SEVERE AND TRANSIENT EOSINOPHILIA RELATED TO COVID-19 INFECTION IN AN INFANT

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Objectives: To present a rare case of massive and transient eosinophilia during COVID-19 infection in an infant and a brief review of literature data. **Materials and methods:** Review of medical records of clinical data and laboratory information related to the case presented. **Results:** A female infant, 14 months old, was referred due to suspected acute myeloid leukemia (AML) based on leukocytosis (71,530/mm^3) and severe eosinophilia (46,494/mm^3). The patient was admitted due to persistent lethargy, irritability, and fever that had started two weeks prior to admission. COVID-19 infection was confirmed through a rapid antigen test performed 12 days earlier. The patient was stable with no evidence of respiratory infection. Laboratory tests showed leukocytosis with severe eosinophilia (55,035/mm^3). Serial stool samples tested negative for eggs, cysts, and larvae. Stool culture did not reveal growth of enteropathogenic bacteria. Blood cultures for bacteria and fungi did not show growth of infectious agents. Infections caused by human immunodeficiency virus, hepatitis B and C viruses, cytomegalovirus, Epstein-Barr virus, rubella virus, and toxoplasmosis were excluded. Chest and abdominal computed tomography scans were normal. Empirical treatment with ceftriaxone, clarithromycin, mebendazole, and metronidazole was administered, but there was no reduction in eosinophil count. Bone marrow (BM) aspirate and biopsy were performed, revealing hypercellular BM with marked eosinophil infiltration and no excess of blasts or mast cells. Flow cytometry immunophenotyping of the BM did not show excess blasts (0.4 %) and confirmed massive (55.4 %) eosinophil infiltration CD13+, CD11b+, CD33++, CD2-, CD25-, CD34-. Hematological karyotype analysis was normal. Molecular studies using real-time polymerase chain reaction to investigate the V617F mutation in the JAK-2 gene, BCR-ABL p190 and p210 rearrangements, and FIP1L1-PDGFRa rearrangement were negative. The patient gradually improved in the following days, with a gradual reduction and normalization of the absolute eosinophil count (AEC), and was discharged after 13 days of hospitalization. Considering the absence of a specific test to confirm the hypotheses, by exclusion, the hypothesis of severe eosinophilia related to COVID-19 infection was considered, with no evidence of persistent organ damage or hypereosinophilic syndrome (HES). The patient remains asymptomatic and without abnormalities in follow-up laboratory tests. **Discussion:** The management of a patient with eosinophilia requires the identification of causes such as infections (predominantly parasitic), atopy, medication exposure, autoimmune diseases, and cancers (chronic myeloproliferative disorders, chronic eosinophilic leukemia, AML, and lymphomas). However, the association of severe eosinophilia with viral infections, especially COVID-19 infection, is uncommon. Rare case reports describe an increase in AEC in patients with HES and COVID-19 infection or a decrease in AEC during the convalescence of the infection. Conclusions: Efforts should be made to better characterize the described association, including a more detailed understanding of the occurrence of eosinophilia during COVID-19 infection and its physiopathology and clinical significance.

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UM CASO DE DOENÇA DE KIKUCHI-FUJIMOTO EM GESTANTE

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Objetivo: Relatar um caso um caso de doença de Kikuchi-Fujimoto em gestante. O estudo justifica-se pela raridade da doença e por representar um importante diagnóstico diferencial com doenças linfoproliferativas. **Material e Método:** Os dados foram extraídos do prontuário da paciente e documentação fotográfica do laudo histopatológico da enfermidade. **Resultados:** RDR, 30 anos, cabelereira e taxista, natural de Itaperuna, reside em Boa Ventura, distrito de Itaperuna. Relata aparecimento de linfonodomegalia cervical direita em dezembro de 2018. Dois meses após, foi diagnosticada com gestação gemelar. Devido ao aumento progressivo da massa linfonodal associada a febre e sudorese noturna, em uso de anti-térmico, foi realizado a biopsia da lesão em fevereiro de 2019. Após o procedimento, a paciente desferveceu, cessou a sudorese noturna e involuiu o tamanho linfonodal espontaneamente. O diagnóstico histopatológico da lesão foi sugestivo de linfadenite necrozante não supurativa, doença de Kikuchi-Fujimoto e linfadenite lúpica. Os marcadores lúpicos encontravam-se negativos. A paciente evoluiu com regressão da massa linfonodal, parto cesariana gemelar na trigésima sexta semana gestacional. Em consulta de seguimento anual, a paciente encontrava-se assintomática, com involução dos sinais e sintomas sistêmicos associados a marcadores lúpicos negativos. **Discussão:** A doença de Kikuchi-Fujimoto (DKF) também nomeada como linfadenite histiocítica necrotizante é uma enfermidade rara, benigna e auto-limitada, acomete predominantemente em mulheres com menor de 40 anos, conforme o caso acima descrito. Caracteriza-se por uma linfadenopatia dolorosa predominantemente em região cervical e supraclavicular, associada a febre e leucopenia. De etiologia desconhecida, considera-se haver uma resposta hiperimune ou auto-imune a diversos agentes antigênicos como o vírus da imunodeficência humana (HIV), herpesvírus tipo 6 e 8, vírus Epstein Barr, Yersínia, Toxoplasmose. O diagnóstico é realizado pela biopsia do linfonodo revelando a linfadenite histiocítica necrotizante, conforme foi demostrado no presente caso. O exame faz-se necessário para realizar o diagnóstico diferencial com doenças linfoproliferativas, infecciosas, auto-imunes e hematofagocíticas. A doença pode preceder e/ ou cursar com o diagnóstico de doença auto-imune, como tireoidite, polimiosite, hepatite auto-imune, esclerodermia, doença de Still, doença mista do tecido conjuntivo, principalmente o lúpus eritematoso sistêmico (LES).