



## **Coronavirus Disease 2019 (COVID-19) And Polyarthritis Juvenile Idiopathic Arthritis (JIA) Comorbidity in Children at Emergency Wisma Atlet Kemayoran: The First Case Report with Two Months Follow Up**

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### **ABSTRACT (upto 300 words)**

**Background:** Infection with SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) is often mild and asymptomatic in youngsters. However, in other circumstances, such as juvenile rheumatoid arthritis (JRA), COVID-19 necessitates special consideration because of the general immune system harm associated with autoimmune disorders and the iatrogenic side effects of corticosteroids. The multisystem inflammatory syndrome in children (MIS-C), which manifests 4-6 weeks after infection as a high fever, organ dysfunction, and markedly elevated markers of inflammation, is one manifestation of the COVID-19 disease that can cause secondary vasculitis or present with vasculitis or hyperinflammation manifestations. The association between MIS-C and SARS-CoV-2 infection shows that post-infectious immunological dysregulation plays a role in the pathogenesis.

**Case:** A 10-year-old boy was admitted to COVID-19 Emergency Hospital Wisma Atlet Kemayoran with complaints of anosmia. The patient had a history of polyarthritis JRA, has been diagnosed since January 2020 and has routinely received methylprednisolone 4 mg/day and one tablet of calcium lactate once daily.

No abnormalities were discovered during a general physical examination or a Pediatric Gait, Arms, Legs, and Spine (pGALS) assessment. On laboratory testing, leukocytosis and thrombocytosis are present. Thorax and extremities were radiologically examined within acceptable bounds. According to national guidelines for mild COVID-19 in children, the patient got routine treatment, which included a multivitamin. The patient also continued receiving methylprednisolone and calcium lactate while he was treated. After 12 days of treatment, the patient tested negative for COVID-19. One month after treatment, there was no hyperinflammatory reaction or recurrence of JRA.

**Conclusion:** In pediatric patients diagnosed with COVID-19 and JRA, it is important to continue corticosteroid treatment with an adjusted dose. Even though this treatment has the possibility of causing immunosuppression which can complicate the healing process of COVID-19, it is important for us to prevent recurrence of Juvenile Rheumatoid Arthritis in patients



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### **BIOGRAPHY (upto 200 words)**

Nia Fitriyani is a general practitioner who has graduated from Muhammadiyah University in Jakarta since 2020. She has work experience in the pediatric team at RSDC Wisma Atlet Kemayoran Jakarta and is currently working at one of the government hospitals in Indonesia since 2022. She has the achievement of winning second place in the oral presentation at the Malang pediatric scientific meeting in 2021. He also has a history of scientific publications in the Pediatric Sciences Journal.

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