CHARACTERISTICS OF MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN VERSUS KAWASAKI ON CLINICAL ASPECTS, SPECIFICITIES AND TREATMENT

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Background and importance
Since Coronavirus (COVID-19) pandemic:
High number of children hospitalized in the pediatric intensive care unit (PICU) because of Pediatric Multisystemic Inflammatory Syndrome (MIS-C or PIMS) resembling Kawasaki Disease (KD)

Aim and objectives
Describe and compare MIS-C versus KD on:
▪ Clinic and the therapeutics we used
▪ Impact of treatments used
▪ Discuss the clinical evolution of our patients

Material and methods
Retrospective observational study in the PICU over 9 month, April to December 2020. Clinical, biological and medication data for PIMS patients were collected via the computerized medical file, our presence in the department and the prescription software. Then compared to scientific literature on KD

Results
Table 1
Drug management of MIS-C:
IV immunoglobulin (IVIG) on admission in 1 dose for n=9 patients (75%): mean dose = 1,56 g/kg
Persistent fever and/or worsening inflammatory markers:
2nd dose of IVIG (1,4 g/kg) n = 5 if persistent: 3rd dose of IVIG (1,0 g/kg) n = 2
In case of resistant hyperinflammation:
IV Methylprednisolone at 1,76 mg/kg/d for a duration 4 days was administered to n = 10 patients (initiated at D1 for all)
Adapted vasopressor support by use of cardiotonic (adrenaline/noradrenaline for 25%) or diuretic (furosemide for 67%) and anticoagulant (enoxaparin for 42%)

9 patients required additional anti-inflammatory treatment with acetylsalicylic acid 60 mg/kg/d
 Persistent fever and/or worsening inflammatory markers:
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Conclusions and relevance
Our patients described a clinical picture suggesting KD, with a broader symptomatology and severity, much more marked inflammatory and cardiac markers, a shorter fever, a lower platelet count, more frequent gastrointestinal involvement, the median age of our cohort was higher. The therapeutic strategy: IVIG and corticosteroid therapy appeared to be effective in our study.

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12 patients included, median age 8 years [2 -16 years], H/F=2, diagnosed with MIS-C in PICU.
- All presented fever, duration = 5 days.
- 5 patients presented 2 clinical criteria characteristic of KD insufficient to diagnose complete KD, need 4 specific criteria on 5 patients had gastrointestinal symptoms, rarely seen in KD

Biological parameters in patients with MIS-C
- inflammatory and cardiac markers very high: hyperinflammatory state and acute heart failure

Negative PCR tests on admission and presence of anti-SRAS-CoV-2 antibodies in all patients. MIS-C = post-COVID disease chronologically distinct from COVID-19

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