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Letter to the Editor

COVID-19 in a child with Still's disease (systemic juvenile idiopathic arthritis): 9th case described

Dear Editor,

Still's disease (SD) or systemic juvenile idiopathic arthritis (sJIA) is a rare autoinflammatory condition of unknown etiology. It is generally characterized by high spiking fever, arthralgia and/or arthritis, transient salmon-like skin rash, leukocytosis, and increased ferritin levels. This rheumatic condition is treated with non-steroidal anti-inflammatory drugs, glucocorticoids, and immunosuppressive drugs[1]. Since Coronavirus disease 2019 (COVID-19) has emerged in China, more than 162.177.376 people were affected by this disease, causing 3.364.178 deaths until May 2021[2]. We published the first case of a Still's disease in an adult patient who had Covid-19[3]. Concerning children, they are less affected, and most experienced a mild or moderate disease and COVID-19, and most young ones were infected by family members[4]. About 8 cases of sJIA (SD) were reported in the literature[5,6].

A 9-year-old girl patient started in December 2012 with recurrent fever (39.0°C), transient diffuse salmon rash, including palms and soles. Laboratory tests revealed hemoglobin 9.9 g/dL [11.52-14.8 g/dL], white blood cell of 15,500 cells/mm^3 (4,000-10,000 cells/mm^3), platelets 363,000/mcL (150,000-450,000 /mc/L), AST of 175U/L (< 32 U/L), ALT of 286 U/L (< 32 U/L), C-reactive protein 11.46 mg/dL (< 5 mg/dL), erythrocyte sedimentation rate of 40 m/1st hour (< 10 mm/1st hour), and ferritin of 1,598 ng/mL (11-306 ng/mL). Antinuclear antibodies, rheumatoid factor, and anti-CCP were not detected. Tuberculin test was negative. Serology for infectious diseases, such as HIV 1 and 2, HTLV I and II, syphilis, rubella, mononucleosis, hepatitis B and C virus, parvovirus B19, and cytomegalovirus were all negative. A thorax computed tomography (CT) revealed pleural thickness bilaterally with mild effusion. An abdomen CT and a transthoracic echocardiography were normal. A diagnosis of SD was established based on the Yamaguchi et al[7] classification criteria (fever, skin rash, pleuritis, negative ANA and RF, liver dysfunction). She was treated with prednisolone (7.5 mg three times a day) and hydroxychloroquine (6 mg/kg/day) with a good outcome, and the glucocorticoid was progressively tapered off. In May 2021, she used HCQ (300 mg/day) and vitamin D 3,000 IU/day, and she had a sore throat, rhinorrhea. She denied ageusia, anosmia, cough, and fever. No clinical evidence of active SD. She received a diagnosis of rhinitis and was treated with amoxicillin-clavulanic acid, nasal cleaning with a physiological solution. As we are on Covid-19 pandemic, a nasal swab for Covid was collected, and it was positive for this virus. It was suggested to keep social quarantine for 14 days, increase oral hydration; we increased vitamin D for 10,000 IU/day and vitamin C 1 g/day. The patient became asymptomatic after five days, and SD remained in remission during COVID-19 infection, with normal ferritin levels.

This is an additional description of Covid-19 in a child with SD and demonstrated to be a mild disease.

A large Spanish Covid-19 cohort of children[5], with a total of 350 hospitalized patients in 49 hospitals, the authors observed that 8 out of 350 (2.3%) had a rheumatic disease, 13.5% required intensive care unit admission, and 4 (1.1%)[7]. Systemic JIA has been diagnosed in 2/8 of these children.

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A Turkish cohort, including 39 children with rheumatic diseases (RD) under biological therapy, which got Covid, 6/39 (15%) were systemic juvenile idiopathic arthritis[6]. Two out of these 39 patients with JIA had a multisystem inflammatory syndrome in children (MIS-C) and were hospitalized. One patient died, and he had JIA and macrophagic activation syndrome.

In conclusion, Covid-19 affecting children is a less common *phenomenum* than adult involvements, which there are only 8 previous cases of Still's disease/sJIA, and we added a child to this statistic.

Conflict of Interest

The Author declares that he has no conflict of interests.

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