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Humoral immune response assessment against different hemorrhagic septicemia vaccines in local buffaloes in the marshes of southern Iraq

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Abstract

Hemorrhagic septicemia (HS) is an important disease in cattle and buffaloes and lead to great economic losses in Asia and Africa. HS gains a great importance and attention in Iraq, because it is one of the most dangerous diseases in buffaloes than cows. Vaccination program was established since 2008 for buffaloes breeders in the marshland in southern of Iraq. Consequently, this study was designed to reassess the vaccination program and evaluate the humor immune response in buffaloes vaccinated by two types of HS vaccine in the marshlands south of Iraq. The study was conducted a challenge examination on buffaloes directly with a study of some physiological and immunological aspects before and after examination of the challenge test using an indirect haemagglutination test. The study also evaluated the effect of the virulent bacterium on the animal's body depending on the clinical symptoms and postmortem pathological changes. The results of this study approved that a single dose of oily vaccine can guarantees the protection of animals more than six months , moreover it appeared better than two doses of alum sediment vaccines in terms of immune strength and immunological duration. In conclusion this study approved the ability of single dose of oily vaccine to protect buffaloes for long period. Therefore, the authors recommend to use this vaccine for protection of buffaloes from HS instead of alum precipitant vaccine.

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