

***Neospora caninum* myositis in Epagneul Breton: ultrastructural findings**

M. Tosti

Polo Nove: Dipartimento di Scienze Biopatologiche ed Ig. Prod. An. Alim. – Sez.
Parassitologia –CUME – Facoltà Medicina Veterinaria – Via San Costanzo, n° 4 – 06100
Perugia (Italy)

parassitologia.vet@unipg.it

Keywords: *Neospora caninum*, dog, TEM, SEM, Clindamycin

Clinical Neosporosis was diagnosed in a 3-month-old Epagneul Breton from Central Italy. The therapy with Clindamycin, Prednisone, Anabolizants, Omega3 fatty acid Integrators, Tenz Physical Therapy for five months healing the puppy. *Neospora caninum* is a protozoan apicomplexan parasite signalled for the first time in Norway on 1984, isolated from livestock and companion animals; it is detected in dog, cat, cattle, sheep, goat and horse (Dubey et al., 1988). This parasite has attracted increasing attention, primarily as an important causative agent of abortion in cattle in many countries including UK, Ireland, Netherlands, Scandinavia, New Zealand, Australia, Japan, South Africa and Israel. The major route of *Neospora caninum* infection in cattle is transplacental transmission from cow to calf; the parasite has been isolated from aborted bovine fetuses and from congenitally infected calves and the infection may be propagated vertically through successive generations. Horizontal transmission seems to be necessary to introduce new infections in the herd, but cow to cow horizontal transmission has not been demonstrated. The dog has been identified as the most important definitive host of *Neospora caninum*, therefore it is possible that cattle may be infected by ingestion of oocysts shed by dogs. *Neospora caninum* has present also in coyotes, foxes, dingoes, racoons and rattus norvegicus.

Neospora caninum has responsible of nervous lesions, abortions, neonatal death, congenital malformation. On dog Neosporosis presents with prevalence on young with nervous disorders and myopathies.

This study refers the muscular lesions during Neosporosis in a 3-month-old Epagneul Breton spastic to posterior limbs. Deltoid and femoral bicipital muscles biopsies have processed for Transmission and Scanning Electron Microscopes (TEM – SEM). On Neosporosis the muscular damage has two origins: neurogenic for the presence of angular profiles and inflammation (endothelial, satellite cells, T-lymphocytes) “cytotoxic”. TEM has enabled to see many muscle fibers in necrosis, sarcoclastosis phenomena, regeneration and a little lymphocytic inflammation infiltrate, strong connective proliferation, presence in many fibers of parasitoforous vacuoles with tachyzoites positive to antibody anti-*Neospora caninum* and single or groups of fibers with angular profiles.

Immunohistochemistry examination positive for Major Histocompatibility Complex (MHC I). Serology examination has point out high CK and LDH levels and a high IFAT degree (1:400).

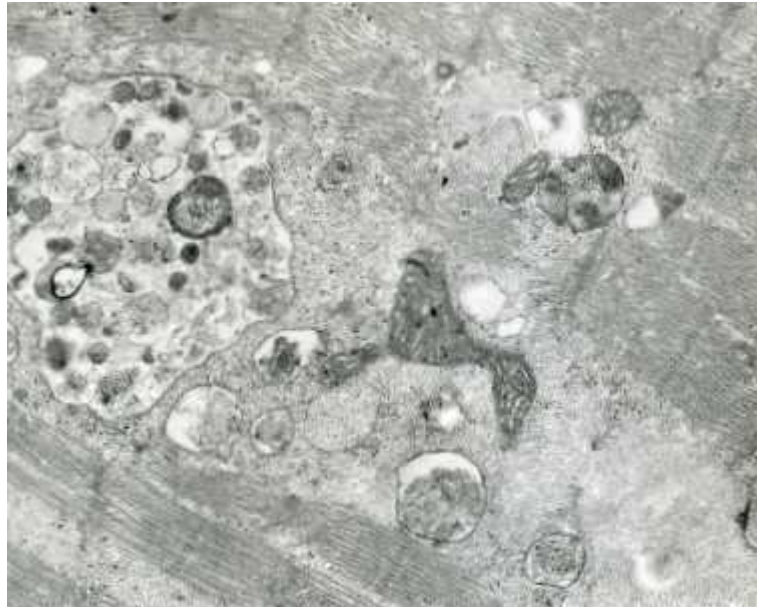


Figure 1. TEM. *Neospora caninum* myositis. Deltoid muscle. 20.000 x.



Figure 2. SEM. *Neospora caninum*. 2.000 x.