NCLEX-RN 2026 · MATERNAL-NEWBORN · GESTATIONAL TROPHOBLASTIC DISEASE

Molar Pregnancy *(Hydatidiform Mole)*

A pregnancy that isn't a pregnancy — abnormal trophoblastic proliferation produces grape-like vesicles inside the uterus, sky-high hCG, no viable fetus, and a real risk of progressing to choriocarcinoma. High-yield for prioritization, OB pharm, and "before-20-weeks" red flags.

TOPIC FILE
№ 27
OB · SHEET 1 OF 3

01 Definition *& overview*

WHAT IT IS · WHY IT MATTERS

WHAT IT IS

An **abnormal pregnancy** where chorionic villi proliferate into fluid-filled, grape-like vesicles in the uterus. A form of **Gestational Trophoblastic Disease (GTD)** — a benign tumor of the placenta with **no viable fetus**.

WHY IT MATTERS NCLEX

- **5–20%** of complete moles progress to **choriocarcinoma** (malignant)
- Causes hemorrhage, DIC, and embolization
- Mimics — then must be distinguished from — preeclampsia & hyperemesis

RISK FACTORS

- Maternal age **<20 or >35**
- Previous molar pregnancy (1–2% recurrence)
- History of miscarriage
- Low dietary **carotene & folate**
- Asian heritage (higher incidence)

Two types — and the NCLEX* loves *to ask which is which.

COMPLETE · 46,XX (ALL PATERNAL) · NO FETUS

FEATURE	COMPLETE MOLE	PARTIAL MOLE
Fertilization	**Empty ovum** + 1 sperm (duplicates) *or* 2 sperm	**Normal ovum** + 2 sperm
Karyotype	**46,XX** or 46,XY — all paternal DNA	**69,XXY** (triploid)
Fetal tissue	**None** — no fetus, no fetal heart tones	Some abnormal fetal tissue / nonviable fetus
hCG level	**Markedly** elevated (often >100,000 mIU/mL)	Less elevated, may be normal-ish
Cancer risk	**5–20%** → choriocarcinoma	<5% → choriocarcinoma
U/S finding	**"Snowstorm"** · "cluster of grapes"	Focal cystic spaces + fetal parts

02 Pathophysiology *simplified*

STEP-BY-STEP MECHANISM

COMPLETE MOLE *Empty egg meets sperm → all paternal DNA → no fetus, just vesicles*

① **Empty Ovum** — Ovum with no maternal chromosomes is fertilized by 1 sperm (which duplicates) or 2 sperm. →
② **Abnormal Zygote** — 46,XX or 46,XY — entirely paternal genetic material. No maternal contribution. →
③ **Trophoblast Overgrowth** — Chorionic villi swell into fluid-filled vesicles (look like grapes/snowflakes on U/S). →
④ **hCG Surge** — Hyper-proliferating trophoblasts secrete **massive hCG**, mimicking TSH → hyperemesis + hyperthyroid signs. →
⑤ **Uterine Distention** — Vesicles fill uterus → **size > dates**, painless bleeding, early preeclampsia.

PARTIAL MOLE *Two sperm + normal egg → triploid embryo that cannot survive*

① **Normal Ovum** — A healthy maternal egg is fertilized by 2 sperm (dispermy). →
② **Triploid Zygote** — 69 chromosomes (69,XXY) — incompatible with sustained life. →
③ **Mixed Placenta** — Some normal villi + some hydropic vesicles. Some abnormal fetal tissue may form. →
④ **Milder hCG Rise** — hCG elevated but less dramatically — symptoms less severe, often diagnosed later. →
⑤ **Loss / Diagnosis** — Often presents as missed abortion; diagnosed by tissue pathology after D&C.

CONTINUED · SIGNS · INTERVENTIONS · PHARMACOLOGY

Molar Pregnancy — *clinical action*

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03 Signs *& symptoms*

EARLY · LATE · RED FLAGS

EARLY — WK 6-12

- **Vaginal bleeding** — dark brown *"prune juice"* or bright red (often first sign)
- **Hyperemesis gravidarum** — severe N/V from sky-high hCG
- **Uterus larger than dates** for gestational age
- **No fetal heart tones** (complete mole)
- Positive pregnancy test (+ extreme hCG)
- Pelvic pressure / fullness

LATE · SEVERE — WK 12-20

- **Hyperthyroidism signs** — tachycardia, tremor, heat intolerance (hCG mimics TSH)
- Severe **anemia** from chronic bleeding
- **Theca-lutein ovarian cysts** — palpable, enlarged ovaries from hCG overstimulation
- **hCG > 100,000 mIU/mL**
- Trophoblastic pulmonary embolization (rare)

RED FLAGS — CRITICAL

- **Passage of grape-like vesicles** — pathognomonic
- **Preeclampsia BEFORE 20 wks** — always think mole first
- Heavy hemorrhage → hypovolemic shock
- Snowstorm pattern on ultrasound
- Persistent ↑ hCG after evacuation → **choriocarcinoma**
- Chest pain / dyspnea → metastasis to lung

PRE-ECLAMPSIA < 20 WK = MOLE | HCG > 100,000 | SIZE > DATES | "PRUNE JUICE" | NO FETAL HEART TONES | SNOWSTORM ON U/S

04 Priority nursing *interventions*

ABCS · SAFETY · PRIORITIZATION

ASSESS	**Bleeding** — count & weigh pads; assess for hemorrhage and signs of shock (↓BP, ↑HR, pallor, cool/clammy skin).	MONITOR	**Vital signs** — frequent BP/HR; watch for **early preeclampsia** (BP, headache, visual changes, edema, proteinuria).
PREPARE	**Suction curettage (D&C)** — definitive treatment to evacuate the mole. Type & crossmatch blood before procedure.	ESTABLISH	**Large-bore IV access** (18g) and have isotonic fluids/blood products available — risk of hemorrhage is high.
ADMINISTER	**RhoGAM** within 72 h if Rh-negative — prevents alloimmunization for future pregnancies.	TREND	**Serial β-hCG** — weekly until negative ×3, then monthly for **6–12 months**. Rising hCG = choriocarcinoma.
ASSESS	**Thyroid status** — high hCG mimics TSH; watch for tachycardia, tremor, heat intolerance.	SCREEN	**CXR baseline** — chest x-ray to rule out lung metastasis from choriocarcinoma.
EDUCATE	**Strict contraception** 6–12 months (OCPs preferred). NOT IUD — perforation risk in newly evacuated uterus.	SUPPORT	**Grief & emotional care** — this is a pregnancy loss with added cancer surveillance burden. Acknowledge both.

05 Pharmacology *essentials*

DRUG · MECHANISM · SIDE EFFECTS · CONSIDERATIONS

DRUG / CLASS	MECHANISM	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Oxytocin (Pitocin) UTEROTONIC	Stimulates uterine contraction post-evacuation to ↓ bleeding.	Water intoxication, hypotension, tachycardia, uterine hyperstimulation.	HOLD until **AFTER evacuation** — pre-evacuation use causes **trophoblastic emboli**. Monitor I&O, fundal tone.
Methotrexate FOLATE ANTAGONIST · CHEMO	Blocks DNA synthesis in rapidly dividing trophoblast cells → treats **choriocarcinoma**.	Bone marrow suppression, hepatotoxicity, mucositis, photosensitivity.	AVOID folic acid. Monitor CBC, LFTs, BUN/Cr. Sun protection. Reliable contraception during & after.
Rh_0(D) Immune Globulin (RhoGAM) IMMUNOGLOBULIN	Prevents maternal anti-Rh antibody formation in Rh-negative women.	Local site reaction, low-grade fever.	Give within **72 hours** of evacuation if mother is **Rh-negative** (mother is Rh-, father unknown/+).
Combined Oral Contraceptives ESTROGEN + PROGESTIN	Suppress LH/FSH → prevent pregnancy and suppress endogenous hCG-like LH activity.	Nausea, breakthrough bleeding, ↑ clot risk, mood changes.	**Preferred** contraceptive for 6–12 months follow-up. New pregnancy would mask rising hCG.
Labetalol / Hydralazine ANTIHYPERTENSIVE	Beta-blocker / direct vasodilator — used if early preeclampsia develops.	Hypotension, bradycardia (labetalol), reflex tachycardia (hydralazine), headache.	Hold for HR < 60 (labetalol) or SBP < 100. Monitor BP before/after dose. Patient supine.
Misoprostol PROSTAGLANDIN E_1	Cervical ripening prior to suction curettage (selective use).	Cramping, diarrhea, nausea, bleeding.	Used pre-procedure only if needed. Not first-line for mole evacuation — D&C is primary.

⚠ *Note: **Methylergonovine (Methergine)** is contraindicated if HTN/preeclampsia is present — always check BP before any uterotonic. **IUDs are contraindicated** during the follow-up period due to perforation risk in a recently evacuated uterus.*

CONTINUED · TEST TRAPS · EDUCATION · MNEMONICS

Molar Pregnancy — *exam armor*

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06 NCLEX *test traps* ⚠

WHERE STUDENTS LOSE POINTS

- ⚠ **Preeclampsia *before* 20 weeks?** NOT typical preeclampsia — think **molar pregnancy first**. True preeclampsia is after 20 wks.
- ⚠ **"Size greater than dates" ≠ automatic twins.** Differentials include **mole**, polyhydramnios, multiples, LGA, incorrect dates.
- ⚠ **Don't give oxytocin BEFORE evacuation** — risk of **trophoblastic pulmonary embolization**. Give it *only after* the uterus is evacuated.
- ⚠ **Hyperemesis + extreme hCG?** Mole and twin pregnancy both cause it — ultrasound distinguishes.
- ⚠ **IUD ≠ acceptable contraception** post-evacuation — perforation risk. **OCPs are preferred**; barrier methods OK.
- ⚠ **Tachycardia/tremor in a pregnant patient?** Could be hCG-driven hyperthyroidism in mole, not just anxiety.
- ⚠ **Pregnancy is forbidden for 6–12 months.** A new pregnancy raises hCG and **masks** rising hCG from choriocarcinoma.
- ⚠ **"Prune juice" discharge** is a hint for **mole**, not just an old bleed. Pair with size › dates and high hCG.
- ⚠ **hCG must reach ZERO and stay there.** Falling but not zero = not done. Rising again = malignancy until proven otherwise.
- ⚠ **Methylergonovine + HTN = NO.** If BP elevated (mole patients often have early preeclampsia), choose oxytocin instead.

07 Patient *education*

DISCHARGE TEACHING

Follow-up is non-negotiable

- Serial **β-hCG**: weekly until negative ×3, then **monthly × 6–12 months**.
- Keep **every** appointment — choriocarcinoma can develop after evacuation.
- Report rising hCG, persistent bleeding, or new symptoms immediately.

Contraception rules

- **No pregnancy for 6–12 months** — must use reliable contraception.
- **Use:** oral contraceptives (preferred), barrier methods.
- **Avoid:** IUD (uterine perforation risk in newly evacuated uterus).

When to call the provider

- Heavy bleeding, passing tissue, severe abdominal pain
- Persistent nausea/vomiting, chest pain, shortness of breath
- Headache, visual changes, severe swelling (preeclampsia signs)
- Coughing up blood (lung metastasis red flag)

Future pregnancies & feelings

- Recurrence risk is **~1–2%** — most future pregnancies are normal.
- Wait the full surveillance period before trying again.
- Early U/S in next pregnancy to confirm normal gestation.
- This is a real loss — grief counseling and support groups help.

08 Memory *boosters*

MNEMONICS · PATTERNS · PICTURES

GRAPES

✧ CLINICAL SIGNS OF MOLAR PREGNANCY

- **G** **Grape-like vesicles** passed vaginally (pathognomonic)
- **R** **Really high hCG** — often ›100,000 mIU/mL
- **A** **Anemia** from ongoing vaginal bleeding
- **P** **Preeclampsia** appearing BEFORE 20 weeks
- **E** **Emesis** — hyperemesis gravidarum (severe N/V)
- **S** **Size** of uterus larger than dates

MOLAR

✧ MANAGEMENT & CARE PRIORITIES

- **M** **Monitor hCG** serially — until zero ×3, then monthly 6–12 mo
- **O** **OCPs** for contraception — *not* IUD
- **L** **Labs** — CBC, type & cross, thyroid, baseline CXR
- **A** **Avoid pregnancy** 6–12 months (masks rising hCG)
- **R** **Remove** with suction curettage (D&C) — definitive Tx

PATTERN: U/S FINDINGS

- **"Snowstorm"** = complete mole
- **"Cluster of grapes"** = vesicles
- No gestational sac / no FHT (complete)

QUICK TRIAD TO SPOT A MOLE

- Vaginal bleeding (prune-juice)
- Uterus › dates + ↑↑ hCG
- Pre-eclampsia before 20 wks

IF HCG RISES AFTER EVACUATION…

- Suspect **choriocarcinoma**
- Treat with **methotrexate**
- Surveil for lung mets (CXR)

If you remember **three things**: *hCG must hit zero · no pregnancy for a year · early preeclampsia = mole.* ✧ HIGH YIELD