Dystocia

Dystocia is defined as the difficulty in parturition. Before the dystocia management is dealt the following terms have to be understood and defined.

**Presentation** it is the relation between the long axis of the foetus and the maternal birth canal. Presentation can be anterior longitudinal or posterior longitudinal according to the extremity of the foetus adjacent to the maternal pelvis.

**Position** indicates the surface of the maternal birth canal to which the foetal vertebral column is applied; accordingly it can be dorsal position, ventral position or right or left lateral position.

**Posture** refers to the disposition of the movable appendages of the foetus and involves flexion or extension of the foetal neck or limbs.

![Normal presentation, position and posture of a calf](image)

*Figure 1*

The manoeuvres that are practised on the foetus in correction of dystocia are described below:

**Retropulsion** means pushing the foetus into the uterus from the maternal birth canal. This action is essential to find out defects in presentation, position and posture. It can be done by applying pressure with the hand or using the crutch repeller, on the presenting part of the foetal body.

**Extension** Means the extension of the flexed joints when there are postural defects. The flexed joints can be extended with hand or using snare (rope).

**Traction** Is the application of force to the presenting parts of the foetal body, to help the dam in expulsion of foetus. This can be done using snare or hooks.

**Rotation** is the technique of alteration of the position of a foetus by moving it around its longitudinal axis so as to bring into the normal position.
Direction of pull

The figure No 2 shows the cow’s pelvis and various directions of traction that has to be applied when assisting a cow in delivery. After the correction of the postural defects (discussed below) the traction has to be in the direction of line A, this is to get the shoulder regions of calf out of the maternal pelvis. The direction in the line B shows the traction to be applied when the chest and abdomen are engaged in the maternal pelvis. Traction in the line C has to be applied when hindquarter gets engaged in the maternal pelvis. When applying traction in line C the operator has to be careful so as to prevent sudden fall of the calf out of the maternal pelvis and landing on the ground with force.

Causes of dystocia
The causes of dystocia can be mainly grouped into three headings Viz:

b. Congenital abnormalities
c. Foetal oversize
d. Postural defects

**Congenital abnormalities:** in this case the foetal development in the uterus does not take place properly and as the result is foetal monstrosity like hydrocephalus, double head, schistosoma refluxus, accessory limbs etc. In any of this conditions foetus may not be carried to the full term and there may abortion.

**Foetal oversize:** in this case the size of the foetus is larger than the maternal pelvic cavity so that the foetus cannot be expelled out. The foetal over size may be noticed in the following conditions.

**Relative foetal oversize:** in this condition the size of the foetus is normal but the maternal pelvis is small making the foetus appear larger. This may be noticed when a heifer is served before two years of age or three years in the farmers condition.

**Absolute foetal oversize:** in this case the maternal pelvis is normal but the foetus is abnormally large making it difficult for the dam to expel the foetus. This might be noticed if a jersey cow is inseminated with semen of Holstein Friesian bull or female donkey is inseminated with the semen of stallion.
Pathological enlargement: this condition is normally noticed in case of prolonged dystocia where foetus dies within the uterus and emphysema (swelling) takes place due to the heat and the bacterial invasion the death foetus.

Postural defects in anterior longitudinal presentation
All postural defects can be corrected if the farmer informs the animal health personnel on time and the attending technician performs the correction with little care.

a. Carpal flexion: in this case one or both the limbs may be affected, in unilateral carpal flexion one of the limbs will be engaged at the pelvic inlet while the other may be presented at the pelvic cavity along with the head. The figure No. 3 shows the unilateral carpal flexion, while the head and one of the forelimbs are presented at the pelvic cavity.

**Correction:** Retropulsion of the foetal head or shoulder should be done before any correction is made. Push the retained carpal upward and grasp the digits in the cupped hand and pull it into the pelvic cavity alongside the other limb. With little traction the foetus can be delivered. Look the figures 4a and 4b for the correction.

b. Shoulder flexion: This condition can be unilateral or bilateral. In bilateral shoulder flexion only foetal head may be presented at the vulva or in the vagina. In unilateral shoulder flexion head and one of the limbs may be visible at the vulva while other limb is retained in the abdominal
cavity. The figure No 5 shows the unilateral shoulder flexion in calf.

Figure 5

 Correction: Apply a snare at the mandible and repulse the foetal head into the pelvic cavity. Locate the flexed limb and make it into carpal flexion by holding below the shoulder joint and pulling it upward. After this, correction is similar to that of carpal flexion. Figure No 6a and 6b shows the method to bring the shoulder flexion into carpal flexion position.

Figure 6a     Figure 6b

c. Lateral deviation of head:
The head may be displaced to either sides and this is one of the most common types of dystocia in cow. When this condition occurs, only the foetal limbs will be presented at the vulva and per vaginal palpation may reveal absence of the head. Figure No 7 shows this condition.

Figure 7

 Correction: apply snares at the presented limbs and apply retropulsion at the base of the neck. Locate the head and apply a snare at the mandible. Ask the assistant to apply traction at the snare applied to the mandible until the head comes to the normal posture. Apply synchronized traction with the abdominal contraction of the dam until the foetus is delivered. Figures No 8a and 8b show the correction of the deviated head in a calf.
c. **Downward displacement of head**: this is uncommon type of dystocia in cattle and if it occurs the nose of the foetus will be retained at the pelvic brim and the limbs will be presented at the vulva. In long standing case the head may be pushed deep into the abdominal cavity. Figure below shows the downward displaced head.

**Correction**: Apply snare at the limbs push the foetal head back into the abdominal cavity. Locate the muzzle of the foetus, grasp by mandible and pull it into the pelvic cavity. Apply traction to deliver the foetus.