Multisystem Inflammatory Syndrome in Children and Adolescents temporally related to Covid-19

Global collaborative effort

World Health Organization
Multisystem Inflammatory Syndrome in Children and Adolescents

- An alert was issued by NHS England about cases of multisystem inflammatory syndrome in children, some of whom tested positive for SARS-CoV2.

- Information about similar cases was shared on WHO clinical management network from other European countries and the US.

- A working group of experts was set up by WHO to follow the evolving situation.
Ongoing WHO Response

- The working group developed a preliminary working case definition and a case report form (CRF)

- A scientific brief was issued by WHO on 15th May:

- A Case Report Form was developed as part of the WHO COVID-19 Clinical Data Platform
  - **Module 1**: to be completed when a case is suspected, with any available results of laboratory tests.
  - **Module 2**: to be completed at discharge or death.
Preliminary case definition

Children 0-19 years of age with Fever >3 days

**AND** two or more of the following:

1. Rash or bilateral non-purulent conjunctivitis or muco-cutaneous inflammation signs (oral, hands or feet)
2. Hypotension or shock
3. Features of myocardial dysfunction, pericarditis, valvulitis, coronary abnormalities (including ECHO findings or elevated Troponin/ NT-proBNP)
4. Evidence of coagulopathy (PT, PTT, elevated d-Dimers)
5. Acute gastrointestinal problems (diarrhoea, vomiting, or abdominal pain)

**AND**

Elevated markers of inflammation such as ESR, CRP, or procalcitonin

**AND**

No other obvious microbial cause of inflammation, including bacterial sepsis, staphylococcal or streptococcal shock syndromes

**AND**

Evidence of COVID (RT-PCR test or serology positive), or likely contact with patients with COVID

Global COVID-19 Clinical Data Platform

- Clinical data platform is now live. Case Report Form is available at:
  
  https://www.who.int/docs/default-source/coronaviruse/final--misc-crf-18-may-2020-who.pdf?sfvrsn=8839181a_4

- How to become a contributor: please email COVID_ClinPlatform@who.int and request log-in credentials. You will receive instructions for data entry and will be assigned you a 5-digit site code.
  
  - Note: Contributors will retain control of their data and health facilities will have access to their dataset in an analyzable format.

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Update

- Working group expanded for increasing representation. In addition to global experts and WHO and UNICEF secretariat, US CDC and European CDC are also represented.

- Expanded WG met on 25 May 2020
  - Approximately 600 cases globally since mid April: mainly from UK, USA, France, Spain, also small # in Canada, Brazil, Ecuador, Mexico, Pakistan.
  - UK and Europe cases peaked end April, now decreasing
  - At least 5 deaths
  - Clinical features still similar, perhaps less severe due to earlier identification and treatment
  - IVIG commonly used, steroids or other immunomodulatory agents also used, some children recovered without specific treatment.
Next steps

- WG will review case definition in 2 weeks

- We request all paediatricians to remain vigilant and report suspected cases to WHO clinical data platform, including LMICs

- Research on response to different treatments needs to be prioritized: based on clinical outcomes, and/or change in inflammatory markers