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atypical Clinical form of post-covid 19 kawasaki disease in a child admitted to pediatric intensive care unit EHU 1er November , Oran

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Introduction :

Since December 2019, severe acute respiratory syndrome due to coronavirus-2 (SARS-CoV-2), responsible for the COVID-19 disease, has been recognized as a causative agent of severe pneumonia in the adult population mainly. At this point, there is very little pediatric data available. Children are clearly under-represented in terms of frequency, with patients <20 years of age accounting for only 1 to 2% of documented cases in Italy and China [1, 2] At the end of April 2020, in Europe (United Kingdom, France, Belgium, Italy and Spain) but also in the United States and Australia, in the midst of the Covid-19 pandemic, resuscitation services reported a significant increase in the number (however little high) of “pediatric cases of myocarditis with circulatory failure and an upsurge in atypical Kawasaki disease without heart failure” [3]

Materiel -method :

We report an observation of a child admitted to pediatric intensive care unit at EHU Oran for consciousness disorders after a covid 19 infection producing a pseudokawasaki form.

Observation:

A 13-year-old girl without any particular personal or family history , living 250 km from Oran admitted to our level through an evacuation for the management of status epilepticus in June 2020. The story dates back to March, marked by flu-like illness, which was symptomatically treated by a general practitioner. The girl and her whole family attended a wake for her grandmother in a situation of endemic corona virus in May 2020

On 06/08/2020 the child presented tonic-lonic convulsive seizures with regaining of consciousness; the last without recovery of consciousness or consultation at the hospital sector of the hometown where the child receives an ampoule of benzodiazepine 10 mg intra-rectally then a loading dose of phenobarbital

She was intubated and sedated with a score of 07/15 on the Glasgow scale and then evacuated to our service .Clinical examination on admission: patient intubated ventilated sedated isocore reactive pupil, no clinical convulsions; hemodynamics found tachycardia on auscultation with a low MAP between 40 and 45 mmHg; heart rate at 119 bpm clear lung auscultation.

The remainder of the clinical examination found bilateral conjunctivitis, 38-degree fever, cervical

lymphadenopathy, erythema of the palms and soles with edema in the palms, and peeling of the skin in the thorax and abdomen. In addition, the father reported digestive disorders such as vomiting and a fever for more than 3 days.
A lumbar puncture returns without particularity, to the biology: inflammatory syndrome, thrombocytosis and cytolysis (2 times the normal). The cerebral scanner finds a discreet cerebral edema and the proBnp dosage returns increased to 500 pg / ml, positive serology covid SARS-CoV-2, the troponin dosage returns to 40 ng / ml.
On echocardiography: Dilation of the left interventricular artery to 5 mm in diameter .Moderate aneurysm dilation of the circumflex to 6mm. Severe aneurysmal dilation of the right coronary. Proximal portion of the right coronary at 6.8mm. Aorta slightly dilated to 25 mm at the tubular level.
All the elements collected suggest a form of post viral kawasaki disease (with 4 criteria defining kawasaki disease in addition to a convulsive state) given the epidemiological situation in Algeria and around the world.

Vascular filling with vasopressor until arterial pressure improved was recommended. The child remained ventilated and sedated for 02 days and intravenous immunoglobulin was initiated with administration of aspirin.
The evolution was marked by good hemodynamic stability, apyrexia was obtained after the 2nd day, the child is extubated at the end of the 3rd day., Discharged after 7 day of hospitalization.

Discussion:
Kawasaki disease only affects young children and is seasonal (epidemic wave in winter and / or spring) [4].
New cases remain rare in absolute numbers (25 new cases in France, 10 in Belgium, 3 in the United States) [4] and they could be “Kawasaki-type symptoms” and not the disease itself [4]. However, 30 to 50% of these cases reported in 2020 are children (sometimes over 5 years old) who have also been diagnosed with Covid-19, or they have been reported in an active outbreak of Covid-19 (young people patients may then be carriers, possibly asymptomatic, of SARS-CoV-2) [5].

Children with Kawasaki disease are in poor general condition. Symptoms suggestive of Kawasaki disease:
• unexplained prolonged fever, above 38 ° C, which persists for at least 5 days and does not respond to antipyretics or antibiotics,
• skin rash;
• conjunctivitis that appears with fever;
• oropharyngeal damage (erythema of the lips, dryness, cracks and sometimes bleeding). The tongue is raspberry;
• cervical lymphadenopathy (swollen glands)

• damage to the feet and hands: erythema of the palms or soles as well as edema, desquamation of the skin, that is to say a loss of the surface layer of the epidermis, mainly affecting the area around the skin. genitals, soles or palms of the hands.
Kawasaki disease is it the main symptom of severe pediatric cases of Covid-19, the "cytokine storm", an overly strong immune system response to SARS-CoV-2. In France, 35 children with cardiogenic shock, left ventricular dysfunction and severe inflammatory syndrome were retrospectively identified within 2 months in 14 pediatric intensive care units (including that of Geneva) [6]

The primary myocardial involvement of these patients was authenticated by an elevation of cardiac enzymes as is the case in our observation. Some children may have developed a mild form of the shock associated with Covid-19 described, known as Multisystem inflammatory syndrome in children and adolescents [7,8] .Two-dimensional ultrasound is useful for detecting coronary dilations and aneurysms (as in our patient's case). Coronary tomodensitometry and magnetic resonance imaging are promising techniques from a diagnostic standpoint, and possibly prognosis as well. In some cases, selective coronary angiography may also be helpful
.treatment with intravenous immunoglobulins making it possible to reduce the frequency of coronary aneurysms to less than 5%.
Aspirin is used to prevent the formation of thromboses, associated with a course of immunoglobulins passed through the venous route

The outcome of Kawasaki disease is most often favorable in the absence of a coronary complication. Relapses are possible but rare. However in our patient, after several phone calls, the parents refused to consult given the distance separating the home from the hospital in addition to a low socioeconomic level, and that our patient was lost to follow-up

Conclusion

While it is evident that children develop less severe forms of SARS-CoV-2 (COVID-19) than adults, a small number may present with left ventricular dysfunction and / or Kawasaki syndrome which rapidly regresses after a treatment with intravenous immunoglobulins and / or associated corticosteroid therapy
The prognosis of Kawasaki disease is related to the severity of its cardiovascular complications.

The authors declare no conflicts of interest.

references:

1] Z. Wu, J.M. McGooganCharacteristics and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72,314 cases from the Chinese Center for Disease Control and Prevention .JAMA, 323 (2020), pp. 129-142

[2] X. Lu, L. Zhang, H. Du, *et al.*SARS-CoV-2 infection in children .N Engl J Med, 382 (2020), pp. 1663-1665

[3] Coronavirus : questions autour d'une hausse de cas de syndromes inflammatoires infantiles » [archive], sur Le Monde.fr, 29 avril 2020

[4] Grégory Rozières, « Coronavirus chez les enfants et maladie de Kawasaki: ce que l'on sait » [archive], sur huffingtonpost.fr, *Huffington Post*, 29 avril 2020

[5] Félix Roudaut, « Coronavirus : qu'est-ce que la maladie de Kawasaki qui inquiète le monde médical ? » [archive], sur rtl.fr, 29 avril 2020

[6] Z. Belhadjer, M. Méot, F. Bajolle, *et al.*Acute heart failure in multisystem inflammatory syndrome in children (MIS-C) in the context of global SARS-CoV-2 pandemic.Circulation, 395 (2020), pp. 1741-1743,

[7] « Multisystem inflammatory syndrome in children and adolescents temporally related to COVID-19 » [archive]

[8] Riphagen, X. Gomez, C. Gonzalez-Martinez, *et al*.Hyperinflammatory shock in children during COVID-19 pandemic .Lancet, 395 (2020), pp. 1607-1608