Dystocia - a practical approach

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Dystocia

- Parturition is usually unassisted in the large majority of cases
- Dystocia encountered in 5 to 10% of cases
- Varying degrees of severity
- Emergency situation for both mare and foal

Client Education & Training

- Recognition of foaling
- Indications for immediate attention
- Premature placental separation (red bag)
  - 1.6% of equine births have a degree of premature placental separation
  - No progression after 30 minutes
  - Preparation for arrival of veterinary assistance

Initial Evaluation

- Visual assessment of mare attitude and physical condition
- History taking from attendees
- Heart rate/pulse, mucus membrane colour
- Physical restraint and handler
- Sedation likely
  - Xylazine (0.5-1.0 mg/kg)
  - Romifidine (50-100 mcg/kg)
- Cleansing of the perineum
- Vaginal examination and assessment

Fetal Viability

- Spontaneous movement
- Limb withdrawal
- Swallowing reflex
- Ocular reflex
- Heart beat
- Anal reflex
- Femoral pulse

McCue and Ferris, 2012
Field management

- Approach governed by facilities and level of experience of owner and/or stud staff
- Assisted vaginal delivery (AVD)
- Controlled vaginal delivery (CVD) under general anaesthesia
- Caesarean Section
- Salvage Caesarean
- Fetotomy

Decision Making Process

- AVD?
  - Duration of dystocia
  - Fetal position
  - Fetal viability
- CVD or FETOTOMY?
  - Fetal viability
  - Likelihood of correcting under anaesthesia
  - Economics
- Ability to resolve the dystocia?
  - Fetal viability
  - Back up plan
  - Assistance
  - Referral

Assisted Vaginal Delivery

- Can this foal be mutated to allow delivery?
- Mare clinical condition
- Mare restraint; standing or recumbent
- Assessment of fetal viability
- Assessment of fetal position
- Mutation
- Delivery

Assisted Vaginal Delivery

- Lubrication, lubrication, lubrication
- Fetal alignment followed by traction (two people)
- Traction applied along with mare contractions
- Limbs first and alternately
- Head rope to spread traction
- Traction applied in a downward direction and if the mare is recumbent this can be applied towards or between the mare’s hind legs
- Rotation of the fetus

Foaling Equipment

- Waterproofs
- Clean obstetrical chains (or ropes) with handles
  - 2 x leg @ 1.1m
  - 1 x head @ 1.4-2.0m
- Obstetrical lubricant and buckets
- Clean stomach tube and pump
- Tail bandage

Epidural Anaesthesia

- First inter-coccygeal space following aseptic preparation
- Loss of tail tone indicates a successful block within 5-10 min
- Lignocaine (2mg/kg)
- 5.0ml of a 20mg/ml (2%) solution for a 500kg mare
- > 6 ml of 2% lignocaine to a 500kg mare can be associated with ataxia and recumbency
- Clenbuterol 0.8 mcg/kg by slow i/v injection
Kühn’s Crutch
• Repulsion and retrieval device
• Elbow repulsion to allow room to retrieve the lower part of the fore limb
• Used as a stirrup with a rope to retrieve a wayward foot

GYN-stick (Kühn’s Crutch)

Blanchard Hook
• Retrieval device on nylon cane with handle (semi-flexible)
• Blunt and pointed hooks
• Medial canthus of the eye
• Mandible (symphysis #)
• Avoid hard palate
• Large pair of forceps

EXIT
• Ex-utero Intra-partum Treatment
• Beginning resuscitation
• Allowing greater time for correction
• Endo-tracheal tube and Ambubag with or without capnograph with or without oxygen insufflation
• Fetal support during transit to referral centre

Palmer and Wilkins, 2005

Controlled Vaginal Delivery
Will anaesthesia (mare relaxation) and hindlimb elevation allow mutation and foal extraction?
• Field anaesthesia
• Allows repulsion and re-positioning
• Recovery from anaesthesia
• Dystocia management protocol

Field Anaesthesia
• Total Intravenous Anaesthesia
  Xylazine 1.0mg/kg
  Ketamine 2.5 mg/Kg
  Diazepam 0.05 mg/Kg
• ‘Triple Drip’
  250mg Xylazine, 500-1000mg Ketamine, 500ml 5% guaifenesin
  1.5ml/Kg/hour infusion
Carpal Flexion

✓ Mare restraint
✓ Lubrication
✓ Uterine relaxants
✓ Epidural anaesthesia

Is the foal dead or alive?
- AVD
- CVD
- Caesarean section
- Fetotomy

Khün’s Crutch (GYN-stick)

Carpal Contracture

- Contracted foal syndrome
- Bilateral carpal contracture
- Very difficult to manipulate
- Need a wide arc to correct (utilise space medial of limb in front of foal’s chest
- Second limb more difficult as less space available
- Potential for head deviation as ‘knees up’ position

Head & Neck Deviation

Is the foal is alive or dead?
Can you reach: Blanchard or hook?
CVD?
Caesarean section
Fetotomy

Bilateral Shoulder flexion

- Assuming the foal has perished fetotomy is a logical choice
- One cut may resolve especially if used in combination with GA & hindlimb elevation however may become more complicated with 2-3 cuts
- Alternative: Caesarean section

Bilateral Hock Flexion

Is the foal alive or dead?

Alive
- AVD unlikely
- CVD very difficult
- Caesarean section

Dead
- Fetotomy
- Caesarean section
Caesarean Section

- Transverse presentation
- Posterior presentation with bilateral stifle flexion (breech)
- Anterior ventro-vertical with bilateral hip flexion (dog-sitter)
- If in any doubt about the viability of the foal

Transverse positions

Breech

Dog-Sitter

Post Dystocia Management

- Pain Relief
- Management of individual complications
- Retained fatal membranes
- Large volume lavage
- Low dose oxytocin therapy
- Calcium supplementation
- ATTENTION TO FOAL AND MANAGEMENT AS HIGH RISK

Key to Success

- Case selection
- Quick decision making
- Early intervention
- Atraumatic technique
- Appropriate equipment
- Appropriate skills
- Intensive proactive post dystocia management
- Prognosis for future breeding can be good to excellent
Danke für Ihre aufmerksamkeit