
ANATOMOPATHOLOGICAL STUDY OF THE ENCEPHALON OF 120 VICTIMS OF TRAFFIC ACCIDENT WITH SPECIAL EMPHASIS ON DIFFUSE AXONAL INJURY (Abstract)*. Thesis. São Paulo, 1994.

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A study of brain lesions of 120 persons, who died from traffic accidents, with special emphasis on diffuse axonal injury (DAI) has been carried out.

A low median survival rate and a high frequency of craniocerebral and extracranial lesions were found.

There were noted, when compared with other reports that included closed cranial trauma of different origins, a low frequency of primary focal lesions (skull fracture, brain contusions and intracranial hematomas) and a high frequency of primary diffuse lesions (DAI and multiple vascular injury).

DAI was found in 75.8% of the brains, there being 17.6% of first degree, 53.8% of second degree and 28.6% of third. In spite of diffuse distribution that characterizes this type of lesion, there was found a pattern of preferential occurrence in interhemispheric regions and rostral brain stem, frequently lateralized.

A significant statistical correlation was found between DAI and slit cavum septi pellucidi, intraventricular haemorrhage, haemorrhage of the fornix and multiple vascular injury, there being higher association with severe DAI (second and third degree).

The intracranial haematomas (extradural, subdural and intracerebral) were almost always associated with DAI and immediate loss of consciousness.

The DAI was almost always associated with immediate alteration of consciousness, with a significant correlation between the degree of DAI and the level of consciousness.

Based on inertial forces over the special characteristic conformation of the brain, is is proposed a mechanical explanation for the most frequent localization and lateralization of the DAI at interhemispheric formations and rostral brain stem.

KEY WORDS: traffic accident, traumatic brain lesion, diffuse axonal injury.

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