G58 Cerebral Artery Thrombosis After Penetrating Oral Trauma: An Exceptional Autopsy Case

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After attending this presentation, attendees will understand the mechanisms of interruption of intracranial cerebral circulation by thrombosis arising in the anterior cerebral artery as a result of penetrating oral trauma.

This presentation will impact the forensic science community by presenting the forensic examination supported by the histological findings. Microscopic examination made it possible to establish the exact causes and vascular consequences of the impalement; they explain perfectly the clinical symptomatology, as well as its neurologic evolution.

A young man fell onto a metal rod at a construction site. The accident resulted in perforation of the oropharynx. After several hours, right hemiplegia developed.

Complementary examinations revealed left middle cerebral artery thrombosis. Forensic autopsy performed after the death of the patient revealed left sylvian artery thrombosis extending into the left intracranial carotid sulcus, into the left internal carotid artery and into the left anterior cerebral artery. Skull base exploration demonstrated a fracture of the left internal tip of the petrous bone. There was a breach of the intima in the anterior communicating artery and extensive thrombosis extending to the anterior, middle and internal cerebral arteries, and to the internal carotid arteries. As the adventitia was spared, this indicated indirect injury to the anterior communicating cerebral artery. This is the first description of cerebral artery thrombosis caused by indirect traumatic injury to this artery. Although the case is clinically similar to internal carotid arterial thrombosis by perforating trauma of the palate in young children, the initial clinical symptoms and signs were different, with hypoesthesia in the territories of the V2 and V3 branches of the fifth cranial nerve. These clinical findings indicated traumatic injury to the base of the skull.

Anterior Communicating Cerebral Artery, Thrombotic Process, Penetrating Trauma

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