The pathologies of the trophoblast are conditions related to a pregnancy event (term pregnancy, premature birth, spontaneous or therapeutic abortion, pregnancy termination, extrauterine pregnancy and rarely to a biochemical pregnancy misidentified by the patient).

The trophoblast forms a few weeks after fertilization. It is the fundamental cellular tissue for nourishing the embryo, even if it does not participate in its formation. Its role is primary in the implantation phase. The trophoblast, in other words, constitutes the outer cellular mass of the blastocyst, which forms before the embryo is implanted. It is formed by small protuberances, the so-called chorionic villi, and produces enzymes that cause the embryonic cells to enter the uterine mucosa, facilitating the nesting of the ovum. Having fulfilled this role properly during implantation, from the third month onwards it is called the placenta.

## 1) What is a molar pregnancy?

Molar pregnancy falls within the spectrum of gestational trophoblastic diseases, encompassing both premalignant and malignant forms. The premalignant forms include complete and partial hydatidiform mole, while the malignant forms comprise invasive mole, choriocarcinoma, placental site trophoblastic tumor, and epithelioid trophoblastic tumor. The incidence of GTD varies among countries, with prevalence influenced by maternal age, previous GTD history, and socioeconomic factors. Molar pregnancies have a low risk to evolve into the malignant form (higher for complete mole).

# 2) Which are the symptoms?

Symptoms of molar pregnancy typically manifest as irregular vaginal bleeding during the first or early second trimester, often accompanied by elevated ß-hCG values. If not promptly diagnosed, patients may experience hyperemesis, excessive uterine enlargement for gestational age, pre-eclampsia, anemia, respiratory distress, and hyperthyroidism.

### 3) How can it be diagnosed?

The diagnosis of molar pregnancy involves a combination of ultrasonography and serum ß-hCG level assessments. Therefore, if a patient experiences vaginal bleeding in the first trimester, prompt consultation with her physician is crucial. While ultrasonography can raise suspicion about the type of molar pregnancy, the definitive diagnosis requires histological examination. In some cases, genetic testing may be necessary to confirm the diagnosis.

In case of partial mole an embryo can be recognized at ultrasound (usually carrying chromosomic abnormalities); in case of complete mole the embryo is always absent.

### 4) How can the condition be treated?

The primary treatment for molar pregnancy involves surgical intervention, specifically uterine evacuation performed through suction and curettage, often under ultrasound guidance. In some cases, an overnight hospital stay might be necessary to prevent hemorrhagic complications. For those who do not wish to preserve fertility, an alternative option is the removal of the uterus, known as a



hysterectomy. However, it's important to note that even with a hysterectomy, follow-up care is still required. Additionally, if the patient has a Rh-negative blood group, anti-D prophylaxis should be offered.

#### 5) Which follow-up will I need after treatment?

After the diagnosis is confirmed, a follow-up plan should be initiated. Serum hCG levels should be monitored, starting 3 to 4 weeks after evacuation, with a frequency of once a week. This monitoring should continue until at least two consecutive negative tests are obtained. Following this, a single confirmatory hCG measurement is recommended for a partial hydatidiform mole over one month, while monthly measurements are advised for a complete hydatidiform mole for a duration of six months. Adherence to follow-up is crucial to detect any potential transformation into malignant forms, although this is rare.

#### What other questions should I ask?

- Are there problems for future fertility?
- When could I try to have another pregnancy?
- Do I need to take extra checks in my future pregnancies?

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