Care of new born

OBJECTIVE: To reduce the calf mortality at the time of birth.

- **How can initiate respiration in new born?**
- **How can you deal with the umbilical cord of new born?**
- **What about the thermoregulation of new born?**
- **How can you diagnose and treated the acidosis in new born?**

During intrauterine life, the fetus is nursed entirely by the dam. At birth, the maternal connections are severed due to rupture of umbilical cord resulting in cessation of nutrient and oxygen supply to fetus. Various measures can be taken to reduce new-born mortality.

1. To initiate respiration:

• Remove mucus from the nostril and mouth with the help of fingers.
• Draw out the tongue to and fro.
• Blow air into the nostrils.
• Vigorously rub the chest with a gunny bag or towel. This tactile stimulus may stimulate respiration.
• Hold the hind legs of newborn and swing backward and forward resulting in discharge of copious quantity of fluid or mucus from the larger bronchii, throat and nose.
• Pinch the fetal nose.
• Tickling the nasal mucosa with straw.
• If respiration is not started but cardiac function is present, then artificial respiration should be attempted.

Once spontaneous breathing is established, the calf may be given further care. Severe dyspnoea may occur in immature calves and these animals should be given an intravenous injection of 2-4 mg. of dexamethasone which encourages surfactant production.

2. Prevention of umbilical infection:

• lf the umbilical cord is not ruptured, it should be ligated at about 2 inches from the umbilicus and severed with scissors, and the stump should be cleaned with antiseptic. The navel cord should not be tied but allowed to drain if bleeding is not so profused.
• To this stump, tincture iodine should be applied. The ligation should be removed within 12 - 24 hours.

3. Thermo-regulation:

Thermo-regulation in the newborn can be improved in a number of ways.
• Ensure that there is adequate milk intake.

• Arrange the birth to occur in a thermally neutral environment as far as possible.
• New born puppy should be placed in an environmental temperature of 30-330C for the first 24 hours, which can be reduced to 26-30oC by 3 days.
• The new born's coat should be adequately and quickly dried.
• Suitable jacket should be provided in winter.
Note: The new born has little subcutaneous fat and hence insulation is poor.

4. Management of acidosis :

The fetus at the time of a normal birth will usually have a mild metabolic and respiratory acidosis. Dystocia is likely to cause a severe respiratory and metabolic acidosis.
• Severe acidosis has an adverse effect on both respiratory and cardiac function, and in the case of the calf will reduce vigour, the suck reflex resulting in reduced colostrum intake and impaired passive immunity.

Signs of acidosis

- Abdominal breathing.
- Low heart rate.
- Prolonged jugular filling time.
- Poor body muscle tone.
- Absence of a pedal reflex.
  The presence of good muscle tone and a pedal reflex are indicators of a well-oxygenated calf with fairly normal acid–base status.
- Time to attain sternal recumbency (T-SR) is greater than 15 minutes.
  Note: *A T-SR of* > 15 *minutes is an ominous sign of severe acidosis.*
- The presence of scleral and conjunctival haemorrhages is indicative of hypoxia and acidosis and carries a poor prognosis; similar lesions are present extensively at necropsy in calves that die at birth.

Treatment:
If there is no sign of spontaneous improvement, give 250-500 ml.
of 4.2% sodium bicarbonate by slow intravenous injection

5. Colostrum feeding :

• The young one should get first colostrum within first two hours after birth.
• In case colostrum is not available, 200-500 ml. of dam's blood or serum should be injected subcutaneously to young one of large animal and in smaller animals, 20-100 ml. to their young one (s) animal.