CASE 1994-10

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Material submitted: One H&E stained slide

Points for discussion: #1: Diagnosis
#2: Pathogenesis

Clinical History:

This was a 10 year old boy with a history of attention deficit disorder, hyperactivity and asthma. A week before admission he developed an upper respiratory tract infection for which he was receiving Penicillin. 3 days prior to his death, he was playing basketball when he suddenly complained of headache with dizziness and he collapsed. He was taken to the Emergency Room at a nearby hospital. He was found to be unresponsive, tachycardic to 140 BPM and apneic. He was immediately intubated. His laboratory values were within the normal range. A chest x-ray showed bilateral pulmonary infiltrates consistent with pulmonary edema. A CT-scan showed a cerebral hematoma with some bleeding into the third ventricle and acute hydrocephalus. He was then transferred to the hospital for further management, where he was taken to the Operating Room for an emergency right frontal ventriculostomy placement. The CSF was found to be under high pressure and was bloody. On the operating table, the patient was noted to have no spontaneous respirations,
no response to deep painful stimuli and had fixed and dilated pupils, consistent with absence of all brain stem functions. The patient remained comatose. An EEG showed minimal cortical activity at this time, He was maintained on ventilatory support. Neurological criteria for brain death were evaluated and he was declared dead the same day at 4:00 pm. The next day, multiple organ harvesting was carried out and the liver with gallbladder, kidneys with adrenal, spleen, pancreas, and mesenteric lymph nodes were removed. Subsequently an autopsy was performed, 67 hours after death.