



### **G75 Trauma-Related Hemorrhage vs. Spontaneous Rupture of Vascular Malformation: Three Case Reports Illustrating Medico-Legal Aspects**

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In medicolegal practice, cutaneous and visceral hematomas are often caused by trauma. In some cases spontaneous rupture of a hemangioma can mimic trauma-related hemorrhage. Three case-reports illustrate this issue.

In medicolegal practice, cutaneous and visceral hematomas are often caused by traumas. However, in some cases, a hemangiomas/ vascular malformations can be involved. These can be overlooked if histology is not performed. The matter is further complicated by the fact that rupture of hemangioma can be provoked by slight trauma. Three autopsy case-reports are presented to illustrate medicolegal aspects of this issue.

**Case 1:** A 6-month-old boy was found dead in his bed by his parents. The GP who examined the body found the child's anus enlarged and considered the death suspicious. At autopsy, the anus was considered normal, but there was an ecchymotic area at the surface of the left ventricular epicardium, 2 cm in diameter. No resuscitation attempts had been performed. There were no rib fractures or any other cutaneous or visceral hemorrhages. Histology revealed a small hemangioma in the anterior left ventricular wall. Such vascular malformations have been reported to cause sudden cardiac death in infants and older children.

**Case 2:** A 5-year-old boy was found dead in his bed by his parents. The cause of death was found to have been a tamponnade due to a hemopericardium. The right atrium was found ruptured. There were no rib fractures or any other hemorrhages. Histology showed a ruptured hemangioma in the right atrial wall. Such vascular malformations have been reported to cause death in infants and older children. This localization has been reported to be the most frequent.

**Case 3:** An 18-year-old man was found dead in jail. During the days prior to the death, he had complained of various neurological symptoms, including headache and difficulty in standing and walking. He reported that these symptoms developed in the days following a dispute, when he had been punched to the face. Neurological examination showed no objective abnormalities. At autopsy there was a meningeal hemorrhage surrounding the cerebellum and the upper part of the brain stem. Edema in the underlying parenchyma caused death. Histologically, there was a ruptured hemangioma in the cerebellum.

In conclusion, hemangiomas are rare causes of hemorrhages. Rupture can be spontaneous (cases 1 and 2). However, in medicolegal practice, the question often arises of whether a slight trauma may have facilitated the rupture (case 3). Histology is essential in revealing the hemangioma and dating lesions.

**Hemangioma, Heart, Brain**