Gestational Trophoblastic Disease (GTD)

Types of Gestational Trophoblastic Disease (GTD):

**Benign** – Non Cancer

**Molar pregnancy** – when sperm and an egg join without resulting in a pregnancy. It instead develops into a cluster of cysts. In about 1 out of 5 women GTD will become malignant (women’s cancer network.org)

**Cancer**—abnormal, rapidly reproducing cells.

**Invasive mole**
The myometrium is the outside muscle layer of the uterus. The abnormal cells from the placenta (hydatidiform mole) can invade this layer which is called an invasive mole. Most often women have symptoms when this occurs. Some of the symptoms are: irregular vaginal bleeding, cysts on your ovaries, an enlarged uterus, or constantly raised hCG levels. Sometimes, this can be seen on ultrasound or MRI.

**Choriocarcinoma**
These cancerous placental tumor cells grow fast. They will attack blood vessels early which means it is more likely to spread to other organs such as lung, liver, and brain. These cancerous cells are very fragile. They often cause bleeding. Symptoms of this type of GTD are most often related to bleeding in the affected organ or organs.

**Placental-site Trophoblastic Tumor (PSTT)**
PSTT is an uncommon form of GTD. This type is caused by a different type of placenta or trophoblastic cell called an intermediate trophoblast. These cells make very little hCG. The blood level of the pregnancy hormone is very low or normal. These tumors most often remain within the uterus. PSTT does not respond very well to chemotherapy. It is most often treated with surgery.

**Staging**

**Stage I** — All patients with persistently elevated beta-hCG levels and tumor confined to the uterus.

**Stage II** — The presence of tumor outside of the uterus, but limited to the vagina and/or pelvis.

**Stage III** — Pulmonary metastases with or without uterine, vaginal, or pelvic involvement.

**Stage IV** — All other metastatic sites (e.g., brain, liver, kidneys, gastrointestinal tract).
Modified WHO prognostic scoring system as adapted by FIGO (International Federation (Gynecology and Obstetrics))

<table>
<thead>
<tr>
<th>Scores</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt;40</td>
<td>&gt;40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antecedent pregnancy</td>
<td>Mole</td>
<td>Abortion</td>
<td>Term</td>
<td></td>
</tr>
<tr>
<td>Interval months from index pregnancy</td>
<td>&lt;4</td>
<td>4–7</td>
<td>7–13</td>
<td>&gt;13</td>
</tr>
<tr>
<td>Pretreatment Serum hCG (IU/L)</td>
<td>&lt;1000</td>
<td>&lt;10,000</td>
<td>&lt;100,000</td>
<td>&gt;100,000</td>
</tr>
<tr>
<td>Largest tumor size (including uterus)</td>
<td></td>
<td>3–&lt;5 cm</td>
<td>&gt;5 cm</td>
<td></td>
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<tr>
<td>Site of metastases</td>
<td>Lung</td>
<td>Spleen/kidney</td>
<td>GI</td>
<td>Liver/brain</td>
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<tr>
<td>Number of metastases</td>
<td>–</td>
<td>1–4</td>
<td>5–8</td>
<td>&gt;8</td>
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<tr>
<td>Previous failed chemotherapy</td>
<td></td>
<td></td>
<td>Single drug</td>
<td>2 or more drugs</td>
</tr>
</tbody>
</table>

Format for reporting to FIGO Annual Report: In order to stage and allot a risk factor score, a patient's diagnosis is allocated to a stage as represented by a roman numeral I, II, III, and IV. This is then separated by a colon from the sum of all the actual risk factor scores expressed in arabic numerals; e.g., stage 11:4, stage IV:9. This stage and score will be allotted for each patient. (Berkowtiz, R.S. & Goldstein, D.S.)
Treatment
Treatment will be based on the size and location of the tumor, the results of hCG levels, the stage of the disease, your age, general health, and your wishes about future fertility.

Single Agent Chemotherapy
The single agent drugs most often used are methotrexate injection into the vein or muscle or actinomycin-D injection in the vein. Single agent chemotherapy is used for treatment of persistent GTD.

Multi Agent Chemotherapy
Multi agent chemotherapy is used when patients are resistant to single agent drugs, in high risk patients who are stage II or III or in patients who have stage IV disease. The most common drugs are etoposide/VP-16, methotrexate, actinomycin-D, vincristine, and cyclophosphamide. All of these are given as injections into the vein.

Surgery
Hysterectomy (removal of the uterus) is a treatment for various forms of GTD if the woman does not wish to preserve fertility.

Radiation
This is generally used to treat metastases (cancer that has spread) to the brain.

References

