

Foetotomy or embryotomy

- This operation should only be used when the foetus is known to be dead, when the dam is in poor condition and unfit for caesarean section also for delivery of monsters with abnormal size & form.
- Foetotomy is defined as that operation for cutting the foetus to reduce its size by either division or removal of certain parts.
- This operation is performed within the uterus of the dam. It is used most commonly in cattle, occasionally in mare, rarely in sheep and goats and never in small animals (sow, bitch & cat).
- Foetotomy may be:

1- Complete or total foetotomy:

Complete foetotomy occurs when whole foetus divided into smaller pieces (infrequently).

2- Partial Foetotomy:

By removal of a small part of the foetus such as a limb. Partial foetotomy is the most commonly performed.

Advantages of foetotomy:

1. Reduce the size of the dead foetus.
2. It avoids the caesarean section.
3. It prevents the possible trauma or injury of the birth canal of the dam during using of excessive traction.
4. It requires a few number of assistance.

Disadvantages of foetotomy:

1. It may be dangerous by causing injuries or lacerations to the uterus or the birth canal by the used instruments as the saw of the foetotome or by the sharp edges of the sawed bones of the dead foetus.
2. It may take long time and make exhaustion for both the dam and the operator.
3. It may cause certain dangers to the veterinarian as wounds from the used instruments and infection of the operator's arm if the dead foetus undergoes emphysema.

Techniques of foetotomy

1. Subcutaneous foetotomy:

Removal and destruction of sufficient skeletal and muscular structure of fetus after its dissection from skin.

- Disadvantages:
 - High physical effort.
 - Time consuming.
 - Only suitable for extended fore or hind limb.
- Procedures:
 - The extended limb is snared and remain under moderate traction before foetotomy.
 - Small incision performed at the level of fetlock joint.
 - Longitudinal incision made from level of small incision and attachment between scapula and fetal body.
 - Destruction and cutting muscular attachment.
 - Dissection skin from limb and disarticulation of joint followed by removal of limb.

2. Percutaneous foetotomy:

Complete foetotomy

A-In case of anterior presentation:

- **Removal of the head:**

If the head is within the vagina loop the foetotomy wire over the head of the foetus and back along to the base of the neck.

If the head is protrude from the vulva cut the head with knife or scalpel.

- **Decapitation:**

It means amputation of the protruded head to allow repelling of the foetus and correction of abnormal posture.

Decapitation is indicated when the foetus is swollen, oedematous or emphysematous.

- **Cephalotomy:**

It means partial cutting of the foetal head to reduce its size, the head is tract and the enlarged cranium is separated from the rest of the head by foetotomy.

It is indicated in case of hydrocephalus or cranial deformities.

- **Removal of the fore limb:**

A loop of the foetotomy wire is passed along the limb to be removed. The loop is guided over the top of the scapula

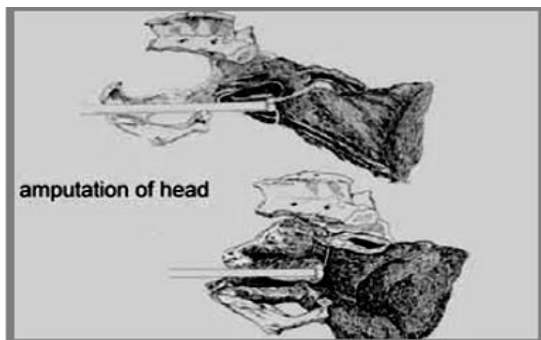
The other limb is cut and removed as the previous one.

- **Removal of the thorax:**

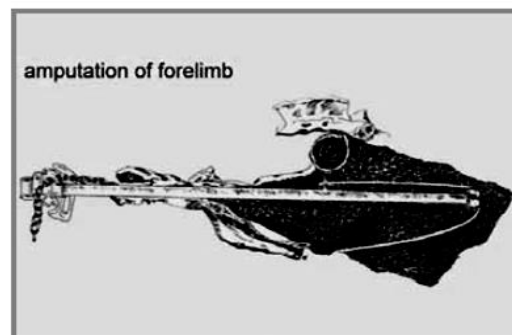
It occurs by sawing of the body across caudal to the ribs in lumbar region (caudal to the last rib). Foetal abdominal viscera are removed manually. If the foetus is large the removal of the foetal thorax occurs in two parts. The first transverse incision is made just caudal to the attachment of the fore limbs and the second caudal to the last rib.

- **Splitting of the pelvis:**

Splitting is mostly to divide the foetal pelvic girdle longitudinally, so that the caudal parts of the calf can be removed as two smaller parts.



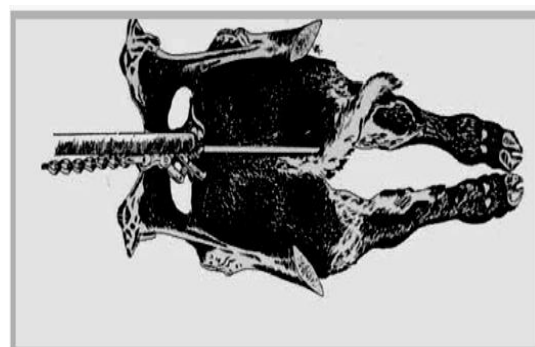
Amputation of the head.



Amputation of the forelimb.



Removal of the thorax.

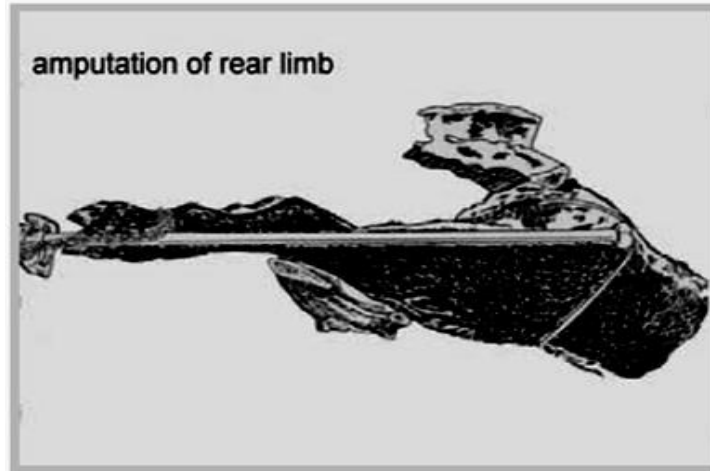


Splitting of the pelvis.

B- In case of posterior presentation:

- **Removal of the hind limbs:**

The loop of foetotomy wire is passed up the limb so that the end of the loop lies anterior and medial to the wing of the foetal ileum. A small incision in the skin with scalpel helps the wire saw to become embedded in its place during sawing.



Removal of the hind limb.

Partial foetotomy

The technique may occur to facilitate delivery of a dead foetus then followed by manual correction of the maldisposition.

- **Deviation of the head and neck:**

These occur when the head and neck are deviated laterally to the right or left side or when retained alongside beneath or above the body of the foetus.

The wire saw of the foetotome passes around the neck where the head of the foetotome is placed between the shoulder joint and the neck of the foetus.

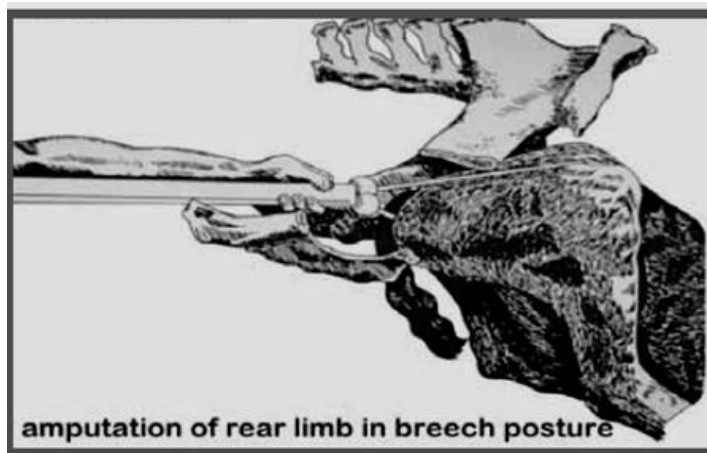
- **In Breech presentation (bilateral hip flexion):**

The foetotomy wire is passed around the medial aspect of the retained thigh and the abdominal wall using the wire introducer.

- **In posterior presentation (hock flexion):**

The foetotomy wire is passed around the limb using the wire introducer.

The limb is sawn through just below the hock. The prominence of the hock joint is preserved to fix a key schottler and then traction of the limb.



Amputation of hind limb In breech presentation.

Types of cuts:

1. Transverse cut:

- Direction of sawing is **perpendicular** in relation to tubular foetotom.
- As: removal of extended head, thorax.

2. Longitudinal cut:

- Direction of sawing is **parallel** in relation to tubular foetotom.
- As: removal of head in case of lateral deviation, and bisection of pelvis.

3. Oblique cut:

- Direction of sawing is **oblique** in relation to tubular foetotom.
- As: removal of fore or hind limb, and division of anterior part in case of posterior presentation.

Precautions:

- Examination of female soft birth way for presence any lacerations or injuries.
- Uterine lavage by worm saline.
- Intrauterine administration of antibiotics.
- I.M injection of oxytocine to enhance expulsion of placenta and uterine involution.