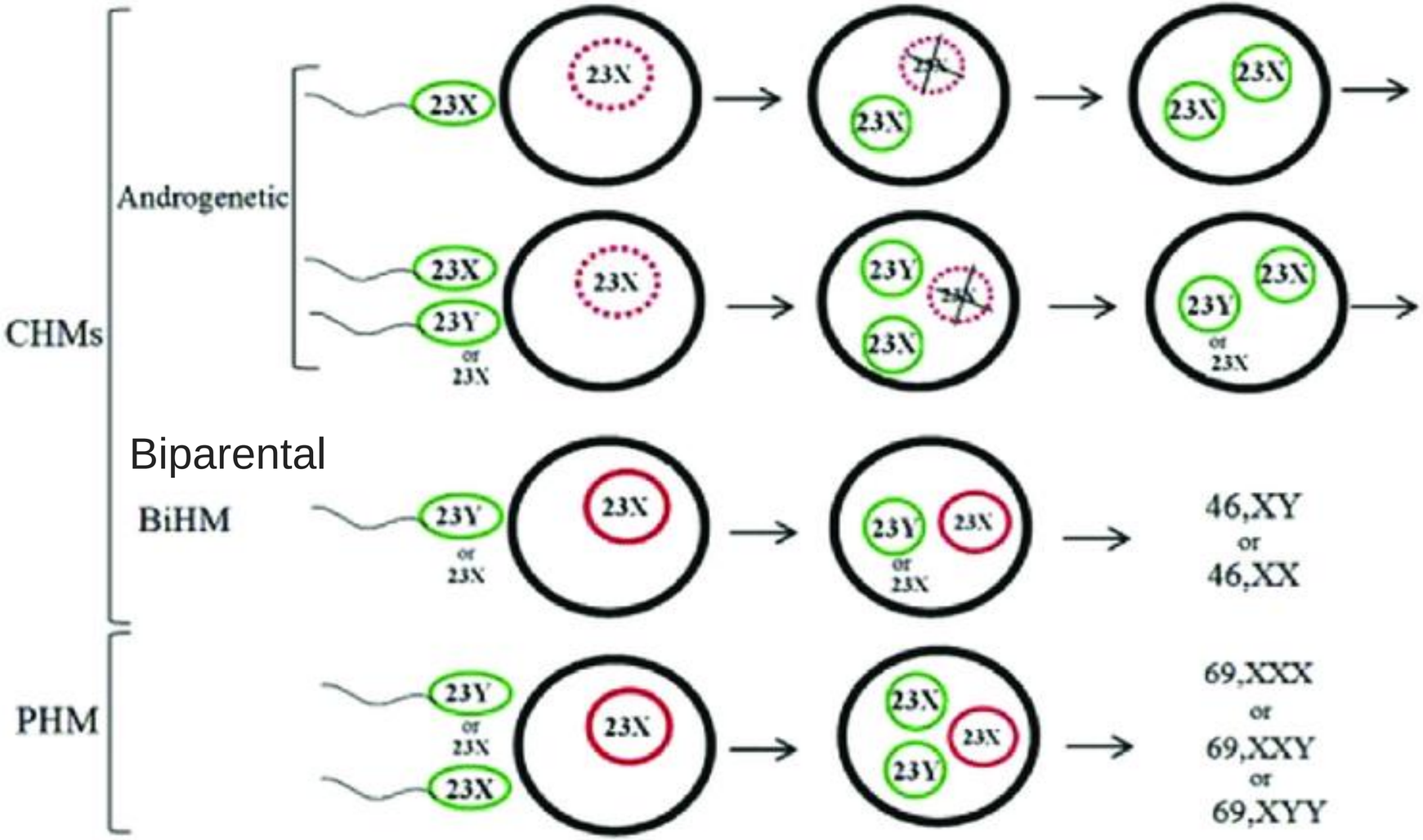
Hydatidiform mole

Clerk 林郁恩 2022/06/22

INTRODUCTION

- **Molar pregnancy** is part of a group of diseases classified as **gestational trophoblastic disease (GTD)**, which originate in the **placenta** and have the potential to locally invade the uterus and metastasize.
- Molar pregnancies, although benign, are considered to be **premalignant** because they have the potential to develop into a malignancy (GTN); the histologic entities included in this group are:
  - Invasive mole
  - Choriocarcinoma
  - Placental site trophoblastic tumor (PSTT)
  - Epithelioid trophoblastic tumor (ETT)



Main: Chromosome 19, *NLRP7* mutations
Less common: *KHDC3L* and *PADI6 mutations*

	Complete mole	Partial mole ole
Fetal or embryonic tissue	**Absent**	**Present**
Hydatidiform swelling of chorionic villi	**Diffuse**	**Focal**
Trophoblastic hyperplasia	**Diffuse**	**Focal**
Scalloping of chorionic villi	Absent	Present
Trophoblastic stromal inclusions	Absent	Present
Karyotype	**46XX; 46XY**	**69XXY; 69XYY; 69XXX**
Immunochemistry	p57 (-)	P57 (+)
Risk of gestational trophoblastic neoplasia	**15 to 20%**	**1 to 5%**
Incidence	1/1500	1/750
Beta HCG	**>100,000 mIU/mL**	通常為正常或稍高
Uterine size	**Greater** than gestational age	Same or smaller as gestational age
Theca lutein cyst	**25-30%**	**Rare**

RISK FACTORS

- **Prior molar pregnancy**:
  - Repeat molar pregnancy after first mole: **1 to 1.5** percent
  - Repeat molar pregnancy after second mole: **11 to 25** percent
- **Extremes of maternal age**: (≤15 and >35 years)
- History of prior spontaneous abortion and infertility
- Dietary factors: decreasing levels of consumption of dietary carotene (vitamin A precursor) and animal fat

CLINICAL FEATURES

Common features

- **Vaginal bleeding (84%)**: results from separation of the molar villi from the underlying decidua. "**prune juice**" discharge
- **Pelvic pressure or pain**: enlarging uterus and/or enlarged cystic ovaries.
- **Uterine size greater than gestational age** (28 %): large volumes of molar tissue and retained blood. Associated with hCG levels >100,000 mIU/mL
- **Hyperemesis gravidarum** (8%)

CLINICAL FEATURES

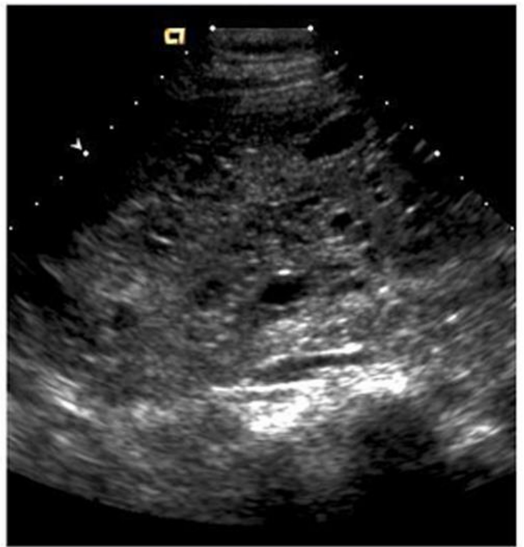
Less common or late (second trimester) features

- **Hyperthyroidism**: requires the elevation of **hCG >100,000 mIU/mL for several weeks**. 因此較常發生在complete mole.
- **Ovarian theca lutein cysts**: ovarian hyperstimulation resulting from high circulating levels of **hCG and prolactin**. These cysts are **multiloculated**, often **bilateral**, and resolve a few weeks or months after treatment of HM.
- **Preeclampsia <20 weeks of gestation**: complete mole presented at later gestational ages較常發生，但極少發生Eclampsia
- Anemia: significant bleeding at later gestational ages, resulting in iron deficiency anemia.
- Passage of hydropic vesicles from the vagina

DIAGNOSIS

Complete mole

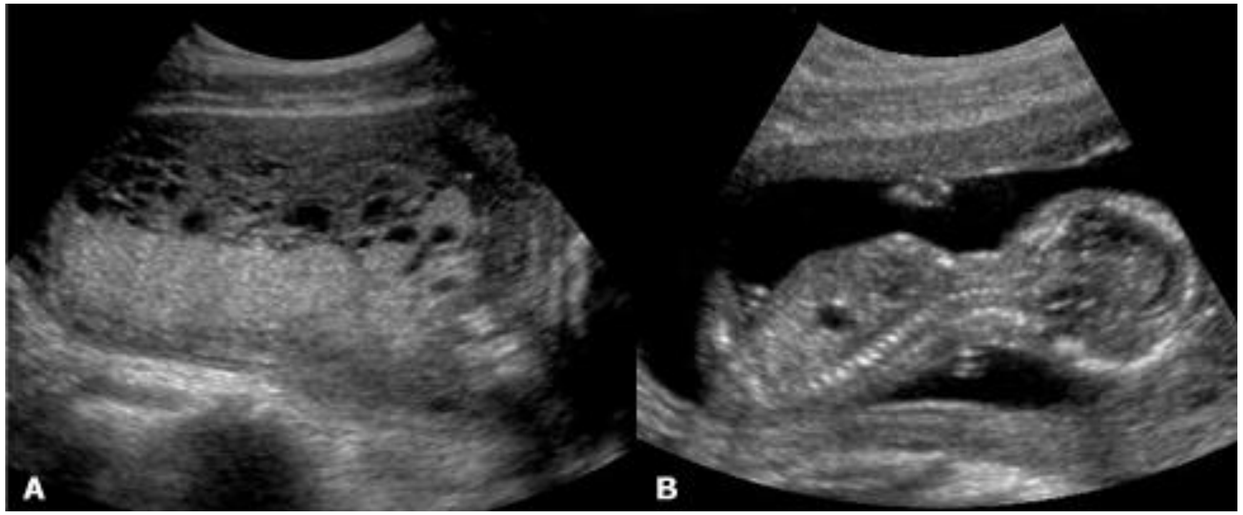
- **hCG >100,000 mIU/mL**
- Presence of theca lutein cysts or hyperthyroidism without another likely etiology, preeclampsia at GA <20 weeks.
- **Pelvic ultrasound**: (1) Central heterogeneous mass with numerous discrete anechoic space (**snowstorm or Swiss cheese pattern**), (2) **Ovarian theca lutein cysts**, (3) Absence of amniotic fluid, (4) Absence of an embryo or fetus.



DIAGNOSIS

Partial mole

- Difficult to diagnose on ultrasound and hCG, 易誤診為incomplete or missed abortion，通常在手術後病理切片才改變診斷
- **Pelvic ultrasound**: (1) A **fetus** may be identified, may be viable, and is often growth restricted (2) **Amniotic fluid** is present, but the volume may be reduced (3) Placenta– Enlarged, cystic spaces ("Swiss cheese pattern”, **focal**) and/or increased echogenicity of chorionic villi (4) **Increased transverse diameter of the gestational sac** (5) Theca lutein cysts are usually absent



MANAGEMENT
PATIENT PREPARATION

- RhD-negative patients: **anti-D immune globulin**
- Hyperthyroidism: oral longer acting beta blockers (eg, **atenolol**) one hour before surgery/ Intravenous **propranolol** to control fever, hypertension, and tachycardia intraoperatively/ Some patients may require **thionamides**
- Preeclampsia: resolves promptly after molar evacuation and usually does not require medical management, unless severe features of the disease are present.

MANAGEMENT

- **Uterine evacuation**:
  - At the time of anesthesia induction, an **oxytocin** infusion is begun to promote myometrial contraction and thus decrease blood loss.
  - Mechanical dilation of the cervix
  - Suction aspiration (regardless of uterine size)
  - Sharp curettage to help assure complete evacuation of molar tissue
  - Intraoperative sonography can be used to monitor the procedure and help determine when evacuation is complete

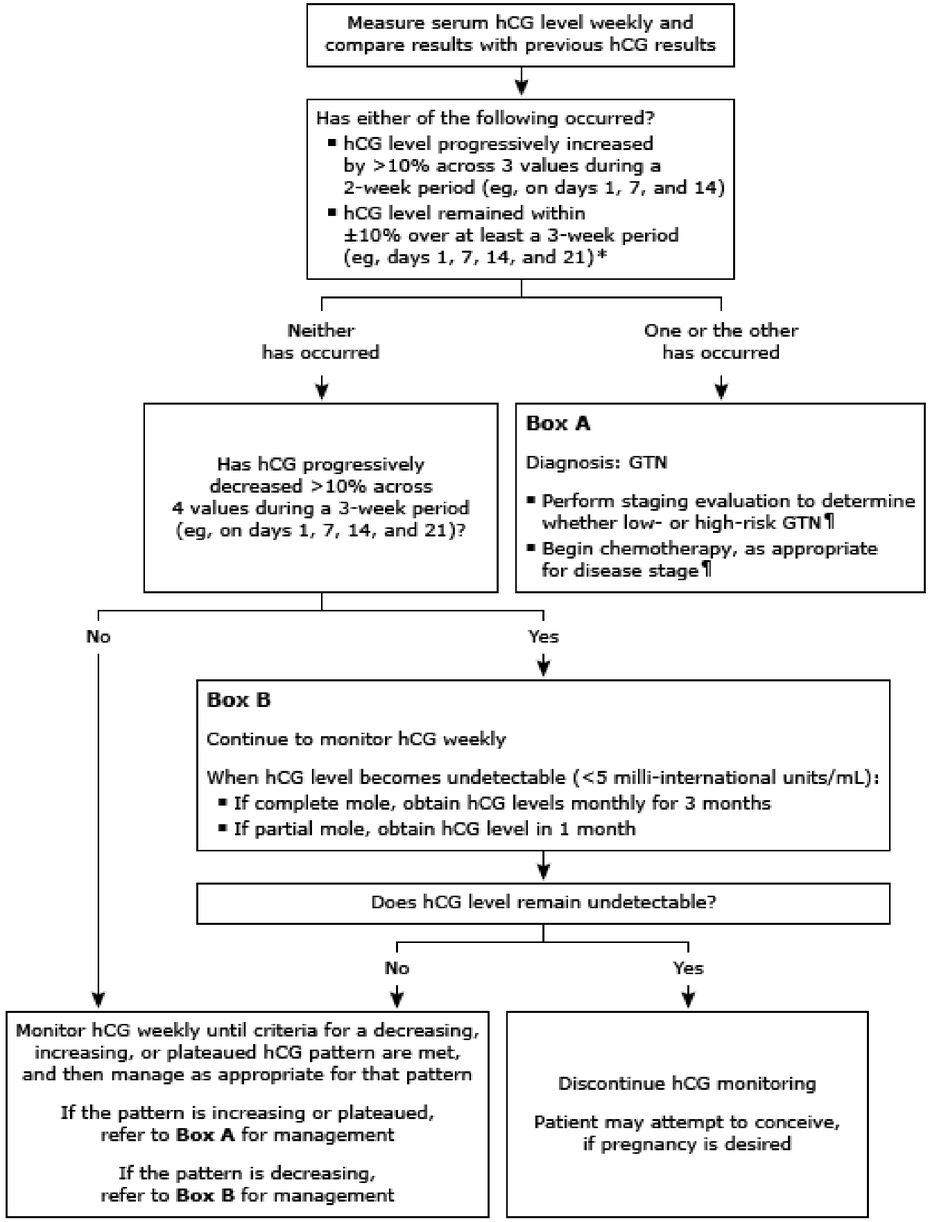
MANAGEMENT

- **Hysterectomy**:
  - Candidates:
    - Risks of GTN— Signs of trophoblastic proliferation (1.**uterine size greater than gestational age**, 2. **serum hCG levels >100,000 mIU/mL**, 3.**ovarian theca lutein cysts >6 cm in diameter**).
    - Age >40 y/o
  - If prominent ovarian theca lutein cysts are present and symptomatic, they can be aspirated to reduce the volume and patient discomfort.
  - The ovaries may be left in situ since ovarian metastases are rarely encountered.

MANAGEMENT
USE OF PROPHYLACTIC CHEMOTHERAPY???

- We only consider it in patients who have a **complete mole** and **all** of the following:
  - Treated by evacuation rather than hysterectomy.
  - High risk of developing GTN (signs of trophoblastic proliferation + age >40 years). 同前頁

POSTOPERATIVE MONITORING



- **Contraception** during monitoring: 避免影響hCG結果 — hormonal contraception (p or p+e) or barrier methods
- 術後**每週**追蹤hCG 3次(D1,7,14,21):
  - **BOXB—Decreasing and undetectable hCG levels** (<5 mIU/ml): **>10%** across four values during a ***three-week*** period
  - **BOXA—** FIGO criteria: 懷疑GTN, 開始接受化療
    - **Increasing hCG levels**: **>10 %** across three values during at least a ***two-week*** period
    - **Plateaued hCG levels**: **±10%** over at least a ***three-week*** period
    - ~~Continuous detectable hCG levels: detect hCG more than six months~~ FIGO 2018年後改為conservative treatment

OUTCOME

- **Postmolar GTN:**
  - Complete mole:**15 to 20** percent
    - High risk groups: signs of trophoblastic proliferation(如前述)、older age (>40)
    - Ultra-high risk groups: pre-evacuation hCG levels >175,000 mIU/mL and older age
  - Partial mole: **1 to 5** percent
- Patients with either a complete or partial mole can anticipate normal future reproductive outcomes.
- Repeat molar pregnancy:
  - Repeat molar pregnancy after first mole: **1 to 1.5** percent
  - Repeat molar pregnancy after second mole: **11 to 25** percent

REFERENCE

- Berkowitz, R. S., Goldstein, D. P., & Horowitz, N. S. UpToDate. Hydatidiform mole: epidemiology, clinical features, and diagnosis. 14 Apr 2017; cited 23 Oct 2017.
- Berkowitz, R. S., Horowitz, N. S., Elias, K. M., & Vora, S. R. (2019). Hydatidiform mole: treatment and follow-up. *UpToDate.*