H76 An Unusual Sudden Death Due to an Invasive Hydatidiform Mole Responsible for a Uterine Rupture and a Massive Hemoperitoneum

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After attending this presentation, attendees will better understand an atypical cause of sudden death due to a gestational trophoblastic neoplasia, which is one of the gynecological malignancies with a usually favorable prognosis.

This presentation will impact the forensic science community by increasing awareness of the possibility of a sudden death presentation, leading to an autopsy of gynecological malignancies, such as gestational trophoblastic neoplasias.

Gestational trophoblastic neoplasias are rare tumors that constitute less than 1% of all gynecological malignancies. They are classified histologically into four distinct subgroups: invasive mole, choriocarcinoma, and the very rare placental site trophoblastic tumor and epithelioid trophoblastic tumor. Invasive mole as well as the other forms of gestational trophoblastic neoplasias could follow either a normal or abnormal pregnancy, but in most cases the antecedent pregnancy is a complete or partial hydatidiform mole. These tumors are generally highly responsive to chemotherapy with more favorable outcomes than other comparable malignancies; however if not diagnosed and treated early, invasive mole can result in serious complications, such as uterine perforation and hemoperitoneum. The most common clinical presentation of an invasive mole includes vaginal bleeding, an enlarged uterus, and high urinary or serum human Chorionic Gonadotropin (hCG) levels. Metastases are rare in cases of invasive mole and occur by hematogenous spread mainly to the lung but also to the vagina, brain, and liver. Color Doppler ultrasound is the imaging of choice. The pathological diagnosis of an invasive mole is rarely made because, most of the time, diagnosis is based on abnormal decrease of hCG levels according to the International Federation of Gynecology and Obstetrics criteria and patients are treated conservatively with chemotherapy, without any need for hysterectomy. Management includes treatment with chemotherapy as well as continued monitoring of hCG. Currently, cure rates are greater than 90% even in the case of widespread metastatic disease.

Presented is the case of a 15-year-old Comorian woman who was spending vacation at her uncle's house in France; she suddenly began complaining of abdominal pain and then collapsed. Despite resuscitation efforts by paramedics, she never regained a cardiac rhythm and expired. The only information concerning her past medical history was a metastatic "molar neoplasia" with clinical follow-up in Comoros. A forensic autopsy was performed to determine the manner and the cause of death at the Medical Examiner's Office of Lyon. External examination of the body was completely negative. The internal examination revealed the existence of a hemoperitoneum of 2,710cm^2. The gross examination of the uterus showed a large necrotic and hemorrhagic tumor that extended to the entirety of the wall. There were many vesicles within the endometrium and myometrium. The liver, kidneys and pancreas were bloodless. Histological analysis identified degenerated and edematous chorionic villi with trophoblastic proliferation and karyorrhectic debris that invaded deeply into the myometrium of the uterus. There

were extensive necrotic and hemorrhagic areas. Some blood vessels were also invaded and, as a consequence of this vascular spread, metastasis of hyperplastic trophoblast were seen in lthe ungs. Additionally, the postmortem toxicological screening was negative. In conclusion, the cause of death was attributed to a uterine rupture secondary to an invasive hydatidiform mole resulting in a massive hemoperitoneum.

Invasive Mole, Uterine Rupture, Sudden Death