



G108 Correlation Between Thyroid Disease and Sudden Thromboembolic Death: Case Report

Silvia Boca, MD, Isabella Aquila, MD*, Francesca Pepe, MD, Carol Pileggi, MD, Debora De Bartolo, Ciro Di Nunzio, PhD, Santo Gratteri, MD, and Pietrantonio Ricci, PhD, Magna Graecia Univ, Viale Europa, Germaneto, Catanzaro, ITALY*

After attending this presentation, attendees will understand how thyroid disease can be related to sudden thromboembolic death in young people.

This presentation will impact the forensic science community by underlining the possibility of a sudden death caused by thromboembolism, consequent to thyroid disease.

Venous thrombosis is the third most common cardiovascular disease after myocardial infarction and stroke. The incidence rates for VT (1 – 3/1.000) vary between person/years.¹⁻³ The case fatality rate of profound venous thrombosis, mainly due to massive pulmonary embolism, varies from 1% in young patients to 10% in older patients. Often the diagnosis of pulmonary thromboembolism is discovered during autopsy.^{4,5} In the United States, pulmonary embolism causes about 50,000 deaths per year.⁶ In general, the thromboembolism determined a sudden death, especially in young people, and it is not always preceded by prodromal symptoms.

The literature suggests a moderate association between hyperthyroidism and acute venous thrombosis. In particular, the role of thyrotoxicosis is a common disorder with an incidence between 0.5% to 2.5% in the world. It causes large effects on the heart, reversible changes such as: increased prothrombotic VIII factor and von Willebrand factor; an increase of clots most resistant to fibrinolysis.⁷⁻¹¹

The purpose of this study is to detect a possible association between thyroid disease and sudden thromboembolic death.

The case study examined a 41-year-old woman, mother of two children, found dead in the bedroom of her lover. Investigation at the scene found that the corpse was naked on the bed. The police reported the woman had had sexual relations with the man. From the investigation interview her doctor did not suggest any disease and the woman had been in good health. The external inspection of the cadaver did not detect external signs of a struggle or other injuries. The TCMS postmortem showed an alteration of TC densitometry in correspondence of the right ventricle. The survey autopsy showed a massive thrombus-embolism without other evident internal signs. Histological examination revealed a pituitary adenoma with lymphocytic thyroiditis of Hashimoto disease. The histological finding, the absence of other diseases or other predisposing risk factors for thromboembolism were allowed to correlate the genesis of thromboembolic sudden death with thyroid disease, which the victim had.

The study has value for the scientific community because it focuses attention on the problem of sudden deaths in young people. In particular, it highlights the high risk of mortality, as demonstrated in the literature, for people with thyroid disease in the genesis of sudden deaths of thromboembolic death. The prevention of these diseases and the appropriate therapy in patients would help to avoid such events.

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Sudden Death, Pulmonary Embolism, Thyroid Disease