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Suspected Molar Pregnancy in a Geriatric Western Lowland Gorilla (Gorilla gorilla gorilla) Managed by Total Abdominal Hysterectomy

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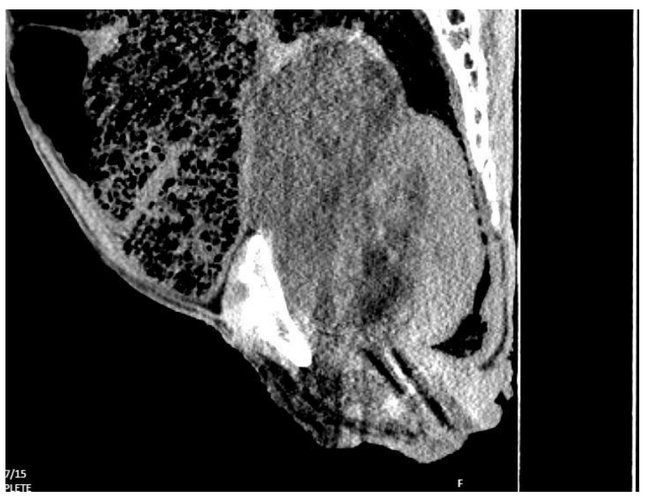
BACKGROUND

Gestational trophoblastic disease (GTD) is well described in humans but rarely reported in nonhuman primates. Species-specific diagnostic and management guidance for great apes is limited.

CASE PRESENTATION

- 46-year-old multiparous Western lowland gorilla
- Positive pregnancy test despite contraception
- CT/US: Heterogeneous mass with uterine wall thickening
- Biopsy: Acute endometritis with atypical trophoblast

FIGURE 1 IMAGING



Sagittal CT shows heterogeneous intrauterine tissue and thickened uterine wall.

CLINICAL DECISION

Total abdominal hysterectomy (TAH) was selected for diagnosis and definitive therapy, avoiding serial β-hCG surveillance under anesthesia.

TIMELINE

- **Positive screening test**
  Despite contraception
- **CT + ultrasound**
  Heterogeneous mass
- **Endometrial biopsy**
  Atypical trophoblast
- **Definitive surgery**
  Hysterectomy
- **Pathology + IHC**
  hCG positive; SRY negative
- **Recovery**
  Returned to troop within 22 hours

SURGICAL FINDINGS

- Uterus enlarged to ~10-week size
- Adnexa grossly normal; ovaries preserved
- No evidence of serosal or metastatic disease

FIGURE 2 SURGERY

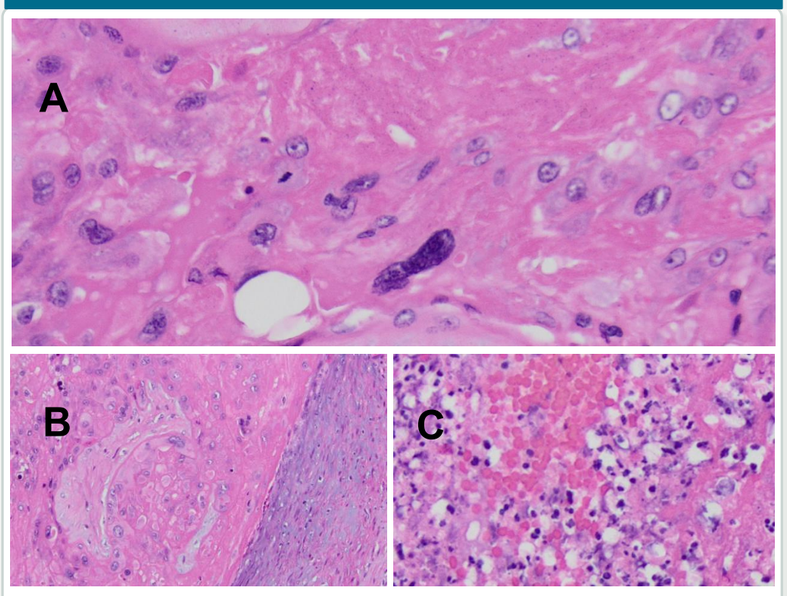


Surgical Team included OB/GYNs and Veterinarians

PATHOLOGY SUMMARY

Gross: Friable tan-red necrotic material and hemorrhagic debris; no fetal structures identified.
Microscopy: Trophoblastic sheets and trabeculae in fibrinoid stroma, marked atypia, vascular remodeling, rare-to-absent mitoses, and no destructive myometrial invasion.
Immunohistochemistry: Strong hCG cytoplasmic positivity; SRY nuclear staining negative.

FIGURE 3 PATHOLOGY SLIDES



(A) Atypical extravillous trophoblast
(B) Intravascular trophoblast
(C) Necrotic decidua
(A-400x; B-100X; C-200x mag)

ASSESSMENT

Features favoring molar pregnancy over invasive gestational trophoblastic neoplasia (GTN)

- Diffuse trophoblastic proliferation
- Strong hCG immunoreactivity
- Vascular remodeling
- No destructive myometrial invasion

KEY DIFFERENTIAL

Considered

- Complete hydatidiform mole
- Placental site trophoblastic tumor
- Choriocarcinoma
- Exaggerated placental site/degenerating implantation site

OUTCOME

Postoperative recovery was uneventful. The gorilla returned to the troop within 22 hours. At ages 48 and 50, successful allonursing was observed.

CONCLUSIONS

- Include GTD in the differential of positive pregnancy tests with abnormal uterine imaging.
- Diagnosis required multimodal evaluation.
- Hysterectomy is definitive and diagnostic when serial β-hCG monitoring is impractical.

TRANSLATIONAL RELEVANCE

This case highlights similarities between human and gorilla trophoblastic biology and anesthesia-related challenges in zoological care.

REFERENCES

1. Berkowitz RS, Goldstein DP. N Engl J Med. 2009;360:1639–1645.
2. Seckl MJ, Sebire NJ, Berkowitz RS. Lancet. 2010;376:717–729.
3. Ngan HYS, Seckl MJ, Berkowitz RS, et al. Int J Gynecol Obstet. 2025.

TAKE-HOME MESSAGE

In a geriatric Western lowland gorilla with a positive pregnancy test and intrauterine mass, hysterectomy enabled diagnosis and treatment while avoiding repeated anesthesia for serial biochemical monitoring.