

**46th ANNUAL DIAGNOSTIC SLIDE SESSION, 2005
REFERENCES AND DIAGNOSES**

MODERATOR: E. Tessa Hedley-Whyte, M.D.

EDITOR: Leroy R. Sharer, M.D.

Case 2005-7

Submitted by: Jon D. Wilson, William Beaumont Hospital, Royal Oak, Michigan 48073.

Diagnosis: Protozoal myositis, compatible with Sarcocystosis

Comment: Immunocytochemistry for *Toxoplasma gondii* and *Trypanosoma cruzi*, both performed at the CDC, were negative in this case. Human infection with *Sarcocystis* spp. is uncommon, and this infection is better known in the veterinary world. This patient was originally from Bangladesh. After the muscle biopsy, he was treated with trimethoprim-sulfamethoxazole (Bactrim); and his serum creatine kinase (CK) level has come down toward normal.

From the presenter: *Sarcocystis* is a parasitic protozoan with a life cycle that involves two mammalian hosts (heteroxenous life cycle), usually a carnivore and its prey. Sexual reproduction takes place in the definitive host (the predator), while asexual reproduction occurs in the intermediate host (the prey). Distribution is worldwide. Humans may serve as definitive or intermediate host. Symptomatic infection in humans is rare. In animals the intermediate host tends to be symptomatic.

References:

Arness MK, Brown JD, Dubey JP, Neafie RC, Granstrom DE: An outbreak of acute eosinophilic myositis attributed to human *Sarcocystis* parasitism. *Am J Trop Med Hyg* 1999; 61:548-553.

Fayer R: *Sarcocystis* spp. in human infections. *Clin Microbiol Rev* 2004; 17:894-902.