CASE 1

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Ref. No. TGH, A-4060

This 34-year-old white male physician expired 80 hours following a motorcycle accident. He hit the base of a steel pole with his upper shoulders. Initially, he was observed to take a few gasping respirations, but immediately thereafter he was apneic and pulseless. Following resuscitation 20 minutes later, he remained unconscious. He did regain spontaneous respirations and he developed pinpoint pupils, blinking eye movements, and marked extensor tonus of all extremities with pronator-extensor thrusts of the upper extremities to deep pain. Caloric stimulation elicited some extraocular muscle activity of the right eye. The initial electroencephalogram showed no cortical activity; 24 hours later there was occasional slow-wave activity, but cortical activity disappeared. Thirty-five hours after cessation of extraordinary supportive care, he expired.

At autopsy, significant abnormalities were confined to the central nervous system, upper trunk, and spine. Besides the contused soft tissues of the shoulders, a cervical-basilar dislocation, hemorrhagic contusions of the inferior frontal lobe, temporal tips, uncinate gyri, and roof of the 4th ventricle, perivascular hemorrhages and microinfarcts of the brain stem and early laminar necrosis of the cerebral cortex, hippocampi and Purkinje's cell layer were observed.

Finally, the most intriguing and dramatic lesion was a rent which had incompletely disrupted the pyramidal tracts at the pontomedullary junction.

Submitted are: 1 Ektachrome transparency, 1 section of the pontomedullary junction stained with luxol fast blue and cresylecht violet.

Points for discussion:

Is this a new kind of traumatic lesion and what is its cause? No. See Ref.
Is it associated with other types of craniocerebral trauma? Yes
What is its relationship with the cruciate syndrome? None
Does judicial hanging produce a comparable lesion? No