Case Report:
Ovarian fibroma in mares - Hormonal considerations

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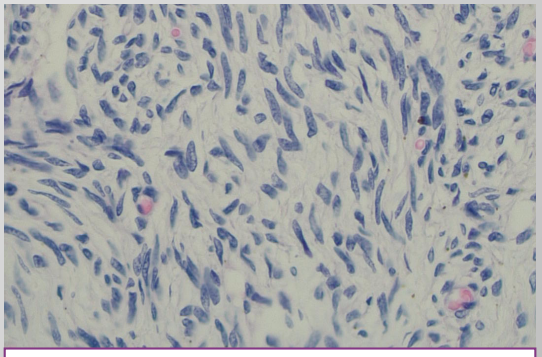
History
- 13 year-old mare
- Hospitalized for colics:
  - Alimentary obstruction of colon
  - Large left ovary incidentally palpated

Genital tract examination
- **Left ovary**
  - Size: 5.8cm
  - Large echogenic area: 5cm
  - No follicles>10mm
- **Right ovary**
  - Corpus Luteum observed
  - Follicular growth (<15mm)



Histology of the ovarian fibroma

Hormonal investigation
- Oestradiol <5pg/mL
- Testosterone<25pg/mL
- Progesterone = 1.98ng/mL
- AMH (Anti-Mullerian Hormone): 2.21ng/mL

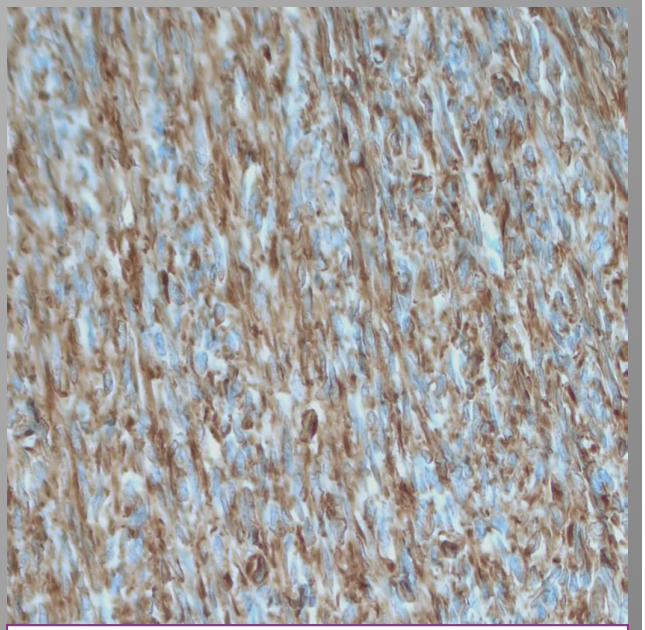
Histopathological findings
- Well circumscribed neoplasm, partially encapsuled
- Collagenous stroma
- Small haemorrhages & cystic areas with basophilic material
- Tumoral cells:
  - Thin cytoplams, elongated, regular
  - Hyperchromatic nuclei & inconspicuous nucleolei
  - Rare mitotic figures (<1/10 per field, X40)

Diagnosis: Benign ovarian fibroma

Surgery
- Standing sedated mare
- Laparoscopy
- Unilateral left ovariectomy

Outcome
- No post-surgery complication
- Follow-up after 6 month: no problems observed

Discussion
- **No hormonal secretion observed in this case of ovarian fibroma (confirmed in a second case this year)**
  - In human ovarian fibroma:
    - No steroïds
    - No AMH
  - 2 cases of ovarian fibroma in mares this year in our clinic:
    - Discrete symptoms, rare diagnosis
- **Theca & Granulosa Cells Tumor (TGCT): most frequent and only secreting ovarian tumor in equine:**
  - Androgens, oestrogens, progesterone (in some cases)
  - Inhibin
  - AMH (human assay recently validated for TGCT diagnosis in equine[1])



Immuno-marking of fibroblasts

Conclusions: In the equine, ovarian fibromas are benign, asymptomatic and non-secreting tumors, very likely under diagnosed. Their evolution and growth are still unknown, but there is no impact on cyclicity.

References:
[1]Ball B.B., Almeida J., Conley J.: Determination of serum Anti-Müllerian Hormone concentrations for the diagnosis of granulosa-cell tumors in mares. Equine Veterinary Journal **45** (2013): 199-203