

## **Dystocia**

Means difficult birth; the corresponding Greek word for normal birth is eutocia. It is impossible to provide a single figure for the incidence of dystocia in cattle because there are a large number of variables such as breed, age of dam, body weight of dam, sex of calf, singleton or twins, breed of sire, body condition of dam.

Common causes of Dystocia

### **A. MATERNAL-**

#### **I Failure of Expulsive forces or**

#### **II Insufficient dilation of birth canal**

I Failure of Expulsive forces.

##### **1. Uterine expulsive forces**

###### **a) Uterine Inertia**

i) Primary uterine inertia

-Myometrial defect- overstretching, degeneration uterine infection, small litter size, heredity.

-Biochemical deficiencies – estrogen, oxytocin, PGF<sub>2</sub>, relaxin, calcium, glucose.

- Environmental disturbance.

- Nervousness

- Premature birth

- Lack of exercise

ii) Secondary Uterine inertia- Subsequent to exhaustion

###### **b) Uterine rupture**

Spontaneous –due to a weak point, Accidental- rolling during torsion

###### **c) Uterine torsion**

##### **2. Abdominal Expulsive forces**

- Inability to strain because of age, pain, debility,

- Diaphragmatic hernia, abdominal hernia.

- Manual assistance would be required in all such cases

#### **II Insufficient dilation of the Birth Canal**

##### **1. Inadequate pelvis**

-Due to pelvic fracture, exocytosis, immaturity, breed, neoplasia

Commonly require cesarean section.

## **2. Insufficient dilation**

- a) Uterus- torsion, herniation, adhesions
- b) Cervix -dilation failure, congenital defects, fibrosis.
- c) Vagina- Congenital defects, fibrosis, prolapse, perivaginal abscess, strictures, excess fat
- d) Vulva- congenital defects, fibrosis, immaturity.

### **Cervical dilation failure**

- Cervical dilation problems are less common in buffalo compared to cattle due to more capacious pelvis, larger area of ileum and free and easily separable 5th sacral vertebra.
- Cervical dilation problems are common in sheep and goats and known as Ring Womb.

### **Vaginal causes of insufficient dilation**

- **Congenital strictures** in the vagina or fibrous tissue bands often hinder conception in bitches but seldom impede whelping.
- **Abscess in vagina** can rarely cause dystocia but can be easily drained prepartum if located.
- **Vaginal tumors or growths if small seldom** cause difficulty in parturition yet large growths may sometimes rarely problem in delivery. Often many growths protrude outwardly post partum and can be removed surgically by general or cryo-surgery.
- **In the presence of vaginal hematomas**/large immature abscess
- Vaginal Cystocoele (Prolapse of bladder through urethra or vaginal rupture). The bladder must be replaced first after pushing the legs of fetus back in the birth canal.
- **Vulvar stenosis**: Fetus can be delivered by traction with or without episiotomy cut about one third down the lateral wall of the vulva through the skin mucosa junction.



**Vaginal cystocele**

## **B- FETAL**

**1. Fetal death-** Lack of initiation of birth process, lack of movements.

### **2. Fetal oversize**

a) Absolute Large sized fetus Monsters, disproportionate mating

b) Relative- A fetus larger relative to the pelvis Fetopelvic disproportion common in heifers that calve at less than 2 years of age

**3. Fetal defects-** Ascites, anasarca, hydrocephalus

### **4. Fetal Maldisposition**

**Malpresentation** -Transverse, lateral, vertical

**Malposition** Dorsopublic, Dorso-ilial , oblique

### **Malposture**

-Anterior presentation – Limb flexion at carpal, elbow or shoulder

-Head deviation – lateral, upward and downward

(vertex, footnape and breast- head)

-Posterior presentation: Hock flexion and hip flexion (Breech)

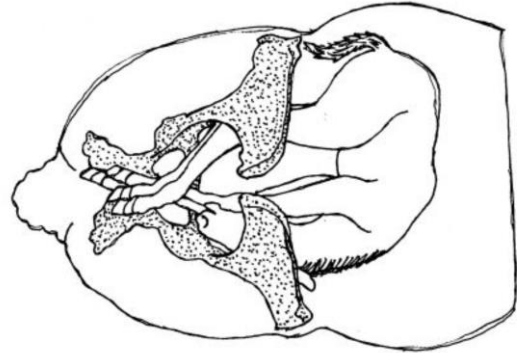
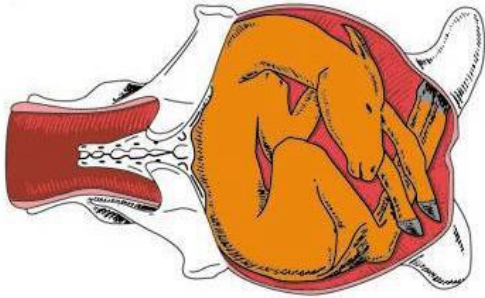
**Presentation** signifies the relation between the longitudinal axis of the fetus and the maternal birth canal.

**Position** indicates the surface of the maternal birth canal to which the fetal vertebral column is applied. It can be dorsal, ventral and left and right lateral.

**Posture** refers to the disposition of the movable appendages of the fetus and involves flexion or extension of the cervical or limb joints.

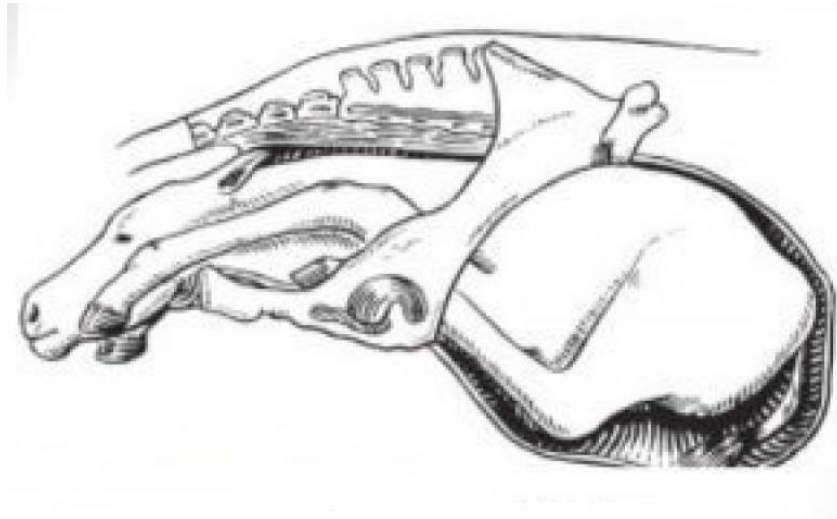
## Abnormal Presentations

### Transverse Presentation



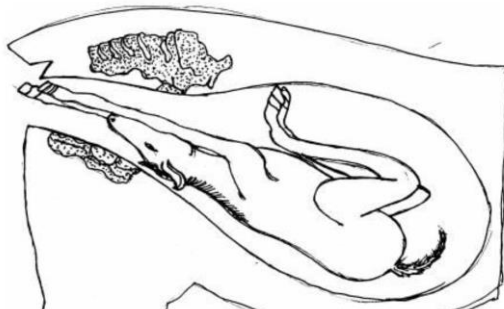
Dorso-Transverse

Ventro-Transverse



Dog sitting (ventro-vertical posture)

## Abnormal Positions



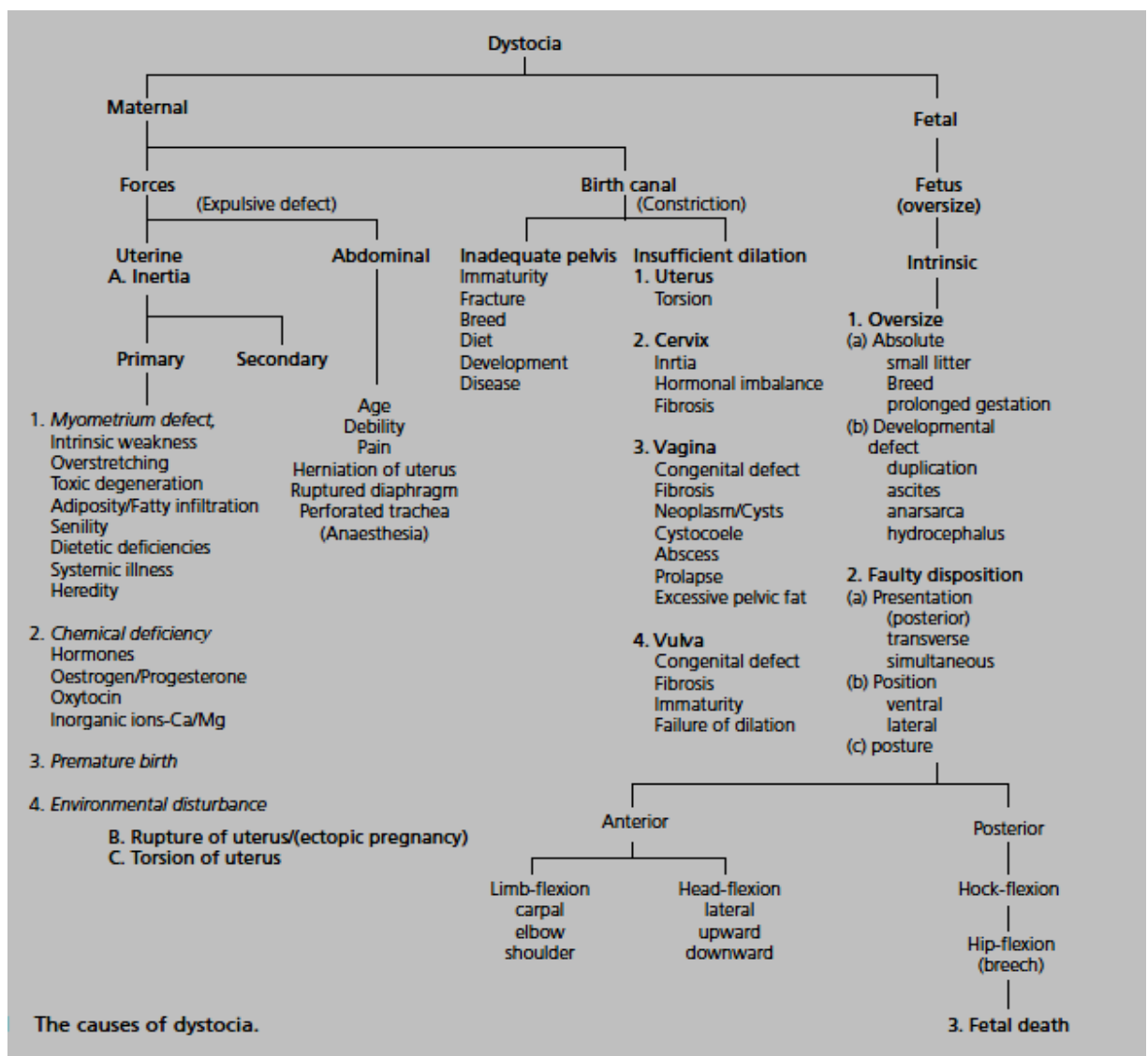
Dorso pubic and Dorso-ilial positions

## CAUSES OF DYSTOCIA IN OTHER SPECIES

-The incidence of dystocia in the **mare** is rare, most frequent cause of dystocia in mares is lateral head deviation followed by posterior presentation problems and rarely transverse presentation..

-The common causes of dystocia in **sheep and goat** are fetal maldispositions and birth canal obstruction. Ring womb or the cervical dilation failure is one of the most common cause of birth canal obstruction ( and thus dystocia) in sheep and goat

-The most common cause of dystocia in the **bitch, cat and sow** is uterine inertia, followed by fetopelvic disproportion.





## Common causes of calving difficulty



Normal presentation



Posterior presentation



Transverse presentation (legs first)



Transverse presentation (back first)



Head back



Head to the side



Head down



Shoulder flexion



Carpal flexion



Upside down



Hock flexion



Hip flexion