Architecture and Cellular Composition of the Spleen in the Japanese Quail (Coturnix japonica)

Fatma El-Zahraa A. Mustafa Sara M.M. El-Desoky

Abstract:

The spleen is considered a key player in birds' immunity. The stroma and the parenchyma of the spleen of the adult quail were demonstrated histologically, histochemically, and ultrastructurally. A thin capsule and the absence of trabeculae were the most characteristics of spleen stroma. The demarcation between white pulp and red pulp was not observed in the quail. White pulp formed from the periarterial lymphatic sheath and the periellipsoidal lymphatic sheath, both of which were surrounded by arteriole and ellipsoid, respectively. Ellipsoids appeared more numerous and were characterized by cuboidal lining of the epithelium and supporting cells. Red pulp consisted of sinuses and cords. White pulp and red pulp of the quail spleen contained various cells, such as red blood cells, macrophages, heterophils with characteristic granules, lymphocytes of different sizes, dendritic cells, plasma cells, and telocytes. In addition, closed circulation and open circulation established the blood flow on the spleen.

Keywords:

heterophils, PELS, red pulp, spleen, telocyte

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