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ORIGINAL CASE REPORT

BETA-HUMAN CHORIONIC GONADOTROPHIN (β-HCG TOTAL) AS A TUMOR MARKER IN PREGNANCY

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INTRODUCTION

- **Beta-Human Chorionic Gonadotrophin (β HCG total)** represents a substance that is usually secreted by the placenta in the course of pregnancy. This is why it is used as **a pregnancy test**, because the values are high in the first trimester of the pregnancy.

INTRODUCTION

- But the determination of the **β HCG total** is also can used as **a tumour marker** in order to detect **gestational trophoblast diseases** such as the hydatidiform mole and **choriocarcinoma** and **germ cell tumours of the ovaries.**

INTRODUCTION

- Nevertheless **the young pregnant hypertensive patient**, with **increased** values of **total β HCG** after the first trimester of pregnancy, cannot be left to be interpreted only within the **pregnancy context**, but these must be taken into account as a possible **choriocarcinoma diagnosis**.

INTRODUCTION

- This **tumoral marker** should be performed as a **screening test** in **young pregnant women** with severe values of blood pressure, after the first month of pregnancy, in order to **detect an unknown choriocarcinoma.**

HUMAN CHORIONIC GONADOTROPHIN(hCG)

- In molecular biology**, human chorionic gonadotropin** (**hCG**) is a hormone produced by the syncytiotrophoblast, a portion of the placenta, following implantation and this is the reason that is used like test of pregnancy.

CLINICAL CASE PRESENTATION

- * I will present the case of a young woman, aged 27 years old, **pregnant in 27 weeks in evolution**, which comes in for a medical consultation because of the high levels of blood pressure **BP=210/110mmHg**, with clinical suspicion of preeclampsia.

MATHERIAL AND METHODS

- Initially the high levels of blood pressure have been interpreted in the context of the pregnancy, although the urine test was normal without proteinuria. Later on, further para clinical investigations were performed in order to rule out hypertension as secondary cause,

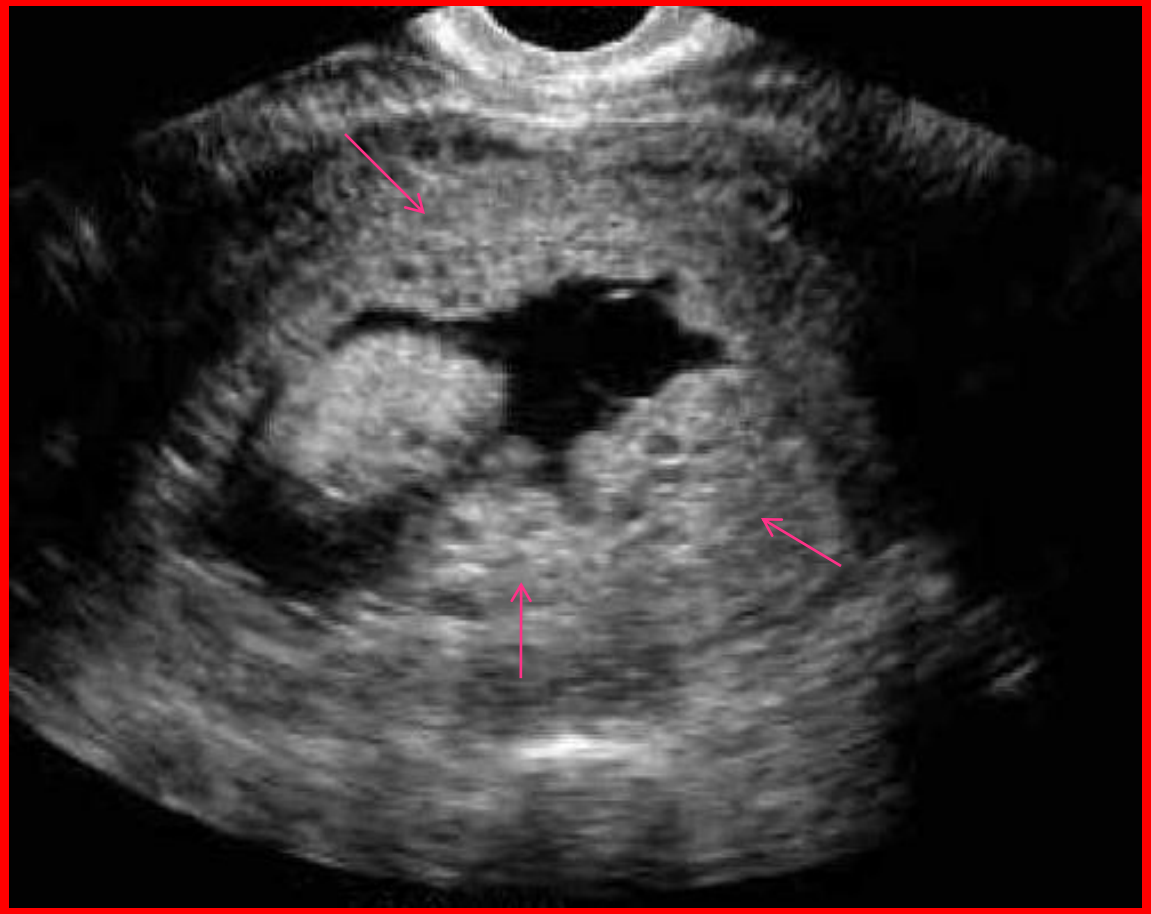
MATHERIAL AND METHODS

- but nothing else was detected in this direction. The usual laboratory tests were in normal range. Then the patient came back because said that she **can not feel the baby's moves** and performed **an abdominal ultrasound**.

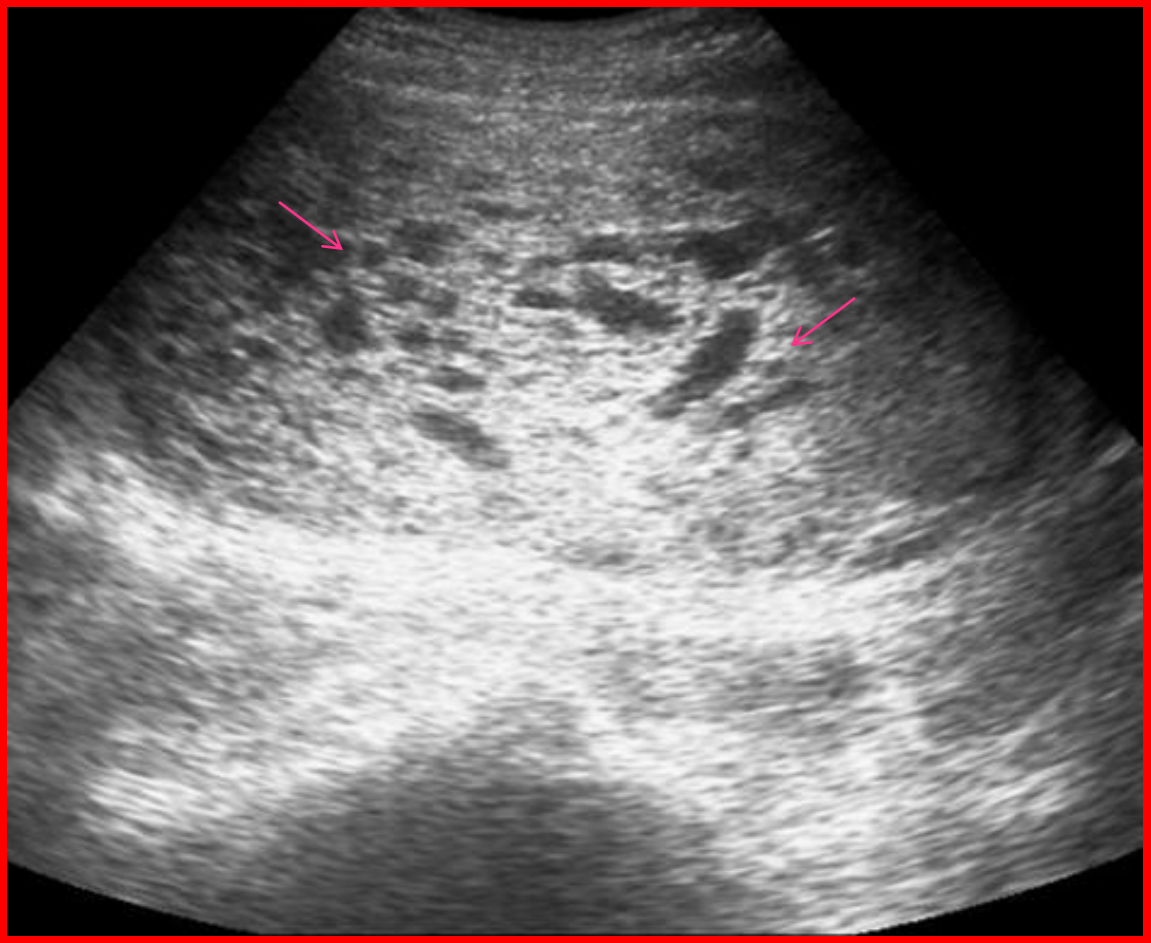
ULTRASOUND SCAN

- This has highlighted the viable fetus and **the placenta appearance**, which was **very thick than it would normally be**, with **abnormal big villosities** which drew the attention upon a possible choriocarcinoma diagnostic.

ULTRASOUND SCAN
molar placenta and pregnancy

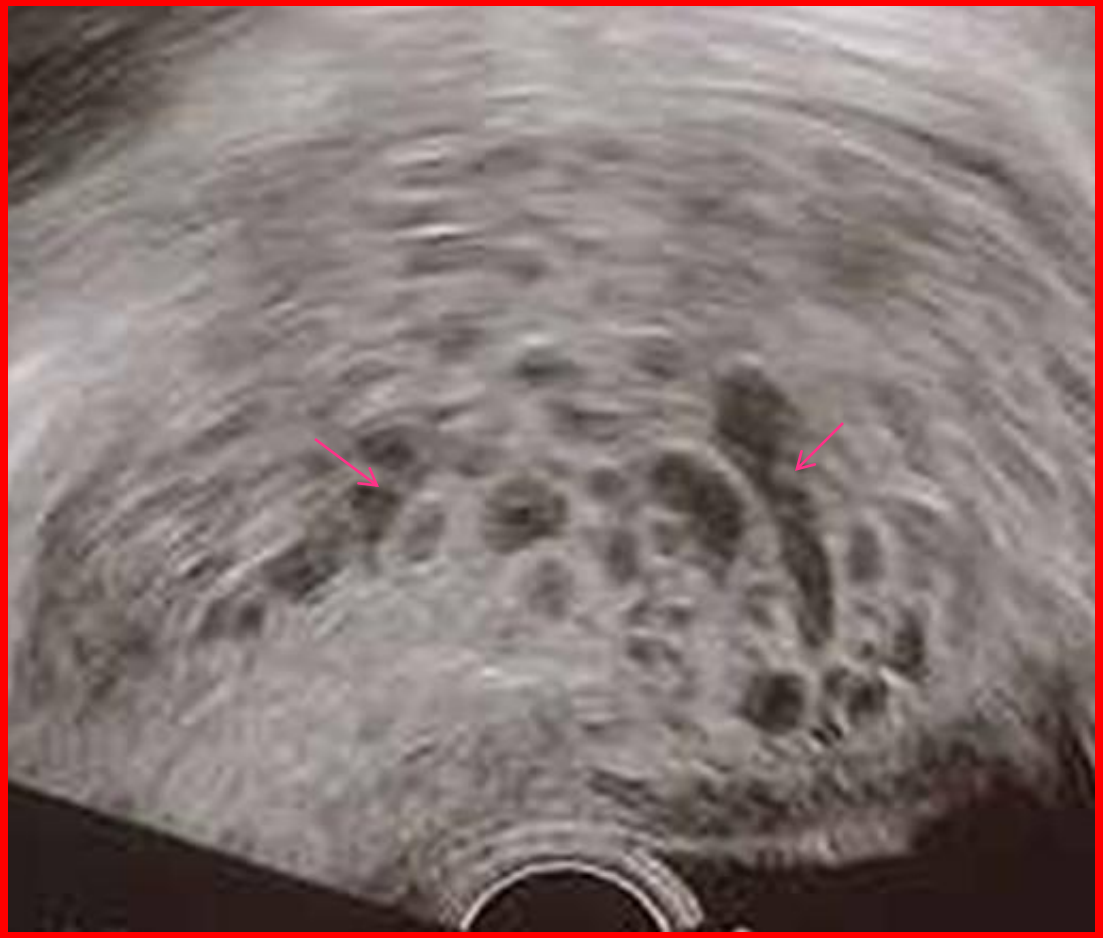


TRANSVAGINAL ULTRASONOGRAPHY



Choriocarcinoma

TRANSVAGINAL ULTRASONOGRAPHY



Showing a molar pregnancy.

DIAGNOSIS

- After taking into account the persistance of the increased blood pressure value **BP=180/ 90mmHg** under the medicamentary treatment scheme allowed during the pregnancy and **the aappearance of the ultrasound image**,

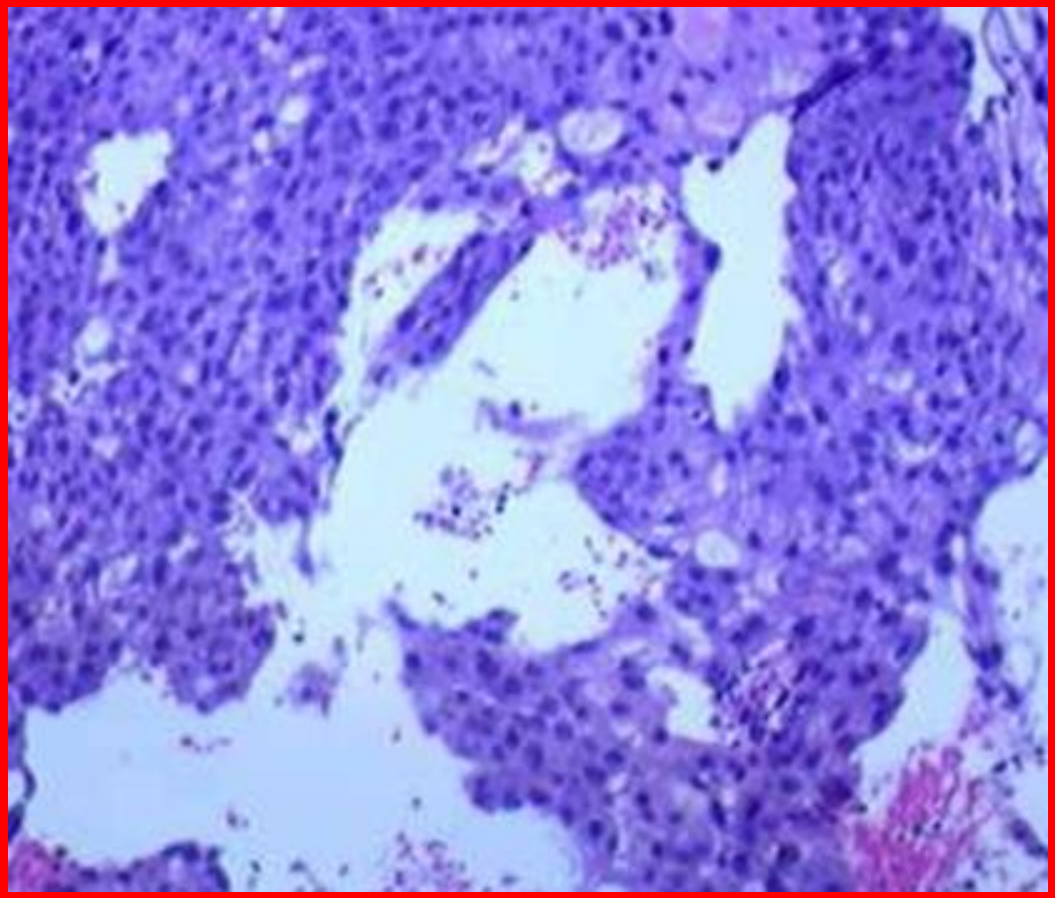
DIAGNOSIS

- the diagnose of **choriocarcinoma** (gestational trophoblastic disease) and the batching of **total β HCG=512,34 mIU/mL** which had high values, was required, thus **confirming the diagnose.**

THE HISTHOPATHOLOGICAL EXAMINATION

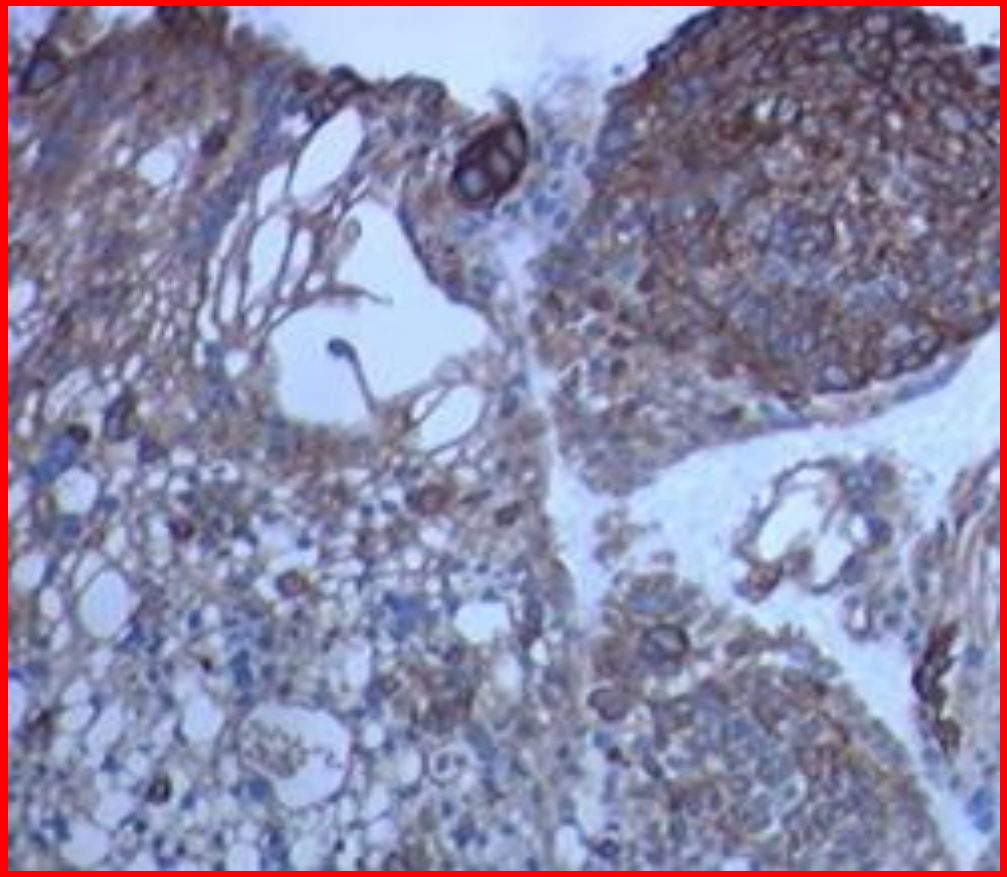
- After delivery, the **histhopathological examination** from the **big placenta** was performed this showed a **proliferation of atypical trophoblastic cells** consistent with **choriocarcinoma,** follow to see in the next images:

THE HISTHOPATHOLOGICAL EXAMINATION



Placenta biopsy showing choriocarcinoma.

THE IMUNOCHEMESTRY



Immunohistochemistry analysis of the big placenta . Cytotrophoblasts and syncytiotrophoblasts were stained with β-human chorionic gonadotrophin (β-hCG) antibody.

RESULTS AND DISCUSSIONS

- The most important moment of this clinical case report was when **the pregnant patient didn’t field the baby's moves.**
- The important sign attracted attention about the diagnosis was **abdominal ultrasound**.

RESULTS AND DISCUSSIONS

- **The placenta** appearance, which was **very thick** than it would normally be, with **abnormal big villosities** which drew the attention upon a possible **choriocarcinoma diagnostic**.
- **The level of Beta-human chorionic gonadotropin(β hCG)**was **very increase total β HCG=512,34 mIU/mL.**

RESULTS AND DISCUSSIONS

- **This investigation increase** suggest not only **confirmation of pregnancy** like a pregnancy test, sometimes **can relieved us the diagnosis of choriocharcinoma like a real tumor marker** an we can use to assess stage, prognosis, and response to treatment.

CONCLUSIONS

- **1.** In conclusion, this **tumoral marker** should be performed as **a screening test** in **young pregnant women patients with severe values of blood pressure**, **after the first month of pregnancy**, in order **to detect an unknown choriocarcinoma.**

CONCLUSIONS

- **2. The high blood pressure values should not be interpreted only within the pregnancy context**, of course if other causes of secondary arterial hypertension in pregnant woman were excluded.

CONCLUSIONS

- **3.**In the future **the stem cell therapy it is posible to be a solution** for this category of patients with **choriocarcinoma unsolved yet. This type of diseases are rare in our medical practice with unknown etiology and the therapy is also incert in this moment.**

CONCLUSIONS

- **4. A research in the future in this field of the stem cell therapy in the context of patients with chorio carcinoma maybe will be a good idea and a hope for these woman's patients.**

THANK YOU FOR ATTENTION

