

# Advanced Obstetrics

Gina Pedersen, DVM

Goat Education Day 2011

## Overview:

- ✘ Labor
  - + Signs and behaviors
  - + Stages
- ✘ Dystocia
  - + What is it and why does it happen
- ✘ Obstetrics
  - + Basic principles
  - + Repositioning limbs
  - + Abnormal presentations and how to fix them
  - + When to call for help
  - + Terminal c-section
- ✘ Aftercare

## Labor

- ✘ Initiated by the FETUS
  - + Giving dexamethasone and/or lutealysse AFTER labor has already begun will NOT have an effect
- ✘ Stages of labor
  - + Stage I – Dilation of the cervix and positioning of the fetus
  - + Stage II – Delivery of the fetus
  - + Stage III – Delivery of the placenta

## Stage I

- ✘ Dilation of the cervix
  - + Caused by pressure of the fetus' feet and nose against the inside of the cervix
- ✘ Uterine contractions
  - + See one every 5-10 minutes
- ✘ Can last several hours

#### Stage II

- ✘ Frequent, forceful abdominal contractions
- ✘ Delivery of the fetus
- ✘ Duration depends on how many kids in the litter, how many kids the doe has had before, etc.
  - + Usually all kids delivered within 1-2 hours

#### Stage III

- ✘ Delivery of the placenta
- ✘ Usually within an hour after the last fetus
- ✘ If it has been longer than 8 hours then it is a retained placenta
  - + May need treatment with antibiotics

#### Dystocia

- ✘ Difficulty delivering the kid(s)
- ✘ Causes:
  - + Large singleton kid
  - + Malpresentation of kid
  - + Dead kid or kids
  - + Cervix not dilated
  - + Deformed kid

#### When to assist

- + Stage I labor for more than an hour with no progress

- ✘ Check for cervical dilation with a vaginal speculum or with your finger (be gentle!)

- ✘ If dilated, what body parts can you feel

- + Stage II labor for more than 30 minutes with no progress

#### Obstetrics - basics

- ✘ Be clean!

- + Wash vulva with mild soap and water

- + Wear OB gloves – NO bare arms or hands!!!

- ✘ Be gentle!

- + Do not force anything – uterus is VERY fragile

- ✘ LUBE!!!

- + You can never have too much

- + “General Lube” – NOT soap!

- ✘ Good restraint!

- + Prevent injury to the doe and to yourself (i.e. broken arm)

#### Obstetrics - presentation of kid

- ✘ Normal

- + Nose first with front legs extended (“anterior”)

- + Hind legs extended (“posterior”)

- ✘ Make sure kid is delivered rapidly to prevent inhalation of fluid

- ✘ Normal?

- + One leg back – an experienced doe can easily deliver this way

#### Solving the puzzle

- ✘ Front leg vs. hind leg?

- + Front leg – bottom of hoof faces down

- + Hind leg – bottom of hoof faces up

- + UNLESS kid is upside-down (i.e. laying on its back)
- ✘ Front leg – both joints bend the same way
- ✘ Hind leg – Joints bend in different directions

#### Obstetrics – abnormal presentation

- ✘ Breech
  - + Posterior presentation with both hind legs facing forward (towards head)
  - + Push kid back in, pull hind legs up one at a time
- ✘ Neck flexed
  - + Can indicate that the kid is too big to fit through the birth canal
  - + Push legs back in
  - + Cup nose in hand to protect uterus from sharp teeth
  - + Pull head around
  - + Useful to have head snare
- ✘ Transverse
  - + All four legs coming out at same time
  - + OR all four legs facing doe's head – see kid's back
  - + Try to push front legs and head back in, deliver hind end first
  - + C-section often required

#### Obstetrics – multiple kids

- ✘ Two (or more) kids coming out at the same time
  - + Must push one back in to make room for the other
  - + Often difficult to distinguish which limbs belong to which kid
  - + Common cause is dead fetus entangling live kid(s)

#### Ring womb

- ✘ Failure of cervix to dilate

- + Kid in abnormal position – no pressure on cervix to initiate dilation (Ferguson Reflex)
- + Hypocalcemia
  - × Give CMPK subcutaneously
- + Selenium deficiency
  - × Make sure does are receiving selenium supplementation (i.e. BoSe or MuSe – salt licks do not contain enough selenium to be effective)
- × Can attempt to manually dilate cervix
  - + Gently insert 2-3 fingers into cervix, slowly and gently put pressure on inside of ring
  - + Make sure to go SLOW – very easy to tear cervix if too aggressive
  - + Repeat several times over 30 minutes
  - + If no progress c-section will be needed

#### Deformed or dead kids

- × May be physically unable to go through birth canal
  - + Schistosomus reflexus, fused joints, edematous fetus, etc.
- × May need to break kid apart to get out
- × Use lots of lube – gallons
- × Put finger deep in kid's mouth – check for suckle reflex to see if alive

#### Fetal anomalies

- × Fetal mummy
  - + Kid dies during gestation
  - + Sterile degeneration of fetal tissues
  - + Tear apart easily
- × Cyclops
  - + Does that graze on False Hellbore (*Veratrum Californicum*) in early gestation
  - + Can cause fused joints if eaten later in gestation

## When to call the vet

- ✘ 20 minute rule:
  - + If you have been trying unsuccessfully to reposition a kid for 20 minutes, you need veterinary assistance
    - ✘ C-section likely
- ✘ Cervix not dilating
  - + C-section required
- ✘ Deformed kid
  - + C-section or fetotomy required
- ✘ Goats are not as tough as cows or sheep – go into septic shock after prolonged labor

## Terminal c-section

- ✘ If no vet is available and you can't get the kid out, a terminal c-section is the last resort
  - + Sacrifice doe
    - ✘ Gunshot through brainstem
  - + Must get kid out within 2 minutes
  - + Uterus will usually be sitting on right side due to rumen sitting on left
  - + Be careful not to cut kids while cutting through uterine wall

## Aftercare

- ✘ Drink of warm water for the doe
  - + And a cold beer for you!
- ✘ Check uterus for tears and/or additional fetuses
- ✘ Retained placenta common with dystocia
  - + If has not passed placenta within 8 hours, considered retained
  - + 1ml Oxytocin subcutaneously (prescription only)
  - + NEVER pull on the placenta – can tear uterus
  - + May need antibiotics if not passed after 12-24 hours

- ✘ Oxytetracycline (LA-200) 5ml/100 pounds subcutaneously every 48 hours for 3 treatments

#### References

- ✘ Smith, Bradford P. Large Animal Internal Medicine. 4<sup>th</sup> edition
- ✘ Rowe, Joan D. "Principles of Obstetrics," VMD 446 Lecture #21
- ✘ Severidt, Julie, Heather Hirst, David Van Metre, and Frank Garry. "Calving and Calf Care on Dairy Farms," <http://www.cvmb.colostate.edu/ilm/proinfo/calving/notes/home.htm>
- ✘ Kansas State University School of Veterinary Medicine. "Gestational Accidents," <http://www.vet.k-state.edu/media/images/therio/gestacc/index.htm>