



# Ovarian Cysts in a White lioness

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# History

- « Zihra », 12 yo
- Infertility since 2010
  - 2009: 3 cubs
  - 2010: few days of estrus
    - matings observation
  - > 2010: no overt estrus
- Localisation:
  - free-roaming in a 300ha area
  - .For veterinary treatment: 1.5ha veterinary enclosure
  - When in the boma the lions
- Nutrition
  - Free-roaming: their hunting
  - Enclosure/boma:
    - carcasses (eg. wildebeest, kudu, zebra, giraffe etc.) with intestine and organs,
    - If intestines are not available: Predator Supplement (powder – distributed by Midlands Veterinary Wholesaler, Johannesburg)



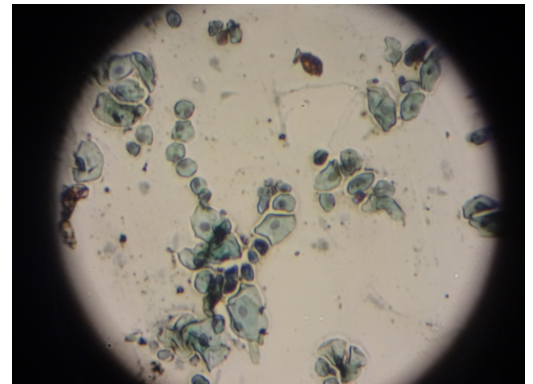
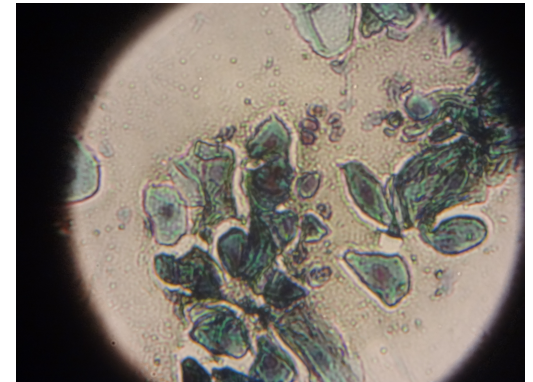
# Medical history

- 2006 – 2009: Suprelorin 4.7 mg <sup>®</sup>
- 2012: suspected heat and mating
- No overt estrus or mating since



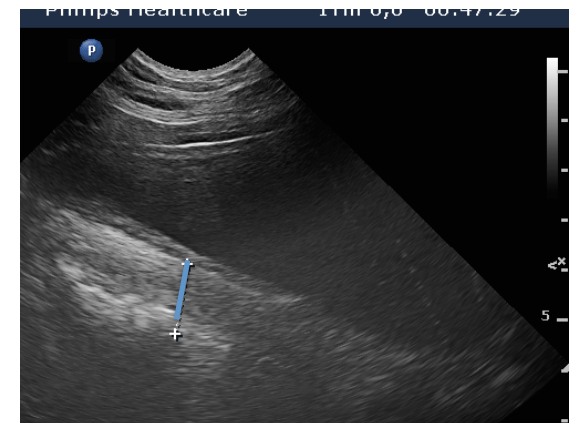
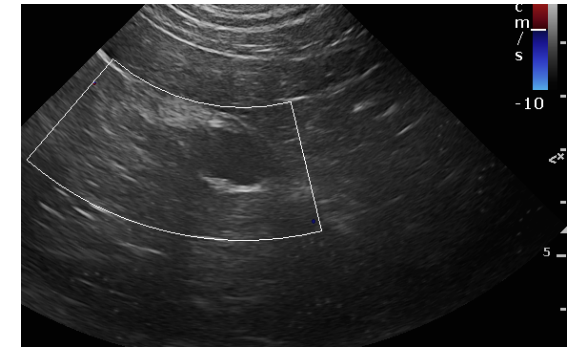
# Examination

- Clinical exam: no abnormality
  - no sign of estrus/diestrus
- CBC and Biochemistry: in the range
- Vaginal cytology (Diagnostrus RAL<sup>®</sup>):
  - 60% parabasal cells
  - 20% large intermediate cells
  - 10% small intermediate cells
  - No blood cells or PMN





- **Plasmatic progesterone:**
  - Fresh: Ovucheck<sup>®</sup>, BVT© > 8 ng/ml
  - Frozen: Minividas<sup>®</sup>,  
Biomérieux© = 14 ng/ml
- **Genital ultrasonography**
  - one single round-shape cavity:  
1.8 cm Ø, anechoic content
  - Uterus wall: > 1 cm ...



# Diagnosis hypothesis

- Bilateral ovarian luteal cyst
- Diestrus ?
  - No estrus observed
  - One « corpus luteum » by ovary
- No secretory cyst
  - Ovarian downregulation
  - Ovaritis complication
  - Etc.



# Medical treatment

## Cyst luteolysis

- **PGF2 $\alpha$ : Cloporostenol (ESTRUMATE<sup>®</sup>)**
  - 2,5  $\mu$ g/kg, dart injection, once a day, three consecutive days.

1 week later



- **eCG (CHRONOGEST<sup>®</sup> PMSG)**
  - One single dart 1000 iu

→ No heat were observed in the two following weeks

- **GnRH analogues: Suprelorin 4.7<sup>®</sup> (deslorelin acetate)**
  - implanted (SC, post-umbilical area)
  - removed a week later

→ No heat were observed in the two following days and months

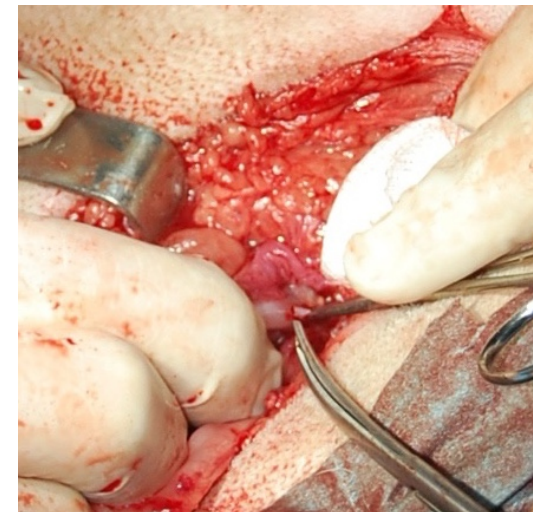
# Follow-up 6 months later

- Genital ultrasound
  - Ovarian cyst still observed
  - Uterus still increase in size
  - Progesterone: 5 ng/ml
    - Ovarian secretion ?
    - Adrenal gland secretion ?
      - Describe in cats



# Ovarian cyst removal

- Anesthesia: manage by Dr Pete Rogers
- 
- a Castroviejo corneal scissors or a Bonn micro scissors and a Harms-Tubingen tying forceps.
- Midline laparotomy
  - less tension on the suspensor ovarian ligament and its vessels than in bitches.
- Cyst puncture-aspiration 23-G needle and aspirated (0.8 ml). (P4 > 80 ng/ml)
- Cyst rinsage NaCl 0.9%
  - to allow a better identification.
- Cyst wall dissection
  - Ovarian bleeding was limited during dissection.
- Ovarian cortex was sutured with an absorbable monofilament 5-0 (Biosyn®).
- No major complication
  - no haemorrhage,
  - normal ultrasound appearance of the ovary (absence of inflammatory reaction, no cyst recurrence) one month later





# Follow-up

- No heat observed since
- Induction of heat will be performed soon



# Discussion

- Suprelorin 4.7<sup>®</sup> leads to
  - persistent anestrus 2-4 yo
  - Subcutaneous post-umbilical implantation maybe a better site
    - Easy to remove
- Origin of luteal cyst
  - Spontaneous
  - Post-treatment ?
  - Ovarian downregulation ?
  - Etc.

# Discussion

- Ovarian cyst: medical treatment
  - Rarely efficient in carnivores
- Surgical treatment
  - Safe in dogs and cats
  - Fertility restoration describe in dogs and cats after follicular and luteal cyst
  - Recurrence of cyst also describe (but not permanent anestrus)
- Permanent overt anestrus ?
  - Covert estrus
  - Ovaritis
  - Ovarian downregulation
  - Other: hypothyroidism, group effect, nutrition imbalance, etc.



# Acknowledgements

