Gestational Trophoblastic Neoplasia

Patient Information Series – What you should know, what you should ask.

What is Gestational Trophoblastic Neoplasia?

Gestational Trophoblastic Neoplasia (GTN) is a malignant tumor originating from placental tissue from a previous pregnancy.

How does GTN develop?

GTN develops from trophoblastic tissue, made of trophoblast cells that normally surround the fertilized egg in the uterus. A previous molar pregnancy, especially complete hydatidiform mole, is the most common precursor lesion for GTN. However, GTN can also develop after a previous normal pregnancy or miscarriage, although this is much more uncommon. There are different subtypes of GTN, some of which grow rapidly and spread to other organs in the body (metastasize), and others which grow very slowly and rarely metastasize.

How frequent is GTN?

GTN is very uncommon. Hydatidiform mole occurs in approximately 1/1000 pregnancies. Complete hydatidiform moles progress to GTN in 15% and partial hydatidiform mole in 1% of all cases. GTN after a non-molar pregnancy or miscarriage is very rare, and occurs in approximately 1/40,000-50,000 pregnancies.

How is GTN detected?

The majority of women with GTN are diagnosed after a previous molar pregnancy when the levels of the pregnancy hormone hCG do not decrease as expected during a surveillance period. There might not be any symptoms at all. Women with GTN after a non-molar pregnancy usually experience vaginal bleeding or more rarely symptoms from metastatic sites, such as cough or headache. It is also possible to experience pregnancy-related symptoms such as nausea and tender breasts.

Are there different types of GTN?

Yes, there are different subtypes of GTN: invasive mole, choriocarcinoma, placental site trophoblastic tumor (PSTT) and epithelioid trophoblastic tumor (ETT). The most common is invasive mole after a previous molar pregnancy. Choriocarcinoma and the very rare PSTT and ETT can follow any type of pregnancy.

What are the risk factors forGTN?

The main risk factor for GTN is a previous hydatidiform mole.

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What is the prognosis for women with GTN?

Women with GTN are classified into low-risk and high-risk groups based on pre-treatment variables including tumor volume and activity, age, and type of antecedent pregnancy. The prognosis is overall excellent. Women with low-risk GTN have an expected cure rate of 100%, while women with high-risk GTN have a cure rate above 90%. The prognosis is worse with metastases to the liver and/or brain.

How can GTN be diagnosed?

The diagnosis of GTN after a previous hydatidiform mole is mainly based on the dynamics of the hCG-levels, and GTN after a non-molar pregnancy on radiological findings and much increased hCG-levels. A biopsy or a tissue specimen is needed for the diagnosis of PSTT and ETT. Ultrasound is used to assess if there is a lesion in the uterus, and if so, also the size and the location of the lesion.

How should GTN be treated?

The cornerstone of treatment for GTN is chemotherapy. The type of chemotherapy used is based on the prognostic risk scoring system. Surgery, usually hysterectomy, is important in the treatment of PSTT and ETT, and can also be an alternative for women who have completed their families and who only have localized disease in the uterus. Surgery can also be used for localized treatment of resistant diseases.

What other questions should I ask?

- What type of GTN do I have?
- What stage is the tumor and what is my risk score?
- What kind of chemotherapy will I get?
- What is my prognosis?
- When can I get pregnant again?

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