**Dystocia**

Dystocia means difficult birth; the corresponding Greek word for normal birth is eutocia. The diagnosis of dystocia is frequently based on a high degree of subjectivity, since there are situations that one person will consider to be normal, but another will consider difficult. For this reason, some of the data on the incidence, causes or efficacy of treatment of dystocia are not very reliable, although there are many circumstances when distinguishing between the two will present no difficulty. The diagnosis and treatment of dystocia constitute a large and important part of the science of obstetrics, and require a good understanding of normal parturition, sensitivity to the welfare of both dam and offspring, and good and sensitive practical competences. In addition, veterinarians must always try to prevent dystocia where possible, by the application of sensible sire and dam selection, and good husbandry and health care.

**CAUSES OF DYSTOCIA**

Obstetricians have usually regarded dystocia as being either maternal or fetal in origin.

Each case of dystocia is a clinical problem that may be solved if a correct procedure is followed. A correct diagnosis is the basis of sound obstetric practice.

**Uterine inertia**

**Primary uterine inertia**

**Etiology**

The most common cause is hypocalcemia,with the cow showing signs of milk fever as calving is about to begin. Other causes include distension of uterus caused by hydropse uteri, general debility wit reduced tone and responsiveness in the myometrium. The presence of twins may cause such stretching of the myometrium that effective contracions cannot occur. Primary uterine inertia can also been seen in overweight beef cows that fail to go into labor. Such animals may be possibly on the verge of pregnancy toxemia.

**Clinical signs**

* Preperation for birth begin but do not continue into second stage labor.
* The fetus is normally in the correct presentation, position, and posture.
* The cervix is dilated or easily dilatable with manual pressure but there is no evidence of uterine contractions.
* The fetal membranes are still intact.
* In case of hydropse uteri there will be probably have been a history during pregnancy of increasing of abdominal size and debility.
* The uterine wall is found to lack muscle tone when palpated.

**Treatment**

If calcemia suuspected, intravenous treatment with 400 ml of either 20% or 40% calcium borogluconate solution should be given. A further 400 ml of drug is given by subcutanously injection.

In many cases the parturition will resume but delivery should assisted with moderate traction. As it should be in cases of uterine inertia resulting from other causes. Failure to deliver the fetus promptly may result in its death if placental separation occurs. Following removal of the fetus. An injection of 20 IU of oxytocin should be given by intramuscular injection to encourage uterine involution and placental expulsion.

**Secondary uterine inertia**

**Etiology** the consequence of another cause of dystocia.for example fetal maldisposition, with the resultant tiring of the myometrium.

**Clinical signs**

The uterine walls felt to be flabby and lacking in tone often after the fetus has been delivered.

**Treatment**

The primary cause of dystocia is treated and the fetus delivered. Uterine involution is encouraged after delivery by injection of oxytocin as in primary uterine inertia.

**Premature birth**

May be accompanied by failure of the normal uterine contractions and, if unobserved or early in gestation, by fetal death.

**Etiology** may be caused by any factorthat compromise fetal life and /or placental function.

**Clinical signs**

There may be unexpected vaginal discharge during pregnancy. An abnormal and sometimes foul smelling placenta may be visible. The fetus is often small and hairless, is palpable in the anterior vagina or uterus. If the fetus has been delivered and not observed. Only placental remnants may be left in the uterus.

**Treatment**

The fetus and the birth canal may both be very dry.the fetus is delivered by gentle attraction applied by hand to its head and limbs after thoroughly lubricating all the stratures involved.

**Uterine rupture**

**Etiology**

Tearing of uterus may occuras a result of traumatic injury to the cow, for examplefollowing collisionwith a vehicle. It may also occasionally occurspontaneouslythrough un suspected weak point in the uterine wall. The fate of the fetus in such cases depends on whether it passes into the peritoneal cavity and the degree of compromise sustained by the fetal membranes. Small tears may be symptomless and the fetus remains in the uterus, where it develops normally and is born without difficulty.larger tears may allow passage of the fetus into peritoneal cavity. Maternal death may follow rupture with severe uterine hemorrhage. In cases where the placenta is compressed and its circulation is compromised, fetal death can occur.if the placenta is unaffected by uterine rupture the fetus may survive untile the end of gestation but its extrauterine location means that normal vaginal delivery is possible.

**Clinical signs**

These depend on the degree of damage and the fate of the fetus. External signs of hemorrhage following road accident may suggest uterine damage. Signs of imminent birth and even cervical relaxation may occur but birth does not follow.Transient colic may occasionally be seen. Vaginal examination may reveal small empty uterusand the placenta disappearing through a defect in the uterine wall. The site of rupture – often on the dorsal carvature of the uterus or ventrally just beyond the pelvic brim. Ocassionally, loops of maternal small intestine may be palpable. The uterus feels smaller than normal on rectal examination and occasionally the in traperitoneal fetus may be palpable.

**Treatment**

The fetus should be delivered from the peritoneal cavity by laprotomy. If the presence of a uterine rupture is anticipated an elective laprotomy/ cesarean section just prior to the end of gestation will increase the chance of delivering a living fetus. The extent of any peritonitis should be noted, if this is so severe or if it involves the ovaies o oviducts , future breeding may have poor prognosis and the cow should be salvagedat an appropriate time.

**Torsion of the uterus in cows as cause of dystocia at term**

Uterine torsion has been found to be a cause of up to 7% of all bovine dystocia cases. The pregnant uterus rotates about its long axis with the point of torsion being the anterior vagina just caudal to the cervix. Less commonly, the point of torsion is cranial to the cervix. In the majority of cases torsion is in an anticlockwise direction as the obstetrician stands behind the cow. The degree of torsion varies from 45◦to 360◦. A few cases of uterine torsion during pregnancy hav been reported.

 **Etiology**

Bovine uterus has been said unstable for a number of reasons. These include:

1. The caudal parts of uterus are attached to the lateral walls of the pelvis by broad ligaments.
2. As pregnancy advances the cranial parts of uterus lie down on the abdominal floor with no stabilizing ligamentous attachement.
3. The single pregnancy chiefly occupies one horn of uterus, making the organ havier and more bulky on one than the other.
4. The instability may be increased when cow lowerin her front end first when lying down.

Torsion occurs when a cow- or fetus- makes a sudden movementcausing unstable uterus to rotate about its long axis. The bovine amnion is fused in places to the surrounding allantois, which is attached through the chorion to the uterine wall, if the fetus rotates about its long axis in late stage of gestation the uterus may rotate with it. Reduced exersize may increase the incidence of torsion.

**Clinical signs**

The first sign may be noted is that first stage of labor is prolonged. And the cow shows mild discomfort. Torsion of birth canal causes one or both lips of vulva to be pulled in. vaginal examination reveals an abnormal disposition of birth canal. The hand cannot immediately to be passed anteriorly towards the cervix.

The vagina narrows conically and the folds of vaginal mucosa may be felt going into an oblique spiral. The direction of vaginal folds may indicate the direction of torsion either clockwise or anticlockwise.

If the torsion is less than 180degreethe obstericians hand may be passed through the constriction to palpate the fetus. In such cases care must be taken to avoid mistakenly thinking a dead fetus is alive. When palpated through the twisted anterior vagina the fetusmay appear to float away from the obstetricians hand and then spontaneously return as if alive. The cervix normally dilated.

If the torsion is greater than 180 degree the birth canal is totally occluded, with the vagina coming to a conical end with no cervix recognizable being palpable. Rectal palpation will confirm the displacement, with the broad ligaments being abnormally palpable as taught bands in the caudal abdomen.

**prognosis**

this is quite good in the cases that recognized and dealt with promptly. In cases that have not been treated for some time afterthey occurred severe compromise of blood supply to the uterus may occur. In such cases the fetus may die the uterus wall may become necrotic and friable**.** uterine rupture may occur spontaneously or at attempted treatment by rolling, and peritonintis, toxemia, and death may occur. The possibility of unseen uterine damageshould always be remembered in cases in which treatment has been delayed or which do not well after treatment.

**Treatment** a number of methods are available **:**

**Rotation of fetus and uterus per vagina back into correct position**

It is possible if the hand of obstetrician can pass into uterus and touch the fetus and if fetal fluids remains within the uterus. The fetus is grasped by either its elbow, sternum or thigh and is rocked from side to sidebefore being pushed right over in the opposite direction to the torsion. If the maneuver has been successful the torsion will have disappeared and the vagina regains its normal morphology.

**Rolling the cow** the principle of this method is to roll the cow around its uterus while that organ remains still. three assistants are required. The cow is cast on the side to which the torsion is directed. Thus in an anticlockwise torsionshe is cast on her left side, the two forelegs and the two hindlegs are tied together and the head is restrained with a halter or head collar. The cow is rolled sharply onto her other (right) side. The patency of the vagina is checked and if the torsion persists the cow is gently rolled backonto her oter (left) side and the process repeated. The cow may have repeated two or three times before the torsion is corrected. The efficiency of rolling can be improved by putting external pressure on the abdomen in an attempt to hold the uterus stillwhile the cows body is rolled. The calf should always be delivered by the obstetrician as soon as the torsion has been corrected. The cervix may close within 30 minutes of resolution of the torsion preventing the fetus from delivery by the vaginal route and necessitating cesarean section.

**Surgical correction** this may be necessary if the rotation of the fetus is impossible and rolling of the cow is unseccessful. A left flank laprotomy is performed on the standing cow under local anesthesia. The uterus is located and the direction of torsion is confirmed by palpating and examining the cervical region. The uterine wall or a fetal limb is grasped firmly and an attempt made to rotate the uterus back into the correct position. Once the uterus is correctly in place the calf may be delivered by vaginum or by cesarean section. If the uterus cannot be rotated cesarean section must be performed with the uterus in its abnormal position. Once the fetus has been delivered the uterus can be normally readily rotated into its correct position after repair of the uterine wall. Antibiotic cover and the administration of a nonsteroidal anti-inflammatory drug such as flunixin may aid recovery and provide analgesia.