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The Pathology of Experimental *Rhoodococcus equi* infection in foals

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Abstract

The pathology of experimental

Rhodococcus equi (R. equi) infection in 2-8 weeks-old-foal is studied. For this purpose, twenty foals were divided into three groups, and given *R. equi* intratracheally (1st group), through gastric route (2nd group) and through umbilicus by contamination (3rd group). A control group of foals were given a Phosphate buffered Saline (PBS). Pulmonary and intestinal lesions were seen in foals of all infected groups. Grossly, there were multiple, variable-sized abscesses diffusely scattered throughout the lung parenchyma, in addition to the presence of different stages of pneumonia with variable-sized areas of consolidation and emphysema. Intestinal lesions were evident as engorgement of mesenteric blood vessels, subserosal hemorrhages seen along the intestinal tract especially the small intestine, in addition to enlargement of lymph nodes (mesenteric, bronchial and mediastinal). Some lymph nodes were edematous, have circular foci of caseous necrosis and some of them were filled with yellowish, thick creamy pus. The microscopic lesions were basically similar in all foals of the experimental groups, but varied depending on the time of death or euthanasia and included: acute pulmonary congestion, acute suppurative broncho-pneumonia, chronic pyogranulomatous pneumonia, and emphysematous and atelectatic area. There were focal necrosis of the pulmonary parenchyma and numerous bacterial colonies seen free or as aggregates within the cytoplasm of many histiocytes. Also, there were focal interstitial thickening of the alveolar septae. The pleura and interlobular septae were thickened due to cellular infiltration.

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