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TITLE

LEUKOCYTE CHARACTERIZATION OF MILKY SPOTS FROM SCHISTOSOMA MANSONI-INFECTED MICE – COMPARISON WITH SPLEEN AND BONE MARROW, AND EXTRAMEDULLARY EOSINOPOIESIS.

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ABSTRACT

The milky spots are structures found in the omentum of humans and other vertebrates, representing a fraction of the lymphomyeloid tissue associated with the celom. They consist of B lymphocytes, T lymphocytes, and macrophages. Also found in smaller quantities are mesothelial cells, stromal cells, dendritic cells, and rare mast cells. In an experimental model of *Schistosoma mansoni* infection, there is significant activation of the omentum and milky spots, which start to exhibit numerous eosinophils. Despite being described for many years, the complete profile of cells found in milky spots, as well as their functions, remains largely unexplored. Here we evaluate the leukocyte populations of the milky spots in homeostasis and in a murine model of *Schistosoma mansoni* infection. The histopathological characterizations, phenotypic profile analysis, and characterization of the eosinopoietic potential of progenitors and precursors, comparing the milky spots with the spleen and bone marrow, showed a significant activation of milky spots in infected mice, with changes in the profile over the analyzed times, showing signs of migration and activation of eosinophils, with local eosinopoiesis and maintenance of the eosinophilic population. The behavior of milky spots differs from other primary and secondary lymphoid organs, acting as a central lymphoid organ in cavity immunity.

KEYWORDS

Milky Spots; Eosinophil; B Cell; Hematopoiesis; *Schistosoma mansoni*

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