**Detection and analysis of equine herpesvirus antibodies in large-scale donkey farms in Liaocheng area**

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**Abstract**

**Background:** Equine herpesvirus (EHV) may cause respiratory, reproductive and neurological diseases in equine animals, including donkeys, of which EHV type 1 (EHV-1) and EHV-4 are the main pathogens.

**Method：**EHV-1 and EHV-4 antibodies were detected in the sera of 230 donkeys collected from 27 large-scale donkey farms. EHV antibody positivity was analyzed by region, season and age.

**Result:** A total of 62.96% (17/27) of the farms were positive for EHV. The total percentage of positive EHV-positive animals was 12.61% (29/230), 7.82% (18/230) and 9.57% (22/230) for EHV-1 and EHV-4, respectively. The differences in EHV infection among the different regions in Liaocheng were not significant (*P* > 0.05), but the highest percentage of positive donkeys was found in Dong'e County (21.28%, 10/47). The highest percentage of positive EHV-1/4 was 21.18% (18/85) in adult donkeys aged 1-4 years, which was significantly different from that in other age groups (*P* <0.05). The difference in seasons was not significant (*P* >0.05),

**Conclusions:** These results indicated that EHV antibody positivity is prevalent in large-scale donkey farms in the Liaocheng area and that this positivity could interfere with the immune response, which could facilitate early warning of EHV epidemic risk.

**Keywords:** Donkey, Equine herpesvirus, EHV-1,EHV-4