

عنوان مقاله:

A comparison of virulence of intraperitoneal infection of Burkholderia mallei strains in guinea-pigs

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خلاصه مقاله:

Male guinea pigs show high susceptibility to Burkholderia mallei and have been used as animal models in glanders studies. The purpose of our study was to elucidate glanders comparative pathogenesis in guinea pigs. We present here the histological changes and bacterial isolation that develop over time in guinea pigs inoculated intraperitoneally (IP) with two strain of B. mallei. Ten male guinea pigs were inoculated intraperitoneally with either the standard strain of Burkholderia mallei or B. mallei strain from Siberian tiger at the Tehran zoo individually, then euthanized at multiple time points post inoculation. Histopathologic changes were similar in both groups and consisted of pyogranulomatous inflammation. In the standard strain study guinea pigs, changes were first seen at ۴۸ hours in liver and heart then in spleen, lung, and kidney at day ۳. These changes generally reached maximal incidence and severity by day ۳ but decreased by comparison in all tissues except the liver, lung and kidney. Changes were first seen in Siberian tiger strain study guinea pigs also at ۴۸ hours in lung, liver and spleen. At day ۳, changes were present in liver, spleen and mediastinal lymph nodes. These changes were maximal at day ۴ and ۵. In contrast there are differences in incidence and severity between the two strain study guinea pigs. Our findings based on histopathological study indicate that Siberian tiger strain has more severity in gross and necropsy examination but in pathologic lesion was qualitatively similar generally. Additionally, by bacterial isolation, we confirmed the presence of B. mallei

کلمات کلیدی:

Burkholderia mallei, Siberian tiger strain, standard strain, pathologic lesion

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