

## PUERPERIUM & ITS DISORDERS

### النفاس وأمراضه

#### **Puerperium period:**

It is the period beginning immediately after the birth of a newborn and extending for about six weeks. The period is also known as a postnatal period, postpartum or puerperal period. Biologically, it is the time after birth, in which the dam's body, including hormones levels and uterus size, returns to pre-pregnancy conditions.

**Lochia:** It is post-partum discharge, containing blood, mucus, and placental debrides.

#### **Changes occur during the Puerperium**

1. Return of normal ovarian activity (3-4 weeks)
2. Shrinkage of the uterus (25-35 d)
3. Regeneration of the endometrium (50-60 d)
4. Elimination of bacterial contamination (4-5 weeks).

Points (2) and (3) called: Uterine involution.

#### **Most important postpartum complications:**

1. Perineal rupture
2. Retained placenta
3. Uterine prolapse
4. Uterine and vaginal rupture
5. Paraplegia.
6. Uterine atony.
7. Straining
8. Puerperal infections.
9. Metritis, vaginitis and vulvitis

## 10. Puerperal tetani.

**Perineal rupture** تمزق العجان

The perineum is a pyramidal fibromuscular mass in the middle line of the perineum at the junction between the urogenital triangle and the anal triangle. in females, it is defined between the vulva and anus.

**Causes of the perineal rupture:**

1. Spontaneous, during the second stage of labor (Vigorous straining)
2. Extreme traction of an oversized fetus.
3. Predisposition includes a hypoplastic vulva.

**Symptoms:**

1. In cow, the tearing begins at the dorsal commissure, as the head of the fetus approaches the vulvar cleft, and extended dorsal and cranial.
2. In mare, the initial injury in perforation of the vaginal roof by the fetal forelimb, the limb then perforates the rectum to tear the anal sphincter.
3. Such lesions destroy the sphincter effect of the vulva, lead to aspiration of air into the vagina.

4. A laceration may extend and destroy the anal sphincter, thus creating a cloaca through which feces fall into the terminal vagina.

**Complications:** bacterial infection leads to infertility.

**Surgical correction:**

1. The animal is confined in stanchion in the standing position
2. Cleaning the Perineal region
3. Light epidural anesthesia
4. The tail is tied to one side
5. Tampon placed in the rectum
6. Exposure of the operative area by placing tension suture in the perineal skin
7. The free edge of the shelf is incised to a depth of 3 cm and extended laterally and caudally on each side.

### **Retained Placenta** احتباس المشيمة

**Definition:**

In cattle, the fetal membranes are expelled within 12h after parturition. Retention of the placenta for a longer period must be considered pathological.

**Etiology:**

It is basically due to the failure of the villi of the fetal cotyledon to detach themselves from the maternal crypts of the caruncles.

**Basic Causes**

1. Immature placentomes.
2. In non-infectious abortion and premature birth.
3. Following cesarean section and uterine torsion.
4. Placentitis and cotyledons lead to necrotic areas between chorionic villi and the cryptal wall.

**Direct causes**

1. Infection of the uterus during gestation (*Brucella abortus*, tuberculosis, *Vibrio fetus*, mold infection).
2. Infection of the uterus immediately after parturition: Streptococcus, E. coli, Staphylococcus, *Cory. pyogenes*.
3. Abortion and premature birth
4. Uterine inertia
5. Endocrine disorder

**Management causes:**

1. Deficiency of vitamins and minerals, Carotene, vitamin A, iodine, selenium, and vitamin E, imbalance in calcium and phosphorus.

**Incidence:**

- The average incidence for all calving 11%
- The incidence after normal calving 8%
- The incidence after dystocia 25-50%.

**Clinical feature:**

1. A portion of fetal membranes hangs from the vulva 12h or more after calving. Occasionally the FM maybe not hang but entirely within the vulva and uterus.
2. Illness
3. Moderate to severe symptoms of metritis
4. In severely affected animals RFM may be associated with mastitis, severe straining, vaginitis, parturient paresis, and a fetid odor is usually produced.
5. Delay uterine involution.

**Treatment:****Treatment without manual removal**

1. Oxytocin: 20-50 I.U., within 24h after birth
2. Estrogenic substances: 5-20 mg (stilbesterol).
3. Ergot preparation: 1-3 mg of (Ergonovine Calcium gluconate)
4. Broad acting antibiotic: 2-4 gm. Terramycin

**Manual treatment**

1. One day after parturition under the aseptic condition without injury to maternal caruncles. The trial should not exceed 10 minutes/day.
2. The veterinarian twists the post-cervical part into a bulky rope, which he holds in one hand at the vulva. On the other hand, he gently follows the rope through the cervix to the Cotyledonary attachment of the uterus. He squeezes gently the base of the maternal caruncles to open the crypts on its convexity, the thumb is lightly passed over the periphery of the caruncles to complete the separation of the released villi.
3. Succeeding cotyledons are approached in a circumferential order.
4. Continues steady traction and rotational force are applied with the other hand.
5. Regardless of the outcome, 2-4 gm (Terramycin) is deposited in the uterus.
6. This treatment should be repeated on days 3, 6, and 9 postpartum, when necessary, in addition to a manual trial of loosening the afterbirth.
7. In all cases, as much as possible of the uterine exudate should be removed by siphon.

**No treatment:** Uncomplicated cases required no treatment.

**Prevention (Prophylaxis):**

1. Balanced nutrition for a pregnant animal
2. Large animal boxes
3. Daily outlet
4. Avoidance of transport
5. Injection of 2 million IU of vitamin A 4-8w antepartum
6. Injection of 50-100 IU oxytocin immediately after parturition.