## CASE #5

<u>SUBMITTED BY:</u> Justin Parr, M.D., Laboratory of Neuropathology, University of Pennsylvania, School of Medicine Philadelphia, Pennsylvania 19174

A 58 year old male was admitted to hospital with a 2 day history of nausea, vomiting, abdominal pain and mild bifrontal headache. One day prior to admission, he had blurred vision. Approximately 3 to 4 weeks before, he had had diarrhea and vomiting for about two days. About the same time, he received a swine flu inoculation "at a shopping center". Bilateral optic neuritis and corticospinal tract signs developed and progressed to total blindness, paraplegia with T6 sensory level, incontinence and bilateral Babinski signs. In addition, "right arm monoplegia", right facial paralysis, right hemianalgesia, "dysphasia", bidirectional horizontal gaze nystagmus and areflexia (left arm exception) occurred within ten (10) days. Brain scan (with  $TcO_A$ ) showed uptake in the left frontal lobe. A CAT scan two weeks later demonstrated decreased density in frontal and calcarine areas, bilaterally and asymmetrically. Other laboratory studies including EEG were normal. He expired during the 15th week of illness.

Visceral Pathology: Bilateral early bronchopneumonia.

<u>Nervous System Involvement</u>: The gross lesions were chalky gray, finely granular, soft and sharply demarcated in white matter of cerebrum (including corpus callosum), cerebellum, brain stem, optic nerves and chiasm, and spinal cord. The sizes ranged from 3.0 cm. (cerebrum) to 0.2 cm. (lumbar) with complete transverse thoracic cord involvement. A confluence of lesions was equivocally discernable in the spinal cord. The lesions were discrete in the brain, multiple, bilateral and asymmetrical. They were not specifically perivenous or subpial in distribution, although most of the brain lesions did abut on the ventricles.

<u>MATERIALS SUBMITTED</u>: One (1) H & E and one (1) unstained section (5u) of left superior frontal, right inferior frontal or left inferior cerebellum are distributed. These are representative of the CNS lesions.

## POINTS FOR DISCUSSION:

- 1. Diagnosis.
- 2. What is the relationship, if any, between onset of disease and a) the swine flu inoculation or b) the mild gastrointestinal upset occurring about the same time (3-4 weeks prior to onset of neurological signs)?