

Abstract:

Anaplasma is an intracellular gram-negative bacterium that its various species cause anaplasmosis in ruminant and other mammals. This disease is one of the most important diseases of ruminants around the world and is a major cause of economic losses in the tropical and sub-tropical areas. The main symptoms of this disease are hemolytic anemia associated with fever, weight loss, abortion, reduced milk yield and in some cases, the death of infected animals. The aim of this study was to determine the prevalence of anaplasmosis in asymptomatic carcasses in Sistan region using PCR technique. 230 samples from different areas of Sistan region were collected. 80 samples from animals with clinical signs and 150 samples from animals without symptoms were collected. First, a blood sample was prepared from each sample and stained with Giemsa and then by Nested-PCR, the molecular method was used to diagnose common anaplasma species in the region. The results of this study showed that the prevalence of *Anaplasma marginale* was 72.17% (166 cases) and the prevalence of *Anaplasma platys* was 66.22% (153 cases) Which is the first report of *Anaplasma platys* in Iran. In the microscopic examination of thin blood transfusions for the detection of anaplasma, 32.60% were positive. Given the importance of disease in the economy and the reduction of livestock products, it can be concluded that this level of infection indicates the need for control measures to control the disease in the region.

Key words: Anaplasma, molecular, cattle, Sistan



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**Molecular detection of Anaplasma Species in cattle of Sistan
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