



SURVEY OF NEOSPORACANINUM CONTAMINATION IN CATTLE IN QAZVIN PROVINCE USING ELISA AND PCR

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Neospora caninum is an obligate intracellular protozoan of the phylum apicomplexa, which causes abortion and great economic losses in cattle worldwide. Cattle is the intermediate host and dog can be infected as definitive host. Among animals, the infection in cattle is of great importance. Horizontal transmission of disease happens through drinking water and foods contaminated with parasite oocysts, and the vertical transmission through the placenta to the fetus. Given the importance of this disease in cattle abortion and presence of some reports of *Neospora caninum* infection in the country, the present study was planned and performed. The purpose of this study was to determine the prevalence of *Neospora caninum* in cattle using ELISA and PCR in the province of Qazvin. 50 plasma samples of cows were studied for the presence of 328bp fragments of the NC5 gene using primers of *Neospora caninum*, Np21+ (5'-CCCAGTGCCTCCAATCCTGTAAAC-3') and Np6+ (5'-CTCGCCAGTCAACCTACGTCCTTCT-3') by PCR and also for the presence of anti parasitic antibodies by ELISA. In this study, 14 samples simultaneously had *Neospora caninum* DNA and were antibody positive (28%) and the rest were negative for both. Similar seroprevalence studies performed by Iranian scholars have indicated the presence of the parasite in other parts of the country. It appears that *Neospora caninum* is also prevalent in Qazvin province. *Neospora caninum* DNA can present in blood samples of all seropositive cows which showing the possibility of vertical transmission of parasite.

Keywords: *Neospora caninum*, PCR, ELISA, Qazvin

IDENTIFICATION OF DICTYOCAULUS SPP. LARVAE IN A SHEEP COPROLITE FROM THE ARCHEOLOGICAL SALT MINE OF CHEHRABAD, NORTHWESTERN IRAN

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Paleoparasitology, the study of human and animal parasites in biological remains, is obtained from archaeological sites. The aim of this study was to diagnose the intestinal parasites of the sheep taking advantage of the coprolite obtained from the Chehrabad archaeological site, Zanjan, Iran. The preservation condition of the organic remains in this archaeological site is comparable with other situations elsewhere. Material & Method: Rehydration of the sample was performed using TSP solution. Several drops of formalin were added to the solution in present work in order to avoid fungal growth. After 10 days, the entire sample was carefully examined. To start paleoparasitology analysis, dating of the obtained materials has been already carried out in archeology section. Result: Out of the 153 prepared slides, larvae of *Dictyocaulus* spp. were observed in 2 slides. In this study the appropriate preservation conditions of salt on this nematode larvae were clearly seen. Identification of this parasite in only one feces of sheep (0.3gr) could be attributed to a possible high prevalence rate of sheep pneumonia due to *Dictyocaulus* spp in Sassanid era (500 CE). This report is the oldest evidence of the presence of this parasite in Iran.

Keywords: Paleoparasitology, Iran, *Dictyocaulus*