



## **DYSTOCIA (Difficult Birth)**

### **Normal Birthing**

Labor has three stages: Stage 1 begins with onset of uterine contractions and ends when the cervix is fully dilated. It averages from 6-12 hours. Dogs may appear restless, nervous, lose their appetite, and may shiver, pant, vomit, or pace. Most will seek a place to “nest” near the end of this stage. Cats tend to vocalize initially, then purr as delivery approaches. Stage 2 begins with full dilation of the cervix and entry of the first offspring into the cervical canal; it ends with delivery of the last offspring.

The dog shows obvious abdominal contractions in her attempt to deliver the puppies. The time between initiation of stage 2 and delivery of the first offspring varies (usually less than 4 hours). The time between delivery of subsequent young also varies (usually 20-60 minutes), but can be as long as 2-3 hours in the dog. Stage 3 begins after delivery of the offspring and ends with passage of all placentas. If the dog has multiple puppies, she may alternate between stage 2 and stage 3.

### **What Causes Difficult Birthing?**

Dystocia centers around three factors: a small or deformed birth canal, infant oversize, or uterine weakness (insufficient uterine force to propel the young through the birth canal).

**Infant causes:** Oversized (a one-pup litter or abnormally shaped infant) or poor position in birth canal.

**Maternal causes:** Abnormal pelvic canal from previous pelvic fracture; Congenitally small pelvis (Welsh corgi and brachycephalic breeds like English bulldog); Pelvic immaturity; Abnormalities of the vagina; Insufficient cervical dilation; Lack of adequate lubrication; Uterine torsion; Poor uterine contractions caused by muscle defect, biochemical imbalance, psychogenic disturbance, or exhaustion;

Ineffective abdominal press due to pain, exhaustion, diaphragmatic hernia, or age.

**Risk factors:** Age; Brachycephalic and toy breeds; Persian and Himalayan cats; Obesity; Abrupt change in environment; Previous history of dystocia.

### **What are the Signs of Dystocia?**

It is common in brachycephalic, miniature, and small dog breeds, and occasionally seen in large dog breeds

with an extremely large litter. It is frequently seen in the Persian and Himalayan cats. The prevalence increases with age.

**Signs include:** The mother has had 30 minutes of persistent, strong, abdominal contractions without expulsion of an offspring. Or more than 4 hours from the onset of stage 2 to delivery of the first young. Or more than 2 hours between delivery of offspring. Or failure to deliver a puppy or kitten 24 hours after rectal temperature falls below 99° F. Or the mother cries and displays signs of pain and constantly licks the vulvar area when delivering. Or prolonged gestation, i.e., over 70 days from day of first mating or over 59 days from the first day of end of estrus (dogs).

### **How is it Diagnosed?**

The history and physical examination make dystocia fairly obvious. The cause is not always so obvious. Some blood tests are helpful and may show low blood sugar, dehydration, and low blood calcium level depending on the length of dystocia.

X-rays of the abdomen and pelvic area are paramount to determine the presence or absence of pregnancy, pelvic structure, number, size, and malposition of offspring. Ultrasound is recommended to monitor fetal viability.

### **How is Dystocia Treated?**

Dystocia is treated as an inpatient until delivery of all young and stabilization of the mother is accomplished. Manual treatment is used to deliver an infant lodged in vaginal vault. Failure to deliver the infant within 25-30 minutes is an indication for cesarean section.

Intravenous fluid therapy, glucose, and calcium may be indicated. The uterine stimulant oxytocin is often used too. A Cesarean section is indicated with uterine inertia unresponsive to oxytocin, pelvic or vaginal obstruction, uncorrectable infant malposition, infant oversize, infant stress, or dead infants in the uterus. Elective Cesarean section is indicated in breeds highly prone to dystocia and animals with a history of dystocia.

*Thank you for this opportunity to serve you!*