with limited floor space impossible. To continue providing training to a greater number of candidates, methods for

recreating the simulation experience with remote candidates were devised and explored:

A: Conversational avatar over Zoom.

Using streaming software, our pre-existing conversational avatar is presented on a Zoom call for conversational simulation with remote candidates.

B: Gameplay style scenarios on CenarioVR.

Candidates navigate a clinical room environment with buttons and menus to undertake a scenario. The system tracks inputs to progress the scenario.

C: Remote In-Ear (RIE) coaching.

Using a wireless earbud, candidates communicate remotely with centre staff ('operatives') who follow the instructions given by candidates watching a live Zoom feed. 3 variations were explored:

C1: Candidates remotely watch the feed while connected to an operative by an audio call.

C2: Candidates message their target operative on Zoom and text-to-speech software reads these messages to the operatives.

C3: Zoom breakout rooms/separate WhatsApp video calls connect candidates to target operatives, where candidates see from the operative's perspective through a head-mounted camera.

D: Virtual environments

D1: Private Worlds within VRChat host scenarios.

D2: GOSH's Minecraft server hosts scenarios.

Proposals were scored 0–10 in: Team Interactivity, Fidelity, Range of Scenarios and Ease of Implementation. Summed total scores were:

C3=32, C1=29, C2=27, A=26, B=20, D1=19, D2=10

So far, the most viable options have been trialled.

Avatar use over Zoom proved easy to set up and courses using it are planned.

RIE coaching's trial sessions had operatives reporting communication inefficiencies. In response, the model was revised: the wider group now coaches the whole room over Zoom.

Gameplay scenarios are still under construction. Externally produced scenarios are being scrutinised.

Overall, we are confident that simulation can coexist with distancing guidelines.

3 RAPID DESIGN AND DEPLOYMENT OF AN ADULT CRITICAL CARE TRANSPORT TEAM – THE LAUNCH OF BIG CATS

Cathy Roberts, Mark Clement. Children's Acute Transport Service (CATS)

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The Children's Acute Transport service (CATS) is a stand-alone paediatric critical care transport service in the north thames region. In April 2020, demand for adult intensive care beds exceeded surge capacity in some North Central London (NCL), units which led to an urgent need to transfer COVID-19+ve adults between units.

A newly formed adult critical care transport service in the NCL region became overwhelmed with requests and CATS were asked to assist. Big CATS was launched within 48 hours, activated 16 times and offered a 7 day a week daytime service without denuding paediatric capacity.