

treatment accelerates age-related neurodegenerative changes in the primate brain.

### LEARNING OBJECTIVES

This presentation will enable the learner to:

1. Explore current theories on the pathogenesis of lentiviral-related neuropathology
2. Explain limitations of nonhuman primate models of age-related human brain changes

### ABSTRACT 19

#### Immunohistochemical markers of reactive skeletal muscle fibres

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Although most patients undergo muscle biopsies to elucidate the cause of muscle symptoms (weakness, cramping, etc.), many muscle biopsies show relatively few specific alterations on routine staining. Immunohistochemical methods for muscle fibre typing and characterisation of inflammatory cell infiltrates are now well established but the value of other markers is less well documented. A preliminary study of other potentially useful immunohistochemical markers revealed that muscle biopsies in our hospital often contain CD56 and/or D2-40 positive myofibres. This study was extended to a series of 32 biopsies from adult patients (age 21–81, 12 males 20 females), 11 of which showed only minor changes on routine examination. Most cases contained CD56 positive mature fibres; D2-40 positive muscle fibres were more common in cases of inflammatory myopathy. Five cases with minor changes on routine examination showed CD56 and D2-40 staining of otherwise unremarkable myofibres, which might represent reactive changes.

### LEARNING OBJECTIVES

This presentation will enable the learner to:

1. Describe patterns of immunohistochemical staining in reactive muscle fibres
2. Discuss the underlying physiology of reactive muscle fibres

### SESSION 5: Quality Assurance in Neuropathology

#### ABSTRACT 20

#### Assessing autolyzed foetal brains

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**Problem:** Evaluating very soft foetal brains is problematic, since anatomic information is often lost when these collapse on a dissection board.

**Methods:** Present cases of very soft foetal brains photographed under water, discuss technical details on this technique, and indicate how these data can be used to evaluate the brains.

**Results:** Foetal brains from intrauterine foetal deaths and from foetal terminations that have a long death-to-delivery time are often very soft, even after fixation, and collapse under their own weight on a dissection board. To better evaluate these brains, they have been floated and photographed in water. When possible, the brain is photographed intact in ventral and dorsal views. After the brainstem with cerebellum is removed and hemispheres are separated, these are all photographed; hemispheres are imaged in both lateral and medial views. This technique records developmental data about cortical gyration, the presence of olfactory tracts/bulbs, corpus callosum posterior extension, cerebellum foliation, and brainstem, which can be compared to standard brain development references. Problems with this technique include fragmentation of autolyzed brain into water.

**Discussions:** Photography of very soft foetal brains under water allows evaluation of brains that normally collapse under their own weight. In cases too soft for meaningful dissection, these data often provide the only available brain developmental information.

### LEARNING OBJECTIVES

This presentation will enable the learner to:

1. Photograph foetal brain under water
2. Evaluate key aspects of external examination using standard developmental literature