Modifications in serum Amyloid A and Haptoglobin in mice following oral inoculation of graded doses of P. multocida type B: 2 and its lipopolysaccharide

ABSTRACT

This study was conducted to investigate the serum Amyloid A (SAA) and Haptoglobin (Hp) in the mice infected with Pasteurella multocida type B: 2 and its lipopolysacheride (LPS) inoculated through the oral route with graded doses (101, 103, 105, 107 and 109 cfu). Sixty healthy Balb c mice were placed in twelve plastic cages each one containing five mice. The mice were divided into three major groups (A, B and C). Group A is the control group (n = 10) and these were inoculated with 0.4 ml of PBS (pH 7.4) orally. The treatment groups (B; n = 25 and C; n = 25) were inoculated with P. multocida type B: 2 and its LPS respectively. The mice in group B and C were further divided into five subgroups. The subgroups were designated based on the graded doses as B101, B103, B105, B107 and B109 for Pasteurella multocida and C101, C103, C105, C107 and C109 for LPS. The mice were observed for 120 hours post-inoculation. The concentration of Hp was significantly higher ($P<0.05$) in the B109 cfu of P. multocida type B: 2 and LPS compared to the control group and the other treatments. In conclusion, Pasteurella multocida type B: 2 and its LPS are able to increase Hp in mice during acute infections.

Keyword: Lipopolysaccharides; Pasteurella multocida type B2; Acute phase proteins; Graded doses; Oral route; Mice