Gestational choriocarcinoma of the kidney: a case report

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Background

Choriocarcinomas are a highly malignant gestational trophoblastic neoplasm (GTN) that often occur following a malignant transformation of a molar pregnancy. The incidence in Western societies is 1 in 20,000 - 25,000 highlighting the rare nature of their presentation[1]. Ultra-high risk choriocarcinomas are classified by the FIGO staging and WHO scoring and respond poorly to first line multiple agent chemotherapy due to high tumour burden.

Case

A 37-year-old G2P2 woman, presented with an acute onset of right lower quadrant pain associated with vaginal bleeding. She was found to have an elevated beta-human chorionic gonadotrophic (BHCG) level in the absence of an intra- or extra-uterine pregnancy based on ultrasonography and diagnostic laparoscopy. Her BHCG levels continued to rise despite methotrexate therapy. Uterine curettings were normal. Further imaging demonstrated a right sided renal mass with retroperitoneal bleeding.

Differential diagnoses

- Gestational trophoblastic neoplasm
- BHCG secreting renal tumour
- BHCG secreting tumour in other regions of the body including brain/lung

A right sided nephrectomy was performed and histopathology was consistent with a gestational choriocarcinoma of the kidney. Further staging with PET, MRI and CT scans revealed metastatic deposits in the lung, liver and scalp. Genetic and molecular studies using DNA from her partner and children performed on the renal mass confirmed choriocarcinoma secondary to her first pregnancy 11 years prior. She was diagnosed with ultra high-risk gestational trophoblastic neoplasia (WHO score = 15) and initially commenced on three cycles of etoposide, methotrexate, actinomycin, and cisplatinum (EP EMA) chemotherapy before her BHCG plateaued and was then switched to paclitaxel, cisplatin/ paclitaxel, etoposide (TP/TE) chemotherapy.

FIGO Stage	Description
I	GTN confined to the uterine corupus
II	GTN extending to the adnexae or to the vagina but limited to genital structures
III	GTN extending to the lungs, with or without genital tract involvement
IV	All other metastatic sites

Table 1: FIGO staging of gestational trophoblastic neoplasms[1]

Discussion

Gestational trophoblastic disease is a rare neoplasm that can occur after any pregnancy event including a term pregnancy. Choriocarcinoma in women of reproductive age are a diagnostic dilemma leading to delays in diagnosis. Up-trending BHCG levels in women without sonographic evidence of pregnancy or with a recent molar pregnancy should raise red flags.

Common presenting symptoms[2]

- Abnormal vaginal bleeding
- Pelvic pain
- Pelvic masses
- Headache secondary to brain metastasis
- Haemoptysis secondary to lung metastasis

Common sites of metastatic disease[3]

- Lung (80%)
- Vagina (30%)
- Brain (10%)
- Liver (10%)

Prompt staging investigation should be undertaken as the propensity for metastasis is high and response to treatment decreasing with greater tumour burden. Treatment is guided by the FIGO classification (Table 1). Low risk disease is generally treated with single agent chemotherapy (actinomycin D or methotrexate) with survival rates reaching approximately 100%. High risk disease is treated with multiple agent chemotherapy (EP-EMA) with corresponding survival rates nearing 90%[1].

References

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