Science Journal of Public Health
2022; 10(4): 190-192
http://www.sciencepublishinggroup.com/j/sjph
doi: 10.11648/j.sjph.20221004.14
ISSN: 2328-7942 (Print); ISSN: 2328-7950 (Online)

High-Risk Gestational Trophoblastic Neoplasia with a Fatal Clinical Course After a Full-Term Pregnancy

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To cite this article:
Carlos Andres Trejos Ramirez, Juan Alejandro Gomez. High-Risk Gestational Trophoblastic Neoplasia with a Fatal Clinical Course After a Full-Term Pregnancy. *Science Journal of Public Health*. Vol. 10, No. 4, 2022, pp. 190-192. doi: 10.11648/j.sjph.20221004.14

Received: July 7, 2022; **Accepted**: July 29, 2022; **Published**: August 24, 2022

Abstract: Gestational trophoblastic disease covers a spectrum of benign and malignant conditions arising from pregnancies with highly abnormal development of trophoblastic tissue and leading to an irregular birth event. When this event occurs after surgery (eg, curettage) or evidence of metastatic disease arises, it is termed Gestational Trophoblastic Neoplasia and includes invasive mole, placental site trophoblastic tumor, epithelioid trophoblastic tumor, and choriocarcinoma. In this context, it is a rare condition, with various forms of clinical presentation and with diagnostic alternatives that include imaging (transvaginal ultrasound, magnetic resonance imaging, and computed tomography), the measurement of hCG, which is useful for diagnosis and prognosis, and histology. Regarding treatment, it has been shown that if it is adequate and carried out by a multidisciplinary team, which involves polychemotherapy, radiotherapy and adjuvant surgery, it has a survival rate close to 70% if it is carried out early. This article reports an unusual case of a 32-year-old multipregnant woman who presented to the emergency department with abnormal uterine bleeding, an enlarged uterus, and hypovolemic shock after a full-term pregnancy with subsequent histological report of gestational trophoblastic disease and a catastrophic outcome due to distant metastases (brain and both lungs) and its complications.

Keywords: Trophoblastic Gestational Disease, Choriocarcinoma, Brain Hemorrhage

1. Introduction

The Gestational trophoblastic disease (GTD) includes a group of conditions malignant, in which is presented an abnormal proliferation of the trophoblastic tissue including the choriocarcinoma, the invasive mole, the trophoblastic epithelioid tumour and the Placental site trophoblastic tumour (PSTT) [1]. About the 25% of the neoplasm emerge subsequent to a pregnancy to term, with an incidence approximate of 1 in 150000 pregnancies [2]; being the histological choriocarcinoma the most common, establishing a pattern of disease of fast growing and dissemination. Nevertheless, this pathology has a fast and favorable response to the chemotherapy compared with other entities. The diagnosis generally is late when it comes from a no molar pregnancy, being prevalent the presence of the metastatic disease [3].

A case is presented, a 32 years old multiparous patient with trophoblastic gestational disease of high risk resistant to monochemotherapy, subsequence a pregnancy to term without complications with a clinic presentation of uterine bleeding with hypovolemic shock and a subsequence catastrophic course.

2. Case Report

A 32 years old patient, who gets into the clinic at 12 weeks of a vaginal birth to no complication term, with genital bleeding associated to manifestations of low cardiac output. She brings a report of subsequence pathology to a uterine curettage at 32 days form the birth (executed on the periphery), which reports "placental remnants with unusual trophoblastic spread with presence of syncytiotrophoblast, cytotrophoblast and intermediate trophoblast, without chorionic villi conspicuous (suggest trophoblastic gestational neoplasm)", without clinical check-ups nor subsequent biochemists. It was documented to the physical exam an enlarged uterus with size (16 cm), signs of vaginal bleeding, slightly open cervix with secretion of suspicious material shaped like a "bunch of grapes". During the evolution

presents an increase of the vaginal bleeding and a haemodynamic instability because of this, it was performed a rescue hysterectomy with discoveries of hemoperitoneum (about 300 cc), uterine rupture and panmetritis. The pathology was diagnosed as gestational choriocarcinoma with infiltration of the entire myometrial wall stage FIGO IV: 10, for which EMACO polychemotherapy begins (etoposide 100 mg/m^2, methotrexate 300 mg/m^2 and vincristine 1 mg/m^2 on the eighth day). On her hospital stay she presents fast neurological deterioration product of the Frontal Intraparenchymal hemorrhage that required decompressive craniectomy and urgent drainage with potential deep neurologic residual damage, associated to imaging evidence of pulmonary bilateral metastasis. She also presents poor response to medical handling and encephalic death subsequence to 45 days from admission.

3. Discussion

Among the trophoblastic gestational neoplasm, the choriocarcinoma is the most aggressive histological type, with chance of spread to the lung (50%), vagina (30%-40%), brain parenchyma (10%) liver (10%) and others like kidneys, spleen and intestine to a lesser extent [4].

The rate of healing ranges from 70% to 90%, even in presence of metastatic disease generalized by the unique singularity which is its high sensibility to the chemotherapy, mostly on the choriocarcinoma and invasive mole [5].

Histologically, the choriocarcinoma is composed of sheets of anaplastic cytotrophoblast and syncytiotrophoblastic tissue without Chorionic villus. Additionally, can be seen some trophoblasts of intermediate appearance, being the biphasic pattern of mononuclear cells (cytotrophoblast) and multinuclear (syncytiotrophoblast) pathognomonic of choriocarcinoma [4].

The trophoblastic gestational neoplasm after a pregnancy to term can be manifested initially as an amenorrhea, being usual the uterine bleeding posteriori, due to invasion by tumour or metastasis in the vagina. When it presents uterine perforation o abdominal metastasis, can appear abdominal pain, and hemoptysis. Those which present metastasis in the central Nervous System usually show increasing of the intracranial pressure like headache, dizziness, seizures and hemiplegia. Patients with extended pulmonary metastasis present dyspnea, cough, and chronic pain. Its fast growing can occasion that the bleeding causes a medical emergency in any of the involve systems [6].

The diagnosis subsequence to a no molar pregnancy usually is late (this is because there are not routine checks of human chorionic gonadotropin (B-hCG) at the puerperal period without complications). The rising of B-hCG with no other cause to explain it, usually is enough for the diagnosis, even without the peculiar characteristic which are growth or lack of metastasis; Always taking into account the must exclude the other conditions that can increase the B-hCG (e.g. spontaneous abortion or ectopic pregnancy) [7].

The handling of this pathology will depend of its changes of response to the chemotherapy through its clinic staging, radiologic, a score of risk and a prognosis of chemoresistance adopted by the international federation of gynecology and obstetrics (FIGO) published by Berkowitz with collaboration in 2008 [8]. The high-risk variants have a very low survival to 5 years as low as 68% [9], instead of the schemes of aggressive polychemotherapy. The preferred indications include etoposide, methotrexate and actinomycin D, alternated with cyclophosphamide and vincristine, showing complete response rates between 71-78% and survival rates to long term as 85-94% [5].

The surgery can be jointly required for really high risk neoplasm, even in multiorgan compromised cases. A study of 50 patients shows healing rates up to 87.5% in 28 operated patients. It was made hysterectomy, lung resections, uterine wedge resections, bowel resection and uterine artery embolization to dry out tumor foci resistant to chemotherapy or bleeding control [10].

The medical prognosis deteriorates in order to the stage and score of risk, showing rates of healing between 90% - 100% of the neoplasm stage FIGO II-III. The full referral of patients with stage FIGO IV of high risk is between 60%-70% (48% more after the application of polychemotherapy, radiotherapy and surgery) [11] resulting in most of cases without response to a catastrophic ending.

4. Conclusions

The trophoblastic gestational neoplasm of high risk after set pregnancy to term is an uncommon entity with a course that can be catastrophic if it is not detected on time and early treated.

It is a pathology that appears days or even months after the puerperium period and should always suspect within the diagnosis algorithm of every patient with abnormal uterine bleeding. The prognosis and survival tend to improve with a multidisciplinary handling that should involve the polychemotherapy and in some cases the radiotherapy and adjunctive reduction surgery.

Acknowledgements

We would like to thanks to the Tomas Uribe Uribe Departmental hospital and the la Unidad Central del Valle del Cauca, the completion of this study could not have been possible without those entities.

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