



البحث الثامن

عنوان البحث باللغة الانجليزية :	
Immune response, antioxidant biomarkers and histology of caecal tonsils of quail supplemented with sodium butyrate.	
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ABSTRACT

This study aimed to evaluate the impacts of dietary supplementation of sodium butyrate (SB) on antioxidant biomarkers, immune response and caecal tonsils (CT) histomorphometry of quail. A total of 240 one-day-old quails were randomly allocated into four groups with three replicates each. The first group was fed a basal diet (BD) without SB (control, T1), the 2nd group fed 1 g SB/kg BD during the first period from 0-3 weeks, then BD until the sixth week as early short feeding SB (ESFSB, T2), the 3rd group fed 1 g SB/kg BD during the whole period from 0-6 weeks as long feeding SB (LFSB, T3), and the 4th group fed BD from 0-3 week then fed 1 g SB/kg BD during the second period from 3-6 weeks as late short feeding SB (LSFSB, T4). The SB supplementation in quail diet significantly increased ($P<0.05$) serum total antioxidant capacity and declined malondialdehyde level compared with the control group. The inclusion of SB had a higher immune response through the increase of SRBCs titer value ($P<0.05$) in ESFSB, LSFSB and LFSB groups than the control group. Histomorphometry parameters of CT were significantly improved in ESFSB and LFSB compared the control. The LFSB group fed a diet containing SB from 0-6 weeks had better antioxidant biomarkers, immune response and histomorphometry parameters of CT of quail. In conclusion, it is suggested feeding quail on diets containing SB through the whole growth period to display its positive influence on the antioxidant biomarkers and immunity of quail.