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Choriocarcinoma

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Abstract: ***Choriocarcinoma is a rare and aggressive form of cancer that happens in female uterus or ovaries. The most common type, gestational choriocarcinoma is a type of gestational trophoblastic disease (GTD). GTD is a group of rare conditions that happens in pregnancy when tumors form from the placenta. The placenta provides oxygen and nutrients to a fetus through the umbilical cord. Choriocarcinoma is most common in people who have a molar pregnancy (when the sperm and egg join incorrectly and make a hydatidiform mole). It can also happen after an ectopic pregnancy, a pregnancy that ends in miscarriage or even after a full - term pregnancy resulting in a birth. Gestational choriocarcinoma occurs in 1 in 40, 000 pregnancies. of all forms of gestational choriocarcinoma, placental choriocarcinoma is the most rare. Maternal choriocarcinoma is usually diagnosed in symptomatic patients with metastases. The incidental finding of a choriocarcinoma confined to the placenta with no evidence of dissemination to the mother, or infant is the least common scenario.***

Keywords: Choriocarcinoma, Gestational trophoblastic disease, Molar pregnancy, Dissemination, Human chorionic gonadotropin, Chemotherapy

1. Incidence

Gestational choriocarcinoma accounts for about 5% of all cases of GTD. GTD occurs in about 0.1% of all pregnancies in the United States. Gestational choriocarcinoma is still very rare — it occurs in fewer than 7 in 100, 000 pregnancies in the U. S.

2. Causes

Choriocarcinomas happen when cells that form the placenta (called trophoblasts) become cancerous. Choriocarcinoma can develop early in pregnancy or happen after a pregnancy. About 50% of people with choriocarcinoma had a molar pregnancy. A molar pregnancy is when fluid - filled sacs or tumors develop inside your uterus instead of a placenta. In non - gestational choriocarcinoma, cells in your ovaries, testicles or uterus start making human chorionic gonadotropin (hCG) and resemble trophoblasts under a microscope

Types of choriocarcinoma:
There are two types of choriocarcinoma:
1) Gestational choriocarcinoma
2) Non - gestational choriocarcinoma

Gestational choriocarcinoma is more common. It refers to cancer developing while a person is pregnant or shortly after a person is pregnant.

Non - gestational choriocarcinoma affects all sexes. It's a type of germ cell tumor that can affect the ovaries or uterine lining, but isn't related to a placenta. In men and people assigned male at birth, it can develop in your testicles.

3. Staging of Choriocarcinoma

The stages of choriocarcinoma include,

Stage I
It involves the affectation of the uterus only. The malignant cells are limited inside the womb.

Stage II
It involves spread up to the genital tract only

Stage III
It involves the spread to the lungs. The metastases are hematogenous in nature, which means it has spread through the blood circulation.

Stage IV
It involves metastases of cancer cells to other parts of the body through hematogenous and lymphatic routes

Symptoms Present in Choriocarcinoma:
It include,
- Increased HCG (human chorionic gonadotropin) levels beyond the first trimester and excessively increased HGH during early pregnancy
- Vaginal bleeding, characterized as heavy and uncontrolled for some patients
- Swelling or edema of the uterus
- Presence of ovarian cysts
- Hypogastric pain
- Shortness of breath because of lung affectation
- Chest pain
- Hemoptysis
- Multiple infiltrates in the lungs seen in X - ray studies
- Increased thyroid stimulating hormone
- Men may experience hyperpigmentation, weight loss and gynecomastia
- Elevated beta HCG reacts with the TSH receptors and causes increased metabolic rate. This in turn mimics the effects of hyperthyroidism with weight loss as a symptom.

Diagnostic Evaluations:
It include,
Pregnancy Test - The elevation of HCG in the blood and urine can be traced even when the patient is not truly pregnant. The HCG is the one detected in most pregnancy tests. A positive pregnancy test along with signs and symptoms may indicate choriocarcinoma.

Pelvic Examination - Pelvic examination is also done to assess the uterus. Results may show swelling of the uterus along with tumor.

Blood tests - Blood tests are done to determine the serum levels of HCG. A very high HCG level may be indicative of choriocarcinoma. Beta - HCG is specifically assessed because it is a tumor marker.

Imaging Tests - Ultrasound, Computerized Tomography (CT) scan or Magnetic Resonance Imaging (MRI) scan identifies presence of tumor inside the uterus.

X - rays - Chest X - rays are also done to determine lung metastases because choriocarcinoma is very aggressive in spreading to the lungs.

Liver Function Test - Another organ that is initially affected by choriocarcinoma is the liver. Presence of high liver enzymes may indicate liver metastases.

Treatment:
There are a lot of treatment modalities for choriocarcinoma, which include:

Chemotherapy
Choriocarcinoma is one of the tumors that are very responsive to chemotherapy, except for the case of choriocarcinoma in the testicles. The treatment rate is as high as 95%. Patients with no metastases have a high recovery rate. However, when metastases are already present in the brain and liver, the condition is usually fatal. The drug of choice for chemotherapy in low - risk disease is methotrexate**.** For intermediate and high - risk conditions, **EMACO** is employed, which consists of **etoposide, methotrexate, actinomycin, cyclosporine and vincristine.**

Surgery
The removal of the uterus or hysterectomy is usually employed for women aged 40 years and above. Patients with severe bleeding and severe infection are also required to undergo the procedure. Pregnant women with hydatidiform mole are required to undergo dilatation and curettage to remove the mole. Patients should be educated that the condition will not develop a baby. In this regard, counseling and emotional support is needed to allow the mother to grieve effectively with the loss of the pregnancy, which she assumed to be normal.

Radiation Therapy
Radiation therapy is also employed for choriocarcinoma that has metastasized to the other body organs.

Prognosis
Choriocarcinoma is highly treatable when metastases are not yet present. Women may also regain their optimal reproductive function.

Poor prognosis of choriocarcinoma is associated with the following conditions:
- Presence of brain and liver metastases
- Reoccurrence of cancer, despite treatment in the past
- High HCG level reaching greater than 40, 000 mIU per ml
- Occurrence of pregnancy symptoms of more than 4 months before therapy initiation
- Development of choriocarcinoma after delivery or normal pregnancy
- Women may also have remissions, but may have more severe condition once the malignancy becomes active.

What are the complications of this condition?
Because this type of cancer spreads quickly, not getting treatment for choriocarcinoma can be fatal. With treatment, many people can achieve remission or be cured. As with most cancers, treating it at its earliest stages has the most successful results.

How long can live with choriocarcinoma?
The outlook for choriocarcinoma in its early stages is good. The survival rate for people with low - risk gestational choriocarcinoma is almost 100%. The survival rate for people with high - risk gestational choriocarcinoma is 94%.

Non - gestational choriocarcinoma (not related to a prior abnormal pregnancy/placental tissue) has a worse prognosis and is less chemosensitive, which means chemotherapy may not be as effective in killing the cancer cells.

4. Conclusion

Choriocarcinoma is a rare type of cancer that develops from trophoblastic cells that stay in the uterus after pregnancy. It can grow very fast and spread around the body. However, doctors can usually treat it. The most common treatment is chemotherapy. Some people with the cancer will also need radiation therapy, surgery, or both. The majority of people who have had gestational choriocarcinoma will still be able to conceive and have a normal, healthy pregnancy after treatment.

Due to the potential fatal outcome of placental choriocarcinoma, careful evaluation of both mother and infant after the diagnosis is made is important. The incidence of placental choriocarcinoma may actually be higher than expected since it is not routine practice to send placentas for pathological evaluation after a normal spontaneous delivery. The obstetrician, pathologist, and pediatrician should have an increased awareness of placental choriocarcinoma and its manifestations.

Author Profile

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