Research corner

COVID-19 and Kawasaki-like syndrom: Progress and outstanding issues

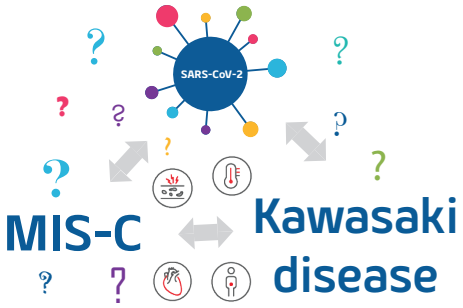
Source: Jiang L. et al, The Lancet Infectious Disease, Aug 17, 2020
Feldstein LR et al., NEJM, 383(4):334, Jul 23, 2020

The COVID-19 pandemic sheds light on many hitherto unknown immune phenomena. Its possible involvement in immunological complications that are both close to and different from known diseases leads us to be cautious in the management of patients.

Intriguing cases of COVID-19-associated multisystem inflammatory conditions

Although SARS-CoV-2 infections are generally milder in children, numerous reports are describing the occurrence of a Multisystem Inflammatory Syndrome in Children (MIS-C) apparently occurring after the acute stage of COVID-19 (see our news on the topic). Some reports highlighted a 4-to-6 week-delay between the incidence peak of both conditions, although the link between them is still unknown.

Even though a general definition of MIS-C is still lacking, clinical features may recall those from Kawasaki disease (KD), such as a high fever (>5 days) together with one or more gastrointestinal, cardiovascular, haematological, cutaneous or respiratory involvement. However, some features are different, including onset at more than 7 years of age possible.



Main questions remain unsolved in the SARS-CoV-2 / MIS-C / KD interplay

Similarities and differences between MIS-C and KD

A study recently reported on 186 cases in the US from mid-March to mid-May 2020. Median age at onset was 8.3 with a slight majority of boys (62%) in good health (73%). Most of the patients displayed at least 4 different types of involvement, with a high prevalence of cardiovascular involvement, more severe than for (KD). Another difference appeared to be a more limited occurrence of coronary aneurysm (only 8% of patients vs. 25% in KD).

Owing to the similarities between the two diseases, cases of MIS-C associated with COVID-19 are classically managed following the standard protocols for KD, including intravenous immunoglobulin, corticoids and vasoactive amines. Although clinical research is still required to prove the effectiveness and safety of these treatments, they were applied in the study leading to the recovery of 70% pof atients by mid-May, with an average 7-day hospitalization time.

Despite the striking similarities between the two diseases, their dissimilarities raise questions. As with KD, are there genetic factors involved? Does age also play a role in the severity? Numerous studies are still needed to clarify these questions and optimize patient management.

We would like to thank FAI2R for pointing out the article fai2r

ImmunAID
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 779295