A Rare Case of High-Risk Gestational Trophoblastic Neoplasia with Pulmonary Metastasis following a Pregnancy of Unknown Location

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BACKGROUND: Gestational Trophoblastic Neoplasia (GTN) is one of the rarest gyanecological tumours with an of incidence of < 1%. Due to their high chemo sensitivity, it has excellent prognosis with an overall cure rate of nearly 100%.

CASE REPORT:

A 45-year-old G2P0 was referred by her private gynaecologist to the early pregnancy assessment services clinic with a pregnancy of unknown location (PUL). She had recurrent vaginal bleeding on a background of serum BhCG 1900 IU/L without sonographic evidence of pregnancy. Her obstetric history included a previous PUL 2 years ago, successfully managed with 2 doses of Methotrexate. She had regular menstrual cycles and known history of a large multifibroid uterus. She denied history of abdominal pain but reported occasional mild left sided chest pain which was investigated with Chest X-ray, ECG, Troponin levels and V/Q scan which did not detect any abnormality. On examination, she had normal vital signs and a soft, non tender abdomen with uterus palpable up to umbilicus. As her repeat serum BhCG level did not show doubling (rise to 2170 IU/L) and COGU scan couldn't identify a site of pregnancy, decision was made to manage the PUL with single dose Methotrexate and BhCG level monitoring. Due to ongoing rise in BhCG level to 5260 IU/L (day 7), she was administered a 2nd dose of Methotrexate. Unfortunately, the serum BhCG level continued to increase to 7280 IU/L (day 7 post 2nd dose). Following another inconclusive COGU and MRI Abdomen – Pelvis scan, she underwent hysteroscopy dilatation and curettage with diagnostic laparoscopy but a definitive pregnancy site could not be identified. A 2cm bulge on the right ovary, which did not look typical of ovarian pregnancy, was biopsied. Histopathology of endometrial curetting and ovarian biopsy did not show evidence of products of conception. After a multidisciplinary team discussion, decision was made to investigate further with CT Chest and Abdomen and to commence multidose Methotrexate regimen. CT Chest detected a 47mm left upper lobe pulmonary mass and biopsy of this mass confirmed diagnosis of GTN, likely choriocarcinoma, with FIGO risk score of 8. Her care was taken over by the Medical Oncology team and she was commenced on Chemotherapy with weekly Etoposide, Methotrexate, Actinomycin D alternating with Cyclophosphamide and Vincristine (EMACO). After 3 cycles of chemotherapy, negative serum BhCG level was achieved and her symptoms resolved. Complete remission was achieved in 6 cycles.

Figure 1: Suspicious area on right ovary biopsied on diagnostic laparoscopy

Figure 2: CT Chest finding of lung mass

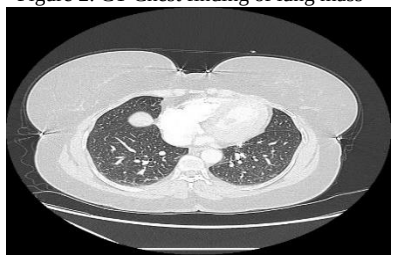


Figure 3: serum BhCG level pre-EMACO

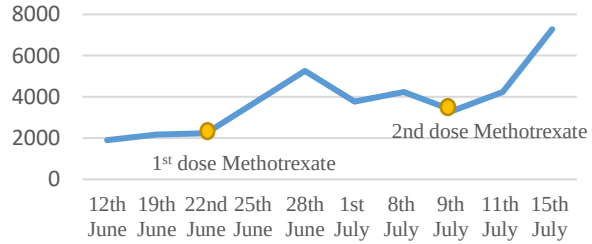
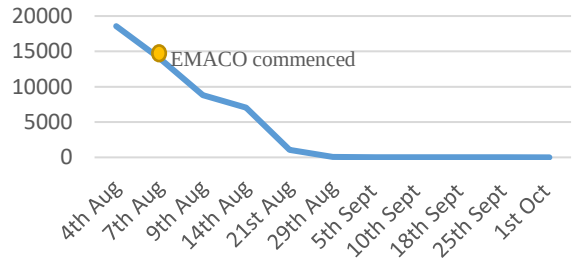


Figure 4: BhCG level post EMACO



DISCUSSION:

The most common metastatic site of GTN is lung (80%). GTN should be suspected even in patients with PUL when the BhCG levels are not appropriately down trending despite treatment with Methotrexate. Typically, patients with lung metastasis present with dyspnea or hemoptysis, but as demonstrated in this case, they may present with mild chest pain as well. Although cases of GTN are rare, with swift diagnosis and the right correct chemotherapy regimen, complete remission is achievable.

REFERENCES:

1. Sarah D, Effi Y, Ram E "A Rare case of gestational trophoblastic neoplasia following an ectopic molar pregnancy"; Gynecologic Oncology Reports, Volume 37, August 2021, 100798
2. Nida J, Mongkol B "Gestational Trophoblastic Neoplasia with Gum Metastasis: A Case Study and Literature Review"; Case Rep Oncol (2020) 13 (2): 485-490
3. Mehwish S, Saqib K, Muhammad T, Sehrish B, Aisha S, Munira M, Zarka S "Review of current literature on gestational trophoblastic neoplasia"; Journal of the Egyptian National Cancer Institute, 35, Article number: 37 (2023)