Fine structure studies of microgametogenesis of Eimeria adenoeides (Eimeriidae, Sporozoa) infecting turkeys in Egypt

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Abstract

The Ultrastructure of microgametogenesis of Eimeria adenoeides was studied in the intestinal epithelium of experimentally infected turkeys' Meleagris gallopavo gallopavo. Microgamonts were recognizable by the presence of peripherally arranged nuclei and the presence of two centrioles between each nucleus and the limiting membrane of the gamont. A nuclear spindle apparatus and an intranuclear centrocone directed toward the centriole were observed. Each young microgamont was surrounded by a very narrow parasitophorous vacuole which widened during development and contained a few intravacuolar folds. Differentiation of the microgamete began when elevations of the limiting membrane appeared above the centrioles. This event was accompanied by the segregation of nuclear content into a dense osmiophilic portion and an electron-pale portion. A gradual protrusion of the dense portion of the nucleus and developing flagella into the parasitophorous vacuole was proceeded. Microgametes had an anterior perforatorium, a dense elongate nucleus, with an anteriorly positioned mitochondrion in a small groove of the nucleus. Usually two flagella could be detected per each mature microgamete.

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