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**Ultramicroscopic features of erythrocytes in splenectomised people affected by attacks of Ixodes ticks infected with Babesia spp**

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**Background & objectives:** Babesiosis is a Ixodes ticks (IT) transmitted disease caused by Babesia spp. (Bs). It is characterized by severe course, frequent death in splenectomised people (SEP). The objective is to determine erythrocytes ultramicroscopic features in SEP affected by Bs infected IT.

**Methods:** The study material was blood from 19 SEP. Splenectomy was performed due to spleen trauma, its rupture and bleeding. Group 1 (G 1) included 8 people without IT attacks. Group 2 (G 2) included 11 people affected by Bs infected IT attacks. Slides were stained by Romanovsky-Giemsa method. Scanning electron microscopy was also performed.

**Results:** In G 1 and G 2 in blood there were found normocytes, regenerative forms and degenerative forms among erythrocytes. In G 1, the relative numbers (RN) of normocytes, regenerative forms and degenerative forms were (69.6±2.13)%, (1.5±0.07)%, (28.9±1.16)%, respectively. In G 2, the RN of normocytes, regenerative forms, degenerative forms were (64.5±2.18) %, (1.3±0.09) %, (34.2±1.96)%, respectively. Comparative analysis of the obtained data in G 1 and G 2 did not reveal significant differences between the indicators. In both groups, intra-erythrocytic and extraerythrocytic forms of Bs were not detected, and erythrocytes were characterized

by anisocytosis (microcytes and macrocytes were determined) and poikilocytosis (echinocytes, degmacytes, schistocytes were determined).

**Conclusion:** Erythrocytes of splenectomised people exposed to Babesia spp. infected Ixodes ticks do not differ from erythrocytes of splenectomised people without Ixodes ticks attacks. They are characterized by the presence of normocytes, regenerative and degenerative forms with predominating normocytes and degenerative forms; changes in size (anisocytosis) and shape (poikilocytosis); absence of intra-erythrocytic

and extra-erythrocytic forms of Babesia spp. despite the detection of pathogens in the Ixodes ticks.