

TRYPANOSOMA CRUZI INFECTION: CARDIAC AND EXTRA CARDIAC LESIONS IN 14 DOGS

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AIM OF THE STUDY: to describe the main clinical and pathological findings observed in 14 dogs naturally infected with T cruzi (chaga's disease).

MATERIAL & METHODS: fourteen dogs (9 females, 5 males; 236 months of age [mean of 11.5 months], 10 large breed, 4 small breeds; 11 pure breed, 3 mixed breed) underwent necropsies and were diagnosed as Trypanosomiasis during 1992-1997. All gross findings were record. In addition, samples were collected and processed routinely for histopathological examination.

In 6 cases myocardial scraping samples were taken and stained with Giemsa.

RESULTS: A-Clinical findings: 4 dogs died in less than 24 hours of showing clinical signs including depression (n=2) and vomiting (n=2). Two dogs had no previous clinical signs and had sudden death. Eight dogs died between 24 and 36 hours of presenting pale mucous membranes (3/8), abdominal distention (3/8), anorexia (3/8) and tachyarrhythmia (3/8), cough and dyspnoea (2/8).



Fig1. An example a large dog that died suddenly.

B- Pathology: grossly the main non-cardiac lesion was ascites, multivisceral congestion (n=9), pulmonary oedema (n=9), and pale mucosae membranes (n=4).

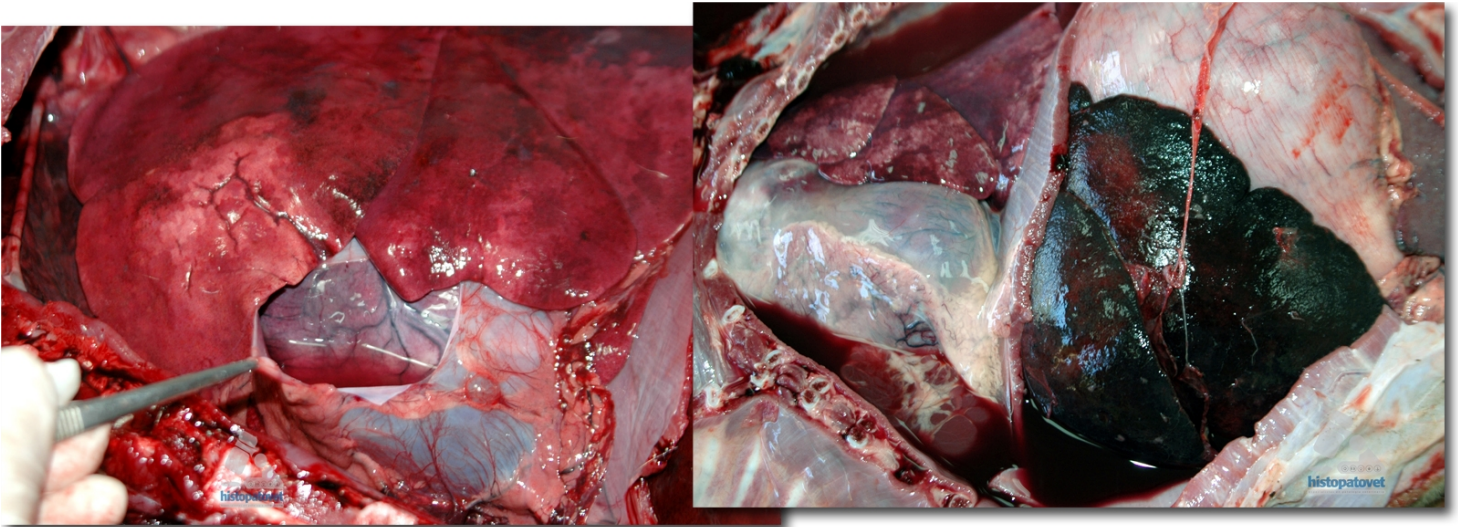


Fig.2 and 3. They showed accumulation of reddish liquid in the pericardium and the thorax. Besides, there is a pulmonary oedema. The right picture also had a liver congestion.

The cardiac predominant lesion in all dogs was a diffuse pale colour in both chambers.

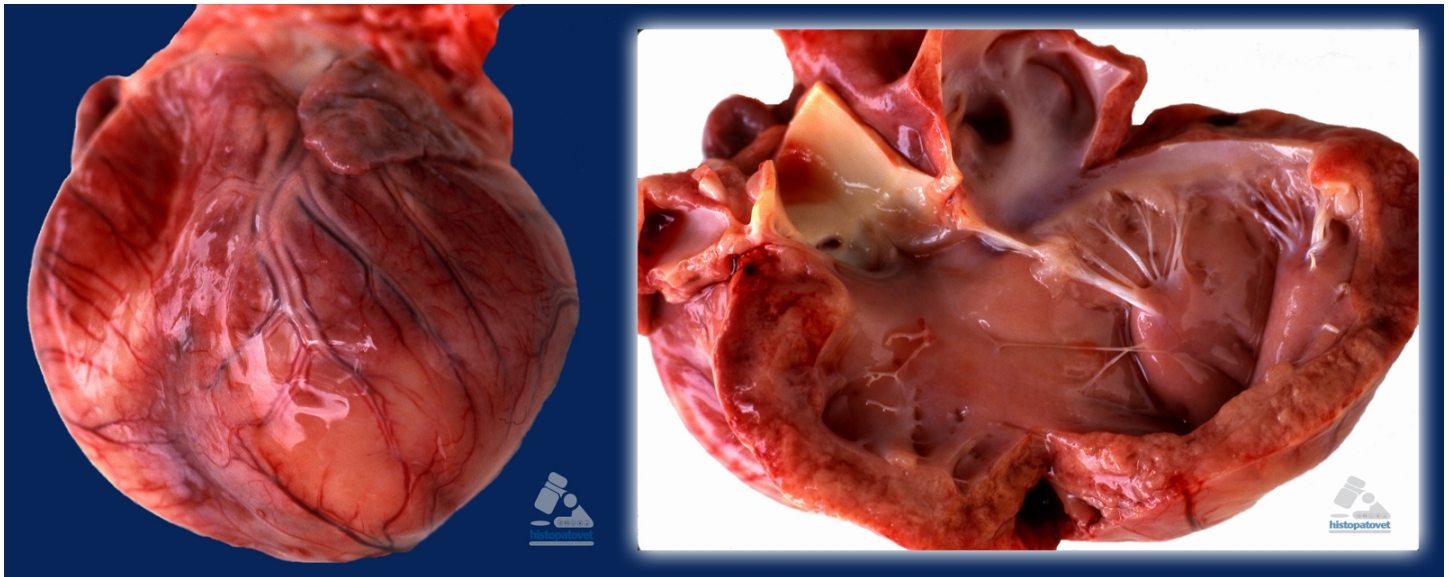


Fig.4 and 5. Dilated cardiomyopathy showing a diffuse pale colour of both ventricles. The right figure. Left open ventricle with white colour of the myocardium.

Microscopically, the myocardium showed an inflammatory reaction with lymphocytes, plasma cells and many histiocytes. In 12 cases the amastigotes were observed intramyofibrillar in three cases a confirmation of *Trypanosoma cruzi* was done by immunohistochemistry (Barr, S.C. Cornell University, U.S.A.). Furthermore, the characteristic *T. cruzi* pseudocyst was observed in the tongue (n=2), oesophagus (n=3), stomach (n=2), skeletal muscles (n=3), and encephalon (n=2). The encephalon also showed multiple granulomatous reactions without parasites.

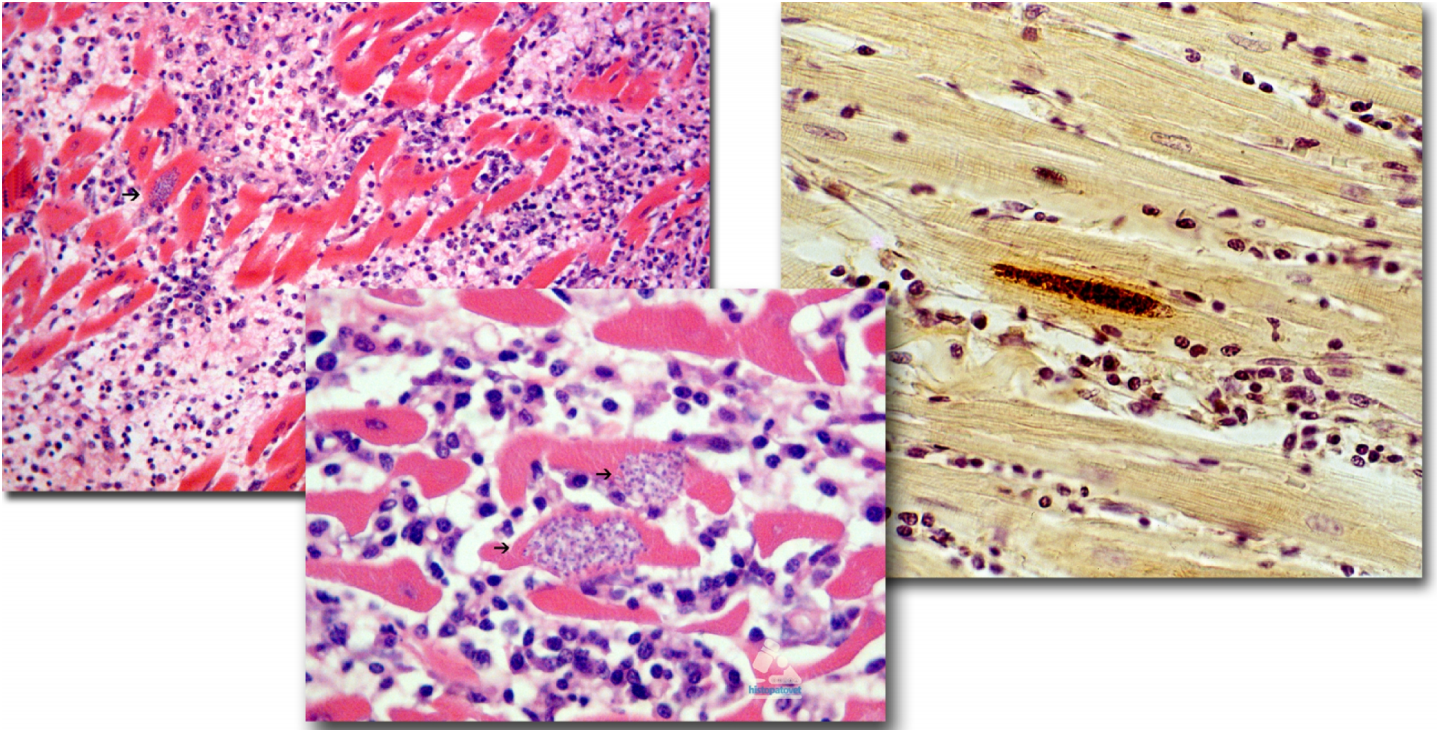


Fig.6 and 7. Myocardial section showing a lot of mononuclear inflammation. The black arrows pointed an intra-miofibrilar cysts. H&E.

Fig.8. An immunohistochemistry indicating a positive cyst.

CONCLUSION: there is an estimated 20 million people infected with Chagas' disease in Latin America. Dogs and wild host should be considered as of public health significance due to the potential zoonotic risk.