RESUMO SIMPLES - OUTRAS ÁREAS TEMÁTICAS

MYELODYSPLASTIC SYNDROME IN A DOG: CASE REPORT

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Myelodysplastic syndromes (MDS) are acquired clonal disorders of the bone marrow characterized by peripheral blood cytopenias and hypercellularity with dysplasia in hematopoietic lineages, which may progress to acute myeloid leukemia (AML). Although MDS is more common in cats due to the oncogenic action induced by infection with Feline Leukemia Virus (FeLV), this condition is rare in dogs, which increases diagnostic difficulty. Diagnosis is based on hematological abnormalities and bone marrow cytology showing dysplasia of hematopoietic lineages and excess blasts, combined with the exclusion of non-neoplastic causes of cytopenia. Cytogenetic assessments used in human

medicine for MDS diagnosis are still scarce in veterinary medicine. There is no established therapeutic protocol; however, there are reports of the use of cytotoxic agents such as cyclophosphamide and vincristine. Other immunosuppressive and immunomodulatory agents have also been applied. Prognosis is variable and tends to worsen when the animal progresses to AML. The present report aims to highlight the clinical and hematological findings of MDS and evaluate the prognosis under immunomodulatory treatment. A 12-year-old mixed-breed female dog was admitted to the Small Animal Veterinary Hospital of the Universidade Federal Rural do Rio de Janeiro (UFRRJ), presenting hyporexia, lethargy, and pale mucous membranes. The complete blood count revealed non-regenerative macrocytic normochromic anemia (hematocrit 25%; MCV 78.6 fL; MCHC 32 g/dL), leukopenia (630 cells/μL), and thrombocytopenia (133,000 cells/μL). Serological testing was positive for Ehrlichia canis and negative for Leishmania chagasi. Abdominal ultrasonography revealed splenomegaly and hepatopathy. Molecular analysis of bone marrow was negative for Ehrlichia canis and Leishmania chagasi. Cytological evaluation demonstrated erythroid hyperplasia and dysplasia, myeloid hypoplasia and dysplasia, and mild megakaryocytic hyperplasia. Treatment was initiated using amoxicillin with clavulanic acid (12.5 mg/kg, PO, BID, 30 days), prednisolone (2 mg/kg, PO, BID, 30 days), and filgrastim (5 μg/kg, SC, every 48 hours, 7 days), with observed clinical and hematological improvement. During follow-up examinations and with the completion of laboratory and imaging tests, findings were reported that could be associated with MDS. The diffuse splenopathy, characterized by an enlarged and coarse spleen, was initially correlated with the positive 4DX result for Ehrlichia canis. However, this association was ruled out after a negative bone marrow PCR test for ehrlichiosis, indicating that the serological positivity likely represented previous exposure and not current or chronic disease. Additionally, the alterations observed in the myelogram represent a pattern compatible with MDS. Given the cytopenia and myelogram compatibility with MDS, the use of filgrastim, intended to stimulate hematopoiesis, and prednisolone, due to its immunosuppressive effect, was justified as supportive and specific therapy for MDS. Despite being rare in dogs, MDS should be considered in cases of persistent cytopenias, and early diagnosis is essential to guide clinical decision-making and improve survival. In the present report, immunomodulatory therapy resulted in hematological improvement and a favorable clinical response, which reinforces the potential benefit of this therapeutic approach.

Palavras-chave: myeloid leukemia; cytopenia; myelogram.