# Seroprevalence Of Crimean Congo Hemorrhagic Fever in Cattle in Thi-qar Province, Iraq

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**KEYWORDS**
Crimean -Congo hemorrhagic, ELISA Hemorrhagic fever virus (CCHV), Iraq

**ABSTRACT**
Crimean–Congo Hemorrhagic Fever is a zoonotic disease that transmission by infected ticks bites and from animals that are main carrier host without clinical septum so the current study was aimed to serological detection antibodies of Crimean–Congo Hemorrhagic Fever virus (CCHV) in cattle of Thi-qar province. Sera were analyzed for the presence of antibodies to CCHFV using the commercially available double-antigen ELISA kit. The study was conducted on 262 cases of cattle (87 male and 175 female) infected with CCHF based on Infected with ticks. Blood samples were collected from different part in Thi-qar province AL-Rifai, AL-Shatra, AL- Naser and Suq-ALshuhk. The wholly percentage of infected cattle with antibodies was 169(64.5%) positive from 262 cases. Highly prevalence record in Al-shatra positive from150 \115positive (76.66%) The prevalence of antibodies was higher in cattle at age 2 to 3 years old 55(73.33%) than in cattle aged less than 2 years 49 (58.33%). In addition, the percentage of cattle with antibodies in female was higher compare in male. These results suggest that is (CCHV) widespread in the cattle populations southern of Iraq.

## 1. Introduction

Hemorrhagic fever is world wide spread zoonotic disease discovered in 1944 in the Crimean area of the erstwhile Soviet Union and then afterward was secluded in Congo, from a child with similar symptoms [1]. Crimean–Congo Hemorrhagic Fever (CCHF) is an emerging disease because more than 1000 human cases presence informed every year from South-Eastern Europe and Western Asia [2]. The disease is endemic in Africa, the Balkans, the Middle East, and Asia, with an infected rate reach to 10,000 to 15,000 CCHF infections every year [3]. The Virus is part of the *Nairo* virus genus, and its lineage is *Nairoviridae*. It is a virus with RNA that is negatively oriented. [4]. Ticks considers as a main role vector for the transmission of several diseases [5],[6],[7]. According to geographic range of diseases that caused by ticks CCHF virus is most extensive among the tick-borne viruses that infect humans. Human Mortality 3 to 30% due to CCHF, and when it surges further than endemic level, it converts to a disastrous [8]. Sources of infection include tick bites, treated with infected animals' meat or by contact with an infected patient's blood through acute stage of infection [9]. About 30 distinct species of the virus has been found in ticks. Main means of transmission are hard-bodied *Hyalomma* ticks belonging to the *Ixodes* family [10]. Wild , domestic mammals and birds are the main hosts of CCHFV [11]. Sheep, goats, and cattle show high levels of virus in their blood, transporting the CCHF-across infected ticks, birds help spread the illness to great distances [12]. Rats, and tick larvae and nymphs also transmission CCHFV, human transmission comes into direct touch with another person's blood or body fluid, [13]The illness in human characterized by increasing bleeding, fever, and muscle soreness. Highly elevated aspartate aminotransferase, creatinine phosphokinase, alanine transaminase, and lactate dehydrogenase are found in biochemical testing [14]. In prothrombin assays, clotting time is delayed, the pathogenesis of disease closely related with indirectly releasing cytotoxic substances. These molecules result in activation of endothelial cells and lead to loss of function [15].

## 2. Material and Methods

### *Study Animals*

A total of 262 animals included 87 male and 175 female from many areas in Thi-qar province / Iraq, collected blood samples from animals clinically infected with ticks during July 2023 to January2024. Underneath sterilized circumstances, drained Transfer 5ml of venous blood using a disposable syringe into a gel tube without anticoagulant. In the lab, every blood sample was centrifugate at 3000 rpm for