145

TUBERCULOSIS IN AN ALPACA (*LAMA PACOS*): PATHOLOGICAL FINDINGS

I. Barranco[*], I. García[†], J. Gómez-Laguna[*], I.M. Rodríguez-Gómez[*], A. Arenas[†], A. Peréa[†] and L. Carrasco[*]

[*]*Department of Anatomy and Comparative Pathology, Cordoba University and* [†]*Department of Animal Health, Faculty of Veterinary Medicine, Cordoba University, Spain*

Introduction: Tuberculosis has been thoroughly studied in ruminants; however, the information on tuberculosis in camelids remains limited.

Materials and Methods: We report the diagnosis of tuberculosis due to *Mycobacterium* spp. infection in a 7-year-old female alpaca from a commercial herd comprising 32 camelids in southern Spain. Clinical signs including dyspnoea, fever, depression, lethargy, anorexia and weight loss continued for 2 weeks and antibiotic therapy was unsuccessful. A repeated intradermal herd test using bovine and avian tuberculins yielded negative results. The animal was humanely destroyed because of its poor condition.

Results: Gross findings consisted of multifocal caseous lesions of different size in mediastinal and mesenteric lymph nodes, lung, trachea, liver and spleen. Well-delimited tuberculous granulomas were observed in the lymph nodes, liver and spleen together with more diffuse tuberculous granulomas in the lung and trachea. Numerous acid-fast bacteria morphologically similar to *Mycobacterium* spp. were identified in Ziehl-Neelsen-stained smears.

Conclusions: A case of *Mycobacterium* spp. infection in an adult alpaca is reported. The results of culture and spogliotype studies are ongoing and will be presented during the meeting.

146

MIXED INFECTIONS WITH *CHLAMYDOPHILA* AND PORCINE EPIDEMIC DIARRHOEA VIRUS: A PERSISTENCE MODEL *IN VITRO* AND *IN VIVO*

N. Borel, U. Ziegler, C. Dumrese, A. Schifferli and A. Pospischil

Institute of Veterinary Pathology, University of Zurich, Switzerland

Introduction: *Chlamydophila* and porcine epidemic diarrhoea virus (PEDV) occur worldwide and can cause diarrhoea in pigs. Mixed infections with *Chlamydophila* and PEDV may result in generation of persistent chlamydial infections. To test this hypothesis an in-vitro model of dual infection with cell culture adapted PEDV and *Chlamydophila abortus* or *Chlamydophila pecorum* in Vero cells was established.

Materials and Methods: Infected cultures were investigated by immunofluorescence (IF), transmission electron microscopy (TEM) and re-infection experiments.

Results: By IF, *Chlamydophila* monoinfected cells showed normal inclusions after 39 hours post-infection (hpi). Dual infections with *C. abortus* revealed three types of inclusions: small inclusions consisting of aberrant bodies (ABs), medium-sized inclusions consisting of ABs and reticulate bodies, and normal inclusions. Dual infection with *C. pecorum* resulted in the exclusive production of aberrant inclusions. TEM examinations of mixed infections revealed enlarged chlamydial inclusions containing reticulate-like, pleomorphic ABs, up to 2 μm in diameter and no re-differentiation into elementary bodies (EBs). In re-infection experiments, co-infected cells produced fewer EBs than monoinfected cells. Differences
between co-infection with *C. abortus* and *C. pecorum* were observed similar to the IF and TEM results.

Conclusions: Our results demonstrated that PEDV co-infection alters the chlamydial developmental cycle similarly to other inducers of chlamydial persistence. Chlamydial persistence was more prominent in co-infection with *C. pecorum* than with *C. abortus*, indicating species-specific differences.

147

INTRAOCULAR LYMPHOMA: IMMUNOPHENOTYPE AND PROGNOSIS

C. McCowan[*], R. Grundon[†], A. O'Reilly[†], C. Hardman[†], S. Holloway[*], M. Meehan[‡] and D. Chow[§]

[*]*University of Melbourne Veterinary Clinic and Hospital, Werribee,* [†]*Animal Eye Care, Melbourne, Australia,* [‡]*All Animal Eyes, Melbourne, Victoria, Australia and* [§]*Peace Avenue Veterinary Clinic, Kowloon, Hong Kong*

Introduction: Ocular disease may be the first indication of lymphoma, but little is known of the outcome of intraocular lymphoma in animals.

Materials and Methods: Thirteen feline and two canine cases of ocular or orbital lymphoma from the University of Melbourne archives for the years 2000–2009 were retrieved. Sections were cut for immunohistochemistry using CD3 for T cells and Pax 5 for B cells. Referring clinicians and owners were contacted for follow-up information.

Results: Most tumours were of B-cell lineage, with variable numbers of normal T cells in association. Only one patient had a diagnosis of lymphoma prior to ocular presentation. Average survival time was 3 months, but ranged from 1 day to 8 or 9 months. Necropsy follow-up was not available for any patient; the major reasons for humane destruction were renal tumours (3), CNS disease (2) and general ill health (2). Three recently diagnosed cats were still alive and apparently well at the time of writing.

Conclusions: Ocular and adnexal lymphomata are commonly aggressive B-cell tumours and prognosis for these patients is very poor.

148

CD117 AND MMP-9 IMMUNOREACTIVITY IN 40 CASES OF MAST CELL PROLIFERATION (MAST CELL TUMOURS AND MASTOCYTOSIS) IN THE CAT

T. Rafael[*], H. Pissarra[*], C. Santos[†], T. Carvalho[‡], J. Correia[*], J. Ferreira da Silva[*], F. Afonso[*] and M. Peleteiro[*]

[*]*CIISA, Faculty of Veterinary Medicine, , Lisbon,* [†]*Hospital Center, Central Zone, Lisbon and* [‡]*CIPM, IPO, Lisbon, Portugal*

Introduction: Mast cell proliferations in cats assume various patterns, ranging from nodules to diffuse infiltrations.

Materials and Methods: Forty cases of feline mast cell proliferation were selected: 27 cutaneous mast cell tumours (CMCTs), four extracutaneous mast cell tumours (lip, vulva, stomach and mesentery) (EXCMCTs) and nine cases of mastocytosis (MTCS). Samples were processed routinely. Immunohistochemistry for CD117 and MMP9 was performed.

Results and Conclusions: The mean age of diseased cats was 7.6 years (range 2 − 16), mastocytosis being more frequent in younger cats. No sex or breed predisposition was identified. Of the 27 cases of CMCT, 19 were well differentiated, seven were moderately to poorly differentiated and one was pleomorphic. The four cases of EXCMCT were poorly differentiated except for one case involving the lip, which showed epithelial infiltration. CD117 was irregularly expressed in CMCT and MTCS and negative in EXCMCT. Strong expression of MMP9 was generally seen in mast cells from localized and diffuse lesions. The fact that many other stromal cells also
expressed MMP9 indicates that invasive behaviour may not depend exclusively on mast cell production of metalloproteinases.