



## *Salmonella mbandaka* isolated from human: Clinical and gross pathological studies in experimentally infected mice

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### Abstract

**This study was** intended to study the clinical, bacteriological and gross pathological aspects of *Salmonella mbandaka* isolated from human in experimentally infected mice. The infective dose (ID) of *S. mbandaka* was estimated in 48 mice, about 6-8 weeks old of both sexes. Clinical and gross pathological features of *Salmonella mbandaka* were studied in 28 mice. These were divided randomly into 2 groups: Group

A" included 14 mice and were inoculated orally with *S. mbandaka* ID that was determined earlier, and Group B with 14 mice and were inoculated orally with phosphate buffer saline and considered as a control group. The infective dose (ID) of *S. mbandaka* in mice was ( $1.3 \times 10^7$  cells), that showed the clinical signs of Salmonellosis without mortality. All mice in the control group (Group B) were appeared healthy during the experimental period. However, the results of experimental study revealed that the most important clinical signs were observed in the orally infected mice with *S. mbandaka* (Group A). These signs were included mild diarrhoea, dullness (24 hours post inoculation), fever and anorexia. In addition, the thirst and decrease in the activity were prominent at 48 hours post infection. However, complications such as epididymitis and meningitis were observed at 5th and 6<sup>th</sup> days post infection respectively in two mice. The gross pathological changes were observed on the small and large intestine at 24 hours and 48 hours post infection and characterized by variable degrees of hyperaemia and gelatinous appearance due to accumulations of mucus. At 72, 96 and 144 hours post infection, the liver and spleen were severely enlarged and congested together with petechial haemorrhages mainly on the spleen surface. In addition, the gall bladder was also engorged at 48 hours and the kidneys were swollen at 72 and 144 hours. Moreover, the heart revealed the flabby appearance at 120 hours and 2 weeks post infection. In conclusion, this study revealed that *Salmonella mbandaka* was able to cause systemic infection with complications such as meningitis and epididymitis. In addition to prominent gross pathological changes. The authors recommend more studies on *Salmonella mbandaka* to investigate another pathogenic properties.

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