

27 April 2020

## **PICS Statement: Increased number of reported cases of novel presentation of multi-system inflammatory disease**

**Please note this is a statement intended for medical professionals who look after critically ill children.**

**If you are a parent, please be assured that serious illness as a result of COVID-19 still appears to be a very rare event in children. If your child is unwell or has the symptoms of sepsis, then please seek medical attention in the usual way as set out in guidance from the Royal College of Paediatrics and Child Health:**

**[https://www.rcpch.ac.uk/sites/default/files/2020-04/covid19\\_advice\\_for\\_parents\\_when\\_child\\_unwell\\_or\\_injured\\_poster.pdf](https://www.rcpch.ac.uk/sites/default/files/2020-04/covid19_advice_for_parents_when_child_unwell_or_injured_poster.pdf)**

Over the weekend, PICS members received an email alert from NHS England highlighting a small rise in the number of cases of critically ill children presenting with an unusual clinical picture. Many of these children had tested positive for COVID-19, while some had not. The alert indicated “the cases have in common overlapping features of toxic shock syndrome and atypical Kawasaki disease with blood parameters consistent with severe COVID-19 in children. Abdominal pain and gastrointestinal symptoms have been a common feature as has cardiac inflammation”.

It is important to highlight that, both in the UK and in other countries, there have still been very few cases of critically unwell children with COVID-19 admitted to paediatric intensive care units. However, an early case report relating to COVID-19 presenting as Kawasaki syndrome has been published recently [1], and PICS is aware of a small number of children nationally who appear to fit the clinical picture described in the NHS England alert.

**What does this mean in practice?** If you are a healthcare professional and see children presenting with a picture of toxic shock or atypical Kawasaki Disease then please discuss this case early with paediatric infectious disease or paediatric critical care teams via your usual pathways (often paediatric retrieval services).

**What are “blood parameters consistent with severe COVID-19”?** Whilst it is too early to say with confidence, features appear to include high CRP, high ESR and high ferritin. In adults with COVID-19 disease, hyperinflammation or cytokine storm syndrome, as well as macrophage activation syndrome (MAS) and haemophagocytic lymphohistiocytosis (HLH) have been described [2].

**What is “cardiac inflammation”?** Children are presenting with a picture of myocarditis with raised troponin and proBNP. Some have an appearance of their coronary arteries in keeping with Kawasaki Disease.

PICS will continue to work with PICAnet and other national organisations to collect

accurate data relating to critically ill children presenting to hospital with suspected covid-19 disease.

1. Jones VG, Mills M, Suarez D, et al. COVID-19 and Kawasaki disease: novel virus and novel case. *Hosp Pediatr*. 2020; doi: 10.1542/hpeds.2020-0123

2. Mehta P, McAuley DF, Brown M, et al. COVID-19: consider cytokine storm syndromes and immunosuppression. *Lancet* 2020 Mar 28;395(10229): 1033-1034. DOI: 10.1016/S0140-6736(20)30628-0.