941-3
Pendular Horizontal Oscillations
Eye Movements

Pendular horizontal oscillations
Left beating nystagmus
Obtrusive saccades
Bilateral asymmetric gaze evoked nystagmus
Saccadic dysmetria:
  Hypermetric lateral gaze to center
  (lesion of the fastigial nuclei)
Eye Movements

Normal convergence
Full vertical gaze
Smooth pursuit eye movements
Pendular Horizontal Oscillations

In this MS case are:

- Relatively high frequency oscillations that dampen after a blink
- Partially suppressed following a saccade and on convergence
Clinical Features of Acquired Pendular Nystagmus (APN)

May have horizontal vertical and torsional components: their amplitude and phase relationship determines the trajectory of the nystagmus in each eye

Phase shift between the eyes is common (horizontally and torsionally; seldom vertically) – may reach 180 degrees, so that the nystagmus becomes convergent-divergent or cyclovergent
Clinical Features of APN

Amplitudes often differ, and nystagmus may appear monocular.

Trajectories may be conjugate, but more often are dissimilar.

Oscillations sometimes suppress momentarily in the wake of a saccade.
Clinical Features of APN

In Association with Demyelinating Disease

Frequency 2-8 Hz (typically 34-4 Hz)

Generally greater amplitude in the eye with poorer vision

Internuclear ophthalmoplegia commonly associated

May have an associated upbeat component
Clinical Features of APN

Syndrome of Oculopalatal Tremor

Frequency 1-3 Hz (typically 2 Hz)

May be vertical (with bilateral lesions) or disconjugate vertical torsional

Accentuated by eyelid closure

Movements of palate and other bronchial muscles may be synchronized
Whipple’s Disease

Frequency typically about 1 Hz

Usually convergence-divergence occasionally vertical; sometimes with associated oscillatory movements of the jaw, face or limbs (oculomasticatory myorhythmia)
Clinical Features – Whipple’s Disease continued

Vertical gaze palsy similar to the clinical picture of progressive supranuclear palsy is usually also present
