



### G50 A Case of Atypical Chronic Subdural Hematoma: A Spontaneous Rupture of Dural Lymphoma Nodule?

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After attending this presentation, attendees will understand the call for creating an entity of spontaneous chronic subdural hematoma.

This presentation will impact the forensic scientist community by presenting a case report about chronic subdural hematoma (SDH) and the different causes of bleeding beneath the *dura*.

**Introduction:** SDH is usually associated with brain injury following trauma. Hemorrhage resulted from the rupture of the cerebral bridge veins of the meninges, from a tear of superficial cortical arteries or from a focus of intraparenchymal hemorrhage associated with an overlying contusion such as in temporal lobe which ruptures through the contused cortical area. Acute SDH is due to direct impact trauma or sudden acceleration-deceleration of the head without injury of the head. Chronic SDH may be traumatic or may rise spontaneously.

**Case Report:** A 40-year-old Caucasian woman traveled to an African country. Her medical history included local radiation therapy, several years beforehand, for the treatment of breast cancer. She had been in complete remission for more than a couple of years. This woman's status of health presented no constitutional or acquired hemostasis disorders. She was completely free of medicine. She had no known addictive tendencies. Several days after her arrival, she presented paroxysmal hyperthermia, accompanied a few hours later by photophobia, difficulty in walking and confusion. Neurological state worsened with the appearance of coma (Glasgow score of 6). She was hospitalized and resuscitation measures did not prevent the patient's death. Following cold storage, the victim's body was repatriated to France, where an autopsy was performed to determine the primary cause of death because liability could be assigned against insurance (transfer with delay time between neurological deterioration and hospitalization). On opening the cranial space, a subdural hematoma forming a right hemispheric biconvex lens was discovered. It weighed 90 grams, was wine red in color and consisted of an encased fluid mass. No traumatic lesion was found during external or internal examination of the skull. Histological investigations then uncovered a multi-organ generalized lymphoid infiltration. Examination of the cerebral cortex showed these lymphoid infiltrations as well. A small-cell lymphoid nodule, disrupted by erythrocytes was found in the falx cerebri of the meninges. Following these additional investigations the main cause of death was a chronic right circumferential SDH. This hematoma could originate with the "spontaneous" hemorrhagic rupture of a nodule of lymphoid infiltrate in the meninges of the falx cerebri. This nodule was a dural metastasis of a multi-organ lymphoma.

**Discussion:** Chronic SDH is well known as incidental finding during forensic autopsy. In forensic medicine, the formation of chronic SDH is always linked to trauma. The entity of spontaneous SDH doesn't exist in forensic medicine. Chronic subdural hematomas occur more frequently in men, in the elderly, and in patients using anticoagulant or platelet aggregation inhibiting drugs. The consumption of alcohol is also a predisposing factor. In these circumstances, the development of a SDH involves necessary the intervention of trauma. It can be minimal such as some encountering in the impacts of everyday life. In the medical literature, several cases of atypical chronic SDH characterized by the presence of pre-existing pathological dural lesions, especially cancerous ones, have been described. These tumors of the dura mater can result from primitive neoplasias of the central nervous system in the meninges or from dural metastases of cancers. In the present case history, several forensic medical elements contributed to the atypical nature of this chronic SDH: no major or minor traumas were identified in this young woman of forty years; she was non-menopausal; and she was not a chronic or acute consumer of alcohol and/or medications that could interfere with hemostasis or coagulation. In some previous published cases, the hypothesis of trauma, even if minimal, leading to displacement of the brain within the cranial space was suggested and could not be excluded. And spontaneous chronic SDH have been described. This presentation will review the possible mechanisms which rupture the lesion and will discuss the fact that if trauma could not be completely excluded, the entity of spontaneous chronic SDH could be created in forensic medicine.

**Subdural Hemorrhage, Forensic Medicine, Spontaneous**