Novel erythrocyte pits in small tropical ruminant, lesser mouse deer.

ABSTRACT

We examined unique erythrocyte pits of the peripheral blood and bone marrow in the lesser mouse deer, Tragulus javanicus, using scanning electron microscope (SEM) and transmission electron microscope (TEM). Under the SEM observation, the pit was observed as a hole on both mature erythrocytes of the peripheral blood and immature erythrocytes of the bone marrow. By the TEM, the mature erythrocytes had a vacuole, which showed complicated shape and occupied considerable space within the cytoplasm. The vacuole was communicated extracellularly by perforation, which corresponded to the hole on the cell surface. In the bone marrow, erythroblast and reticulocytes have a cytoplasmic vacuole. This abnormal feature of the erythrocytes is peculiar to the mouse deer, and not found in other tropical ruminants. Despite the disadvantage of volume loss from the small erythrocytes, the mouse deer were healthy and showed no signs of anaemia.

Keyword: Novel erythrocyte; Lesser mouse deer