

# ECVP/ESVP Summer School in Veterinary Pathology

## Summer School 2010 – Emerging Infectious Diseases Case 2

### Ewe

#### History:

Several animals from a larger herd (400 adults, 200 lambs) showed circling and died. Two lambs and one adult sheep were submitted for a post mortem examination.

#### Gross Findings:

The animal showed a severe diffuse acute alveolar oedema. Meninges exhibited red discoloration.

**Histology:** Tissue from a sheep.

#### 1. DESCRIPTION OF HISTOLOGIC FINDINGS

Brain stem and cerebellum. Within the brain stem, there are multifocal, randomly distributed, variably sized aggregates of leukocytes (composed of macrophages and often fewer neutrophils) that are poorly delineated (microabscesses). These sometimes exhibit a neuron in the centre that shows evidence of degeneration and necrosis (shrunken appearance, eosinophilic cytoplasm). Often, swollen axons (spheroids) are also seen within the infiltrates. There are occasional bacterial colonies (coccoid bacilli) within the parenchyma. In close proximity of microabscesses, blood vessels often exhibit several cell layer thick cuffs (composed of lymphocytes with fewer macrophages and occasional neutrophils). Some vessels also contain leukocytes, sometimes with numerous neutrophils, within the wall (acute vasculitis) and there are focal aggregates of erythrocytes in proximity to affected vessels (perivascular haemorrhage). The meninges over the cerebellum exhibit mild diffuse infiltration by lymphocytes and fewer macrophages.

#### 2. MORPHOLOGIC DIAGNOSIS

Moderate, multifocal acute suppurative encephalitis with acute vasculitis and perivascular cuffs and mild non-suppurative meningitis

3. NAME the most likely DISEASE:      Listeriosis

4. ETIOLOGY:      *Listeria monocytogenes*