5.2 PLACENTAL RETENTION IN A BONOBO (Pan paniscus)

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Overview of female bonobo reproduction

- Sexual maturity in captivity between 6 and 11 years of age
- First offspring: between 13 and 14 years old
- Interbirth interval ~ 4 to 6 years
- Gestational length: between 220 and 230 days

Pre-parturition history

- 11 years old female (Kalina), 29Kg
- Primiparous
- No contraception history
- Last estrus observed: 210 days before birth date
- Isolated from her social group 2 months before the presumed birth date.

Placental retention

- Normally: placenta is delivered within $\frac{1}{2}$ hour after birth with a mean of 20 minutes (Lola Ya Bonobo sanctuary)

- In this case: 11 Hours postpartum (HO+11): no expulsion despite regular contractions of the uterus (figure 1)

Treatment: medication

H0+11: Injection IM of 5 IU of oxytocine (Syntocinon® 5 IU/1 ml) additional uterine contractions were observed but no expulsion
Figure 1. Placenta retained 11 hours after birth, despite regular contractions.

**H0+27:** umbilical cord broke
half of the placenta expelled
injection IM of 10 IU of oxytocine (Syntocinon® 5 IU/1 ml)
unsuccessful in expelling the remainder of the placenta

**H0+27.5:** 10 IU more of oxytocine (Syntocinon® 5 IU/1 ml), IM
no amelioration

**H0+28:** anesthesia and intervention decided
Anesthesia by dart: 1 ml Ketamine IM  (Ketamine 1000®, 100mg/ml) 1 ml medetomidine IM (Domitor®, 1mg/ml)

Supportive treatment during the anesthesia
350 ml NaCl 0.9%, IV
10 ml hypertonic glucose (50%), IV
400 mg of amoxycillin (Clamoxyl® 1g/5ml), IV
75 mg of diclofenac (Voltarene® 75 mg/3ml), IM
Figure 2 and 3 – placental delivery. Bonobo placed in dorsal recumbency. Surgeon could only get 7cm of his hand into the tract to assist.

Figure 4. Force out the uterus' contents with belly massage…

Figure 5… and placenta turned in clockwise and anticlockwise direction…
Medication after the delivery:
0.2 mg IM of methylergometrine (methergin® 0.2 mg/ml)
5 mg IM of atipamezole hydrochloride (Antisedan® 5 mg/ml)

Probable scenario?
1: Strict placental retention with no bleeding: the placenta remained fixed to the uterus by cotyledons despite the contractions

2: Over the next 11-27 hours postpartum, the placenta was partially expelled while the cervix also began to close

3: placenta trapped in the uterus by the closed cervix. This would cause the placenta to develop an hourglass shape.

The following days:
D0+2: fever (38.1°C), diarrhea, muco-hemorrhagic-non smelly lochia

Additional medication:
40 mg/kg/per os b.i.d of metronidazole (flagyl® 125 mg/5ml)

The dam’s health status improved rapidly over the following days. The infant remained healthy.
Medication summary:

- Amoxycillin: 9 days from the first day postpartum
- Diclofenac: 2 days from the first day postpartum
- Metronidazole: 7 days from the second day postpartum
- Probiotics, rice: 5 days from the second day postpartum
- Methylergometrine: once 1 day postpartum
- Iron: started 6 months into the pregnancy and administrated for 4 more days postpartum.

*Figure 8. Recovered mother, with baby.*