Midbrain Examination shows diffuse axonal damage. There is no secondary brain stem haemorrhage. The substantia nigra shows no evidence of degenerative change.

Pons Examination shows the features of severe diffuse axonal damage.

Cerebellum Examination shows no evidence of cortical necrosis. The Purkinje cells are preserved. A small gliotic scar is present in the white matter.

Immunohistochemistry for neurofilament protein and for the myelin stain LFB/H & E confirms the distribution and severity of diffuse axonal damage.

COMMENT:

In summary, the predominant finding in this case is the severe diffuse axonal damage. Diffuse axonal damage is thought to be due to interruption of movement of cytoplasm through axons with subsequent accumulation of axonal material seen on H & E examination as small eosinophilic bulbs. In this case it was distributed throughout the deep white matter, corpus callosum and brain stem. This pattern of damage is consistent with being caused by trauma. It is indicative of a severe head injury.

7/8/97
29/10/97