International Journal of Advanced Research and Review

www.ijarr.in

GESTATIONAL TROPHOBLASTIC DISEASE

Ms. Manpreet Kaur[1], Ms. Amiteshwar Kaur[2]

[1]M.Sc. Nursing (OBG),Tutor / Nursing Demonstrator, State institute of nursing and praramedical sciences , Badal
[2]M.Sc. Nursing (Child Health Nursing),Tutor / Nursing Demonstrator, State institute of nursing and praramedical sciences , Badal
Corresponding Author: Ms. Manpreet kaur: Email: Manpreetchahal80@gmail.com

ABSTRACT
A molar pregnancy is the most common and benign form of gestational trophoblastic disease and is characterized by proliferation of placental tissue after abnormal fertilization of an empty ovum by one (complete mole, no fetus) or two (partial mole, fetus present) sperm. The causes of vesicular pregnancy depends on various factors which leads to develop fluid filled vesicles instead of normal development of embryo. This topic deals with the incidence, evidence, causes, Diagnosis, Management. Mainly two types of molar pregnancy are diagnosed i.e. Complete mole and partial mole.Sign andsymptoms are having the clinical triads and other aggravating pregnancy symptoms of normal pregnancy are discussed. The correct techniques used to diagnose the medical history, ultrasonography and pregnancy tests are also discussed. The assessment of the successful management tools of vesicular pregnancy which includes medical treatment of chemotherapeutic drugs and surgical management is also explained.

Keywords: Molar pregnancy, vesicular mole , hydatiform mole , management.

INTRODUCTION
It is a spectrum of abnormal growth and development of the trophoectoderm that continue even beyond the end of pregnancy. It encompasses persistent molar pr, invasive molegnancy, chorionic carcinoma and a rare entity of placental site trophoectoderm tumor .The etymology is derived from hydatis (a drop of water), referring to the watery contents of the cysts and mole ass false conception.

DEFINITION
A molar pregnancy is a relatively rare condition in which the tissues around the fertilized egg that normally would have develop into the arachnoid membrane instead develops into a cluster of cells known as vesicular pregnancy.
Or This grape like mass forms inside the uterus after fertilization instead of a normal embryo. A hydatiform triggers positive pregnancy test and in some cases can become cancerous also.

INCIDENCE
- A gestational trophoblastic disease occurs in about 1 out of every 1500 pregnancy in US.
- In some parts of India incidences may be as high as 1 in 200.

- Molar gestation are most likely to occur in younger and older woman (age above 45 years) than in those between 20 to 40 years of age.
- About 1 to 2 % of the time a woman who had a molar pregnancy will have a second one also.

EVIDENCE

Sebire NJ, Foskett M, Fisher RA, Rees H, Seckl M (2002) was conducted a study on risk of partial and complete molar pregnancy in relation to maternal age in all cases of first microscopic anatomy confirmed complete and partial moles registered between 1985 and 1999 were identified from the database of a Trophoblastic Disease Registration Centre. The maternal age distribution at diagnosis was calculated for the 7916 molar pregnancies and compared with the maternal age distribution of an unselected population of women from a routine obstetric database. Likelihood ratios were calculated for complete and partial molar pregnancies by maternal age. A positive relationship was found between the risk of molar pregnancy and both upper and lower extremes of maternal age (> or = 45 years and < or = 15 years, respectively). This association, although present for both complete and partial moles, is much greater for complete mole at all maternal ages, and the degree of risk is much greater with older (> or = 45 years) rather than younger (< or = 15 years) maternal age. This study provides, for the first time, data regarding specific risk of partial versus complete mole with maternal age.

ETIOLOGY

The cause is not exactly known. Following hypothesis have been put forward.

- High in teenage pregnancy and women above 45 yrs of age.
- Faulty nutrition caused by inadequate of high class protein and low dietry intake of carotene.
- Disturbed maternal immune mechanism
- Chromosomal abnormality.
- Patient having previous history of one or more births.
- Regardless of age , initial Human choronic gonadotrophin in urine is above 1 lakh I.U. in 24 hrs , urine .
- Previous history of molar pregnancy and women with blood group A or AB with husband of blood group O.

INVASIVE GESTATIONAL MOLE also known as invasive mole and chorioadenoma destruens is a type of tumor that grows into the muscular wall of the uterus. It is formed after conception. It may spread to other parts of the body, such as the vagina , vulva and lung.

A condition where a molar pregnancy, such as a partial mole or complete mole, invades the wall of the uterus, potentially spreading and metastasizing to other parts of the body (such as the vagina or lungs).

Invasive moles occur in about 20% of molar pregnancies but are more common in complete molar pregnancies than in partial molar pregnancies. Invasive moles can develop both before and after treatment by D & C. Treatment of an invasive mole may include chemotherapy.

CHORIONIC CARCINOMA

It is a quick-growing form of cancer that occurs in a woman's uterus (womb). The abnormal cells start in the tissue that would normally become the placenta, the organ that develops during pregnancy to feed the fetus.

It is most often found in women over the age of 40 and those who have had a molar pregnancy, miscarriage, abortion, or ectopic pregnancy.

The primary symptoms are irregular vaginal bleeding, difficulty in breathing, neurological symptoms and abdominal pain. It invades and metastasizes early, particularly to lungs, brain and liver, so is often widespread at diagnosis. The metastases are highly vascular and cerebral and intestinal bleeding may be life-threatening, making early diagnosis critical.

Placental site trophoblastic tumor

Placental site trophoblastic tumor (PSTT) is a rare manifestation of gestational trophoblastic disease, which develops at the placental implantation site and will complicate any type of pregnancy (molar and full-term pregnancies).

The symptoms can appear from weeks to years after termination of the pregnancy. Human chorionic gonadotrophin values are often low and certainly below those of other forms of gestational trophoblastic disease.

TYPES

Based on morphology molar pregnancy is divided into two:

1. Complete mole
2. Partial mole

In complete mole : All the chorionic villi are vesicular and no signs of embryonic or fetal development is present.

In partial mole : Some villi are vesicular where as other appears normal and embryonic or fetal development may be seen . but the fetus is malformed and is not viable.

If not removed about 15% of moles can become cancerous. They borrow into the uterus wall and causes serious bleeding . Another 5 % will developed into fast growing cancers known as chorionic carcinoma. Some of these tumors spread very quickly outside the uterus in other part of body.

PATHOPHYISIOLOGY

1. Naked eye appearance: the mass filling the uterus is made up of multiple chains and cluster of cysts of varying sizes. There is no trace of amniotic sac.
2. Microscopic appearance: marked proliferation of trophoblastic epithelium .
3. Absence of blood vessels.
4. Villus pattern is distinctly maintained.

CLINICAL MANIFESTATION

Symptoms:

- ❖ vaginal bleeding

- lower abdominal pain
- excessive vomiting
- breathless
- over activity of thyroid gland due to increased chorion thyrotrophin
- expulsion of grape like vesicles through vagina and history of quickening is absent.

SIGNS

- early features of preganncy:
  Patient looks more ill pallor and features of pregnancy, eclampsia are present in about 50% of cases.

ASSESSMENT

ABDOMINAL ASSESSMENT

Size of uterus is more than expected due to undue enlargement of uterus .

- The feel of the uterus will be firm and elastic.
- Fetal parts are not felt nor any fetal movements.
- Absence of fetal heart rate not even with the help of ultrasound.

VAGINAL EXAMINATION

- Internal movement can not be elicited unilateral or bilateral enlargement of the ovary may be palpable .
- Finding of vesicles in vaginal discharge.
- If cervical opening is open instead of membranes blood clot , vesicles may be felt.

INVESTIGATIONS

- Full blood count , blood group. RH factor, hepatic, renal , thyroid function test, ultrasonography is done for uterus , spleen , liver, kidney.
- Human chorionic gonadotrophin estimation titre in urine is upto 1:200
- 1:500 : beyond 100 days of pregnancy.

MANAGEMENT

The principle are:

- To give adequate supportive therapy to restore the blood loss.
- To evacuate the uterus as soon as the diagnosis is made .
- To do appropriate steps to minimize infection.

PATIENT GROUPED INTO 2

- GROUP A: The mole is in process of expulsion
- GROUP B: The uterus remain inert

SUPPORTIVE THERAPY

Group A: patient usually present with variable amount of bleeding.
Injection morphine 15 mg I/M given.
Start 5% dextrose
Make management of blood transfusion

Group B: keep blood ready prior to termination

Group A: along with supportive therapy , oxytocin 10 to 20% units in 500ml in 5% dextrose with drip rate of 40 to 50 drops / min.

Suction and evacuation negative pressure of 200 to 250 mm hg under diagepam sedation.
After complete evacuation ergometrine .5mg is given I/M.

Group B: Evacuation of uterus is to done as soon as diagnosis is made.

1.) Vaginal evacuation : start oxytocin 20 units is 5% dextrose 30 drops / min .
Dialatation and evacuation.

2.) Hysterectomy : patient above 35 yrs has completed family , high risk cases for the development of future malignancy.

3.) Curretage: not done immediately evacuation
Preffered time for curretage is 5 to 7 days . Following evacuation, when the uterine wall are thick and firmer and cavity becomes smaller.
Material should be send for microscopic anatomic examination.

PROPHYLACTIC CHEMOTHERAPY

If the Human chorionic gonadotrophin titre fails to become negative by 4-6 weeks and if the level of evacuation exceeds 40, 000 IU / 24 hrs at 4-6 weeks.
Evidence of metastasis.
Proper follow up facility is not available.

FAVOURABLE MANIFESTATIONS

Quick appearance of sense of well – being .
Menstruation resumes 6-8 wk following malignancy .
No abdominal vaginal bleeding.
X-ray chest gives negative report.
Urinary Human chorionic gonadotrophin becomes negative by 6-8 weeks time.

COMPLICATIONS

1. Immediate : Bleeding and shock, sepsis , perforation, eclampsia, co-agulation failure , acute pulmonary insufficiency due to pulmonary embolisim.
2. Late complication: chorionic carcinoma development. Risk factors include : mother over the age of 35 yr irrespective of parity.

NURSING MANANGEMENT

FOLLOW UP

Routine follow up is necessary for all cases for at least 1 yr.
Irritability check up should be at interval of wk for 4-6 wk.
After that patient if followed up at every one month for one year.

FOLLOW UP PROTOCOL

History and clinical examination

Questions about relevant symptoms like irregular bleeding , persistent cough, breathlessness or haemoptysis.

ADVICES

Patient is advised not to be pregnant for at least 2 yr.
If patient desires , she may be pregnant after 12 months , following HCG -ve titre under consistency.
Intrauterine contraceptive devices is contraindicated due to irregular bleeding .
Combined pills.

DIAGNOSIS

1. Acute pain related to the presence of mole in the uterus.
2. Activity intolerance related to abdominal pain.
3. Disturbed sleeping pattern related to pain.
4. Hyperthermia related to infection.
5. Anxiety related to bleeding .
6. Knowledge deficit related to disease condition.

BIBLIOGRAPHY

- Copeland LJ, Landon MB. Malignant diseases and pregnancy. In: Gabbe SG, Niebyl JR, Simpson JL, eds. *Obstetrics - Normal and Problem Pregnancies*. 6th ed. Philadelphia, PA: Elsevier Saunders; 2012:chap 47.
- D.C. Dutta textbook of gynaecology 5th edition published by new central book agency (p) LTD.s
- Fisher RA, Maher GJ. Genetics of gestational trophoblastic disease. Best Pract Res Clin Obstet Gynaecol. 2021;74:29–41. https://doi.org/10.1016/j.bpobgyn.2021.01.004.
- Goldstein DP, Berkowitz RS. Gestational trophoblastic disease. In: Abeloff MD, Armitage JO, Niederhuber JE, Kastan MB, McKenna WG, eds. *Abeloff's Clinical Oncology*. 4th ed. Philadelphia, PA: Elsevier Churchill Livingstone; 2008: chap 94.
- King JR,et al. Dysregulation of placental functions and immune pathways in complete hydatidiform moles. Int J Mol Sci. 2019;20(20).
- Sun SY, Melamed A, Joseph NT, Gockley AA, Goldstein DP, Bernstein MR, et al. Clinical presentation of complete hydatidiform mole and partial hydatidiform mole at a regional trophoblastic disease center in the United States over the past 2 decades. Int J Gynecol Cancer. 2016;26(2):367–70. https://doi.org/10.1097/IGC.0000000000000608.
- Savage JL, Maturen KE, Mowers EL, Pasque KB, Wasnik AP, Dalton VK, et al. Sonographic diagnosis of partial versus complete molar pregnancy: a reappraisal. J Clin Ultrasound. 2017;45(2):72–8. https://doi.org/10.1002/jcu.22410.