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Case Report-3

Persistent Gestational Trophoblastic Neoplasia (PTN)

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Abstract:

A 35-year old lady had persistent Gestational Trophoblastic Neoplasia following molar pregnancy. Initially the patient came with hydatidiform mole diagnosed by trans abdominal ultrasonography and high level of serum β-hCG. At that time patient was treated by suction & evacuation of molar tissues. After evacuation serum B- hCG level declined but not reached to normal level. During follow-up period patient complained of irregular per-vaginal bleeding & her β-hCG level again rised & ultrasonology showed-some molar tissues within the endometrium. She was diagnosed as a case of persistent trophoblastic neoplasia(PTN). We then gave her two courses of systemic Methotrexate(MTx) therapy and patient's serum B hCG level return back to normal.

A persistent trophoblastic disease can be successfully treated with systemic Methotrexate therapy.

Key words:- Hydatidiform mole,PTN, Methotrexate(MTX).

Introduction :

Gestational Trophoblastic Neoplasia (GTN) means proliferative abnormalities of placenta associated with pregnancy. It includes Hydatidiform mole, invasive mole, placental site tropoblastic tumour (PSTT) and choriocarcinoma. They elaborate a unique & characteristic tumour marker, human chorionic gonodotropin (hCG)[1]. Hydatidiform mole is a benign condition & makes up 80% cases[2]. Its incidence varies world wide, being highest among oriental countries. In Asia, incidence is 0.5-0.25%[3]. An invasive mole can invade the myometrium or adjacent structures, and occurs in 10-15% of patients who have had primary molar pregnancy[4]. PSTT is the rarest type of GTN, can occur after a normal pregnancy or abortion or after hydatiditon mole. Choriocarcinoma, is rare, reported in 2-5% of GTN. It is malignant,rapidly-growing and both non-metastatic & metastatic form of cancer.

Persistent GTN is defined when there is persistance of trophoblastic activity following initial treatment of GTN which can be evidenced by clinical, imaging, histopathologic and or hormonal study. We present a case of persistent GTN that followed a hydatidiform mole and was successfully treated with systemic MTX therapy.

Case Report :

Mrs. Gita Banik, 36 yrs, para-2 + 4(MR) with previous regular menstrual cycle, visited our Gynae out patient department on 14th December '2013 with the complains of amenorrhea for 2 months and slight vaginal bleeding for 3 days.

On examination she was moderately anaemic, normotensive. Uterus was 14 wks size & doughy in consistency. Per-vaginal bleeding was present (+).

Her Hb% was 10 gm%, blood group is B +ve. Trans abdominal USG showed "snow storm" appearance within the endometrium, suggestive of molar pregnancy. Both ovaries were enlarged & cystic, right one measuring 75 mm X 51mm and left one about 87mm X 67mm. Serum β-hCG level was > 400000 mIU/ml. Chest X-ray P/A view showed normal study with no evidence of metastasis. Other investigations reports were normal. She was then diagnosed as a case of hydatidiform mole. After proper counseling suction & evacuation of molar tissues was done followed by histopathology which confirm molar tissues. One week after evacuation her β-hCG level was done which was 12,800 mIU/ml & USG showed endometrial cavity empty but both ovaries were enlarged & cystic. She then discharged with

advice for contraception for 1 year and to do regular follow-up in GOPD with weekly serum β-hCG.

Patient came on GOPD one week after discharge with serum β-hCG level 10, 200 mIU/ml.But patient not attended on GOPD or with any Gynecologist thereafter. Two months after her evacuation she again noticed of irregular per-vaginal bleeding and consulted with a Gynecologist in her private chamber. According to the advice of her gynecologist she done an USG, which showed two small cystic areas within the endometrium indicate molar tissues. Both tubo-ovarian regions normal. At that time her serum β-hCG level was 8800 mIU/ml & chest X-ray revealed no metastasis. She then came to our hospital & we diagnosed her as a case of PTN, based on these findings. Then decision was taken to give her systemic MTx therapy along with folic acid .Before that evaluation of the patient was done by complete blood count, liver function test & kidney function test. All reports were normal . After completion of one courses of systemic MTx therapy, serum β-hCG level was done which found declining but not reached to normal level. Then another course of systemic MTx was given for 1 wk. After two courses of systemic chemotherapy, the patient's serum β-hCG level dropped to normal titer (<10 mIU/ml). β-hCG level was done for another two consecutive weeks which was found negative. An USG was also done showed no molar tissue within the endometium. Patient then discharged with proper counseling & advice for regular follow-up with monthly β-hCG for 1 yr. During follow up period she had no complains & her β-hCG level remained within normal value.

Discussion :

Same of the Gestational trophoblastic tumour (GTT) turned to cancer with a high mortality rate, but recently it has become one of the most curable malignancies for many reasons.Such as – i) GTT is a chemosensetive malignancy; ii) there is a sensitive and specific tumour marker hCG for monitoring response to the treatment; and iii) there are prognostic systems to identify high risk groups for chemotherapeutics resistance5-7. The etiology of molar pregnancy is still not well known though it is thought to be caused by an abnormal egg with no genetic information is fertilized by a sperm. The sperm's chromosomes then duplicate and develop into a mole. Factors that may increase risk of having a molar pregnancy include: Women under 20 and over 40 yrs of age, multipariety, a diet low in carotene, protein & folic acid and high in carbohydrate(so it is specially occur in 'rice eater'), malnourished or debilitated by diseases such as Tuberculosis[3], previous history of molar pregnancy(2% chance)[1].

A molar pregnancy triggers the same first trimester symptoms that a normal pregnancy does, but in exaggerated form.

Additional symptoms include:Vaginal bleeding(light or heavy),vaginal discharge of grapes like tissue (most characteristics), severe nausea & vomiting, pelvic discomfort or pain. Features of hyperthyroidism such as fatigue, weight loss, heat intolerance, increased heart rate etc. may occur.Shortness of breath, coughing or blood in coughed up secretions may occur in case of metastatic choriocarcinoma.

The physical signs are: anaemia, pre-eclampsia in the 1st trimester or early 2nd trimester in 10-20% cases. In Per abdominal finding-size of the uterus is more than the expected period of amenorrhoea. Uterus is doughty in consistency and does not contract. Fetal parts are not felt. Fetal movement & heart sound absent. Bilateral ovarian cyst (theca lutein cyst) may be palpable. GTN can be diagnosed by suspected symptoms & signs and high level of serum β-hCG. An ultra sound of the pelvis typically can confirm the diagnosis. If diagnose a molar pregnancy further testing will be done to determine the possibility of its spread outside the uterus. These tests are X-rays, CT scans or MRI scans to view the chest, abdomen, pelvis & brain .Histopathology of molar tissue confirm the diagnosis.

Treatment options include suction, evacuation & gentle curratage of molar tissue. Hysterectomy rarely done in case of multiparous women, aged over 40yrs.Chemotherapy given in case of PTN and choriocarcinoma. Radiotherapy is the treatment of choice when tumour has spread to liver or brain.

In every case, whatever the method of termination, close follow-up for 1yr in case of benign mole & 2yrs for malignant GTN is essential, because 20-30% of patient develop persistent tumour.

Effective contraceptive should be given throughout the follow-up period.

Follow-up should included brief history taking & serial serum β-hCG level weekly until normal titer (<10mIU/ml) for 3 consecutive weeks. Then monthly for 1yr. Chest X-ray should be obtained prior to evacuation, and if pulmonary metastasis are noted, at 4 week interval until remission, then at 3 months interval during the remainder of the surveillance period.

During follow-up period persistent GTN can be diagnosed by continued vaginal bleeding, persistent theca lutein cysts, persistently soft and enlarged uterus, hCG titres either fail to become negative or remain plateau or re-elevation after a initial fall.

The case which we reported here, had some risk factors for malignancy such as age >35 yrs, uterus was more larger than the

period of amenorrhoea, presence of bilateral theca lutein cyst of >6 cm. & initial serum β-hCG level >4000000mIU/ml and patient was not under regular follow-up. Two months after initial treatment of hydatidiform mole, molar tissues again growed & serum β-hCG level not declined to normal level. She then diagnosed as a case of benign persistent Trophoblastic disease & treated successfully with two courses of single agent chemotherapy. No side effects of Methotrexate was found. She was then under regular follow-up for 1 yr with serum β-hCG.

Conclusion :

Persistent Gestational Trophpblastic neoplaisa is not so common, but to exclude it proper follow-up with serum β-hCG after primary treatment is mandatory. It is one of the malignant tumour, if diagnosed can be cure almost 100% with systemic chemotherapy. Nevertheless,there still remains the problem of treatment of patients where serum β-hCG follow-up facilities are not available or who is not return for follow up visits. With improvements in chemotherapy, malignant transformation or metastasis of Gestational trophoblastic neoplaisa are now very few in number and even these will hopefully be resolved in the foreseeable future.

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