

An 18 year old female presented with amenorrhea for 7 weeks with a few episodes of spotting, abdominal pain and morning sickness. General examination was unremarkable except for mild pallor. Systemic examination revealed a distended abdomen corresponding to 24 weeks of gestation with a doughy feel and no fetal heart sounds. The initial blood work revealed anaemia and beta-hCG of 2,50,000 mIU/ml. On the second day of admission she developed heavy vaginal bleeding with expulsion of grape like vesicles requiring emergent suction and evacuation after administration of oxytocin.

What is the most likely diagnosis?

How will you confirm it?

What will be the follow up test and/or treatment?

Best answer by Achyut Kanungo, 3rd Prof-1, IPGMER, modified by Dr Upmanyu Nath, who provided the case

Most Likely Diagnosis

1. The diagnosis - is gestational trophoblastic disease - most likely being - Hydatidiform Mole.

Clinical theories to support the diagnosis include -

a. Abnormal uterine bleeding, usually during the first trimester, is the most common presenting symptom,

occurring in more than 90% of patients with molar pregnancies. In this case the amenorrhea with history of spotting indicates that.

b. More than 50% patients have a uterine size that is greater than expected for their gestational age - this is seen in the systemic examination that reveals a distended abdomen.

c. Multiple theca lutein cysts appear, causing enlargement of one or both ovaries in about 20- 30% of women with molar pregnancies. This sudden increase in size causes stretch of the uterus, leading to concealed hemorrhages, which may be the cause of pain. Infections are also common.

d. Anemia happens to be a finding in gestational trophoblastic disease, most often due to prolonged bleeding.

Lab findings

Laboratory findings :

1. beta-hCG :- The principal characteristic of gestational trophoblastic neoplasms is their capacity to produce hCG - detected in the serum or urine of all patients with hydatidiform mole or malignant trophoblastic disease. The levels correlate closely with the presence of viable tumor cells. Serial β -hCG levels are the best monitoring scheme and - The rate of decline in hCG titers is important because the

hCG values exhibit a progressive decline to nondetectable levels within 14 weeks after evacuation of a molar pregnancy. (Both diagnostic and prognostic value)

2. Ultrasonography happens to be simple, safe and reliable diagnostic method of choice for patients with suspected molar pregnancy. In a complete molar pregnancy, the characteristic ultrasound pattern consists of multiple hypoechoic areas corresponding to hydropic villi (the grape-like vesicles that are seen at the time of evacuation)- and is known in common language as a “snowstorm” pattern.

Differential Diagnosis must be considered before arriving at a final diagnosis -

Gestational trophoblastic disease must be distinguished from

1. a normal pregnancy,
2. an aborting pregnancy, and
3. an ectopic pregnancy.

It is done via - Ultrasonography, Quantitative hCG levels and analysis of tissue obtained from a dilatation and evacuation for histology and DNA content.

Follow up

The management is a 3-point agenda as per the latest guidelines -

1. Evacuation—After the diagnosis has been confirmed - blood type, hematocrit, and thyroid, liver, and renal function tests should be obtained.

A chest radiograph can rule out metastasis to the lungs (in case of any suspected malignant disease).

Subsequently, the molar pregnancy is terminated by Suction curettage under general anesthesia once the patient is stable. Local or regional anesthesia may be an option for the stable, cooperative patient with a small uterus.

Intravenous oxytocin should be administered after dilation of the cervix and before the start of evacuation and is continued, if necessary, for 24 hours post-evacuation.

Post-operative submission of tissue for histopathology is a must.

Blood loss usually is moderate, but precautions should be taken for the possibility of

hemorrhage requiring a transfusion. When a large hydatidiform mole (>12 weeks in size) is evacuated by

suction curettage, a laparotomy setup should be readily available, as hysterotomy, hysterectomy, or bilateral

hypogastric artery ligation may be necessary if perforation or hemorrhage occurs.

After the completion of the evacuation, all Rh-negative patients should receive Rh immune globulin.

2. Prophylactic chemotherapy—The use of prophylactic chemotherapy (with methotrexate or dactinomycin) after a complete molar pregnancy is indicated by several studies showing that the incidence of neoplasia in later life may be decreased.

3. Surveillance - It is perhaps the cornerstone of the management plan because it has been seen three-fourths of patients with malignant non-metastatic trophoblastic disease and half of patients with malignant metastatic disease develop the aforementioned tumors following a previous history of hydatidiform mole.

a.) Serial hCG titers is essential for every patient, as the incidence of malignant sequelae approaches 20–30%.

b.) Post evacuation of the molar pregnancy, serial hCG determinations, beginning 48 hours after evacuation and then at weekly intervals until hCG values decline to undetectable levels (<5 mIU per milliliter) on three successive assays.

c.) If titer remission occurs spontaneously within 14 weeks and without a titer plateau, the hCG titer should then be repeated monthly for at least 6 months; while if remission occurs after the period of 14 weeks has been crossed, then hCG titer should be repeated monthly for atleast 1 year before the patient is released from close medical supervision.

d.) Thereafter, the patient may enter into a routine gynecologic care program. Effective contraceptive measures should be implemented and maintained throughout the period of surveillance. There is no data that shows any increased risk of persistent gestational trophoblastic neoplasia after a molar pregnancy with the use of oral contraceptives. The contraception maybe terminated when the woman is desirous of a pregnancy.