G51 Placental Site Trophoblastic Tumor (PSTT) With Lung Metastases as Cause of Death in a Young Patient: Autopsy Findings and Medico-Legal Implications

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The goal of this presentation is to present the autopsy and histological findings of placental trophoblastic tumor, which are very rarely described in the literature.

This presentation will impact the forensic community by demonstrating how medico-legal implications are related to the difficulties of the doctor who faced this rare condition.

Placental site trophoblastic tumour (PSTT) is a rare form of gestational trophoblastic disease (GTD) with unpredictable biological behaviour. It arises from the transformation of intermediate trophoblastic cells that normally play a critical role in implantation. PSTT was originally termed “atypical chorioepithelioma” by Marchand in 1895. In 1976, under the title “trophoblastic pseudotumor of the uterus”, Kurman et al. recognized the entity as a form of trophoblastic disease, distinct from choriocarcinoma. Five years later, Scully and Young introduced the term “placental site trophoblastic tumor” to indicate possible malignant behaviour. Since the first report, approximately 90 cases of PSTT have been reported, formerly termed atypical choriocarcinoma, chorio-epitheliosis or syncytioma. PSTT can occur after a normal pregnancy, abortion, term delivery, ectopic pregnancy or molar pregnancy. It displays a wide clinical spectrum, and when metastatic, can be difficult to control even with surgery and chemotherapy. Unlike other forms of GTD, PSTT is characterized by low beta-hCG levels because it is a neoplastic proliferation of intermediate trophoblastic cells. Expression, however, of human placental lactogen (hPL) is increased on histologic section as well as in the serum. The most common presenting symptoms of PSTT are vaginal bleeding and amenorrhoea. Diagnosis is confirmed by dilatation and curettage and hysterectomy but meticulous evaluation of metastasis is mandatory.

A 21-year-old woman, (gravida 1, para 0) at 25 weeks of amenorrhea was admitted to the hospital for hyperemesis, hepatic problems, and impor- tant weight loss registered during the last few months. Routine laboratory tests such as liver function, haematics and coagulations markers were abnormal, whereas all fetal parameters were unremarkable. On examination, the patient was cachectic looking. The per-abdominal examination was unremarkable. Few days after the admission the patient suddenly died before the doctors can reach a diagnosis. A forensic investigation for medical malpractice was initiated. Microscopic examination of the samples collected from uterus revealed the presence of large trophoblastic cells with eosinophilic cytoplasm. Deposition of fibrinoid material was noticed between trophoblastic cells. Tumor cells dissected through the myometrium and invaded into the vascular spaces. Specimens of the lungs revealed numerous small neoplastic emboli into the vessels.

Placental site trophoblastic tumor is an uncommon member of GTD, with less than 100 cases having been reported in the English language literature. PSTTs behave in a benign fashion, whereas approximately 10 – 15% were clinically malignant. Predicting which patients will develop metastases is difficult. The outcome is usually excellent after the simple hys- terectomy. Unfortunately at the time of diagnosis our patient presented metastasis beyond the uterus. The management of disease with metastasis can be very difficult, for the relative insensitivity to chemioteraphy. Other important adverse prognostic factors are age >40 years and mitotic count>5 mf/10 HPF. Gross autopsy and histological findings, which are very rarely described in the literature, are demonstrated. The medico-legal implications related to the great difficulties of the gynecologist who faced this rare con- dition in term of diagnosis and prediction of the biological behavior and out- lining effective therapeutic approaches are discussed.

Placental Site Trophoblastic Tumor, Lung Metastas, Medico-Legal Implications

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