



**EXPULSIVE DEFICIENCY**

- ❖ **Expulsive Forces**= Primary Force (Myometrial Contrac.) + Abd. Straining with closed glottis (Induced by Abdominal Muscles)
- ❖ **Primary Uterine Inertia:**
  - Original def. in contractile potential of myometrium resulting in either removing or reducing myometrial component of the expulsive force and delaying or preventing completion of the second stage of parturition
  - Common in polytocous species
  - Cattle- due to Hypocalcaemia/Hypomagnesemia a cause of incomplete cervical dilation
  - Factors- Already Discussed
  - Diagnosis: History and Examin. of birth canal + Fetus

**EXPULSIVE DEFICIENCY**

- **Diagnosis:** Dam is at or near term, Mammary changes and ligamentous relaxation in pelvis, while psychological manifestations coupled with restlessness due to abdominal discomfort indicates that first stage has passed (Abd. Discomfort is seen in second stage of parturition), May be few feeble abdominal contractions but no progress; or in the polytocous species, after an adequate beginning of 2<sup>nd</sup> stage labour, all further activity has ceased- Linde-Forsberg and Eneroth (1998) (Primary partial uterine inertia) as second stage fails to commence at all in "Primary complete inertia".
- Difficult to distinguish from secondary inertia, which is always a sequel to some other factor such as an obstructive dystocia
- Examination of the birth canal in the larger animals reveals a patent cervix, beyond which a fetus normally can be palpated contained within its membranes.
- Female dog and cat - No fetus may be felt

**EXPULSIVE DEFICIENCY**❖ **Primary Uterine Inertia:**

- Treatment: Should be attempted at earliest once other cause of dystocia is removed
- Large Monotocous animals- T/t is simple, remove fetus manually after rupturing membranes, and if the fetus is in normal disposition , it should be delivered immediately by traction.
- Cattle and Buffalo- Calcium borogluconate (CBG) should be given even if there is no clinical evidence of hypocalcaemia.
- Sow- Hypocalcaemia is associated with uterine inertia but it is difficult to administer large volumes of CBG. Hence treatment = Manual removal of piglets that can be palpated in vagina or uterus + Use of repeated doses of oxytocin

**EXPULSIVE DEFICIENCY**❖ **Primary Uterine Inertia:**

- Treatment: Oxytocin is a potent ecbolic, and doses of 10 IU i.m. or 5 IU i.v. should be used initially
- Large doses of oxytocin cause myometrial spasm, myometrium becomes refractory to repeated dosing so it is important to provide an opportunity for an incremental dose regimen

❖ **Primary Uterine Inertia:**

- For the Female dog and cat, where PUI is main cause of dystocia:
  - ✓ Vigorous exercise of dam → stimulate uterine contractions
  - ✓ Digital stimulation of vagina (feathering) → stimulate endogenous oxytocin release, and may induce uterine contractions
  - ✓ Slowly inject 10% CBG i.v. (0.5–1.5 ml/kg body weight) & leave Dam for 30 minutes; if straining commences then repeat CBG If not, administer oxytocin at @ 0.5–5 IU i.v. or 1–10 IU i.m. in female dog depending on size, and 0.5 IU i.v. or i.m. in queen cat.
  - ✓ Perform a vaginal exam. and remove any fetuses by gentle traction.
  - ✓ Oxytocin treatment can be repeated, if small no. of litter remain.
  - ✓ If calcium or oxytocin therapy is not successful, or if the litter is very large or small then caesarean operation is indicated.

❖ **Primary Uterine Inertia:**

- Nervous voluntary inhibition of labour: FEMALE DOGS
  - labour did not begin or, having begun, did not proceed.
  - Factor : Provision of a special parturition environment to female dogs
  - When the dams are provided their accustomed quarters they proceeded to whelp
  - Occasionally, female dogs appear to be frightened by labour pains and voluntarily inhibit straining; **tranquillising drugs** are helpful
- Hysteria: SOWS
  - Excitable and aggressive and are apparently unable to continue normal parturition (Sedative administration follows resumption of normal farrowing)
  - Treatment- Include some older farrowing sows in farrowing pen, exert a calming effect

❖ Secondary Uterine Inertia/Inertia of Exhaustion:

- Essentially a result, rather than a cause, of dystocia due to some other cause, usually of an obstructive nature
- Polytocous species, prolonged unsuccessful efforts to deliver one fetus may result in dystocia from inertia
- Frequently followed by ROP and retarded involution of uterus
- Preventable condition
- Prevention: Early recognition of cessation of normal labour & application of the appropriate assistance
- In female dog & queen cat, normal parturition will commence but after expulsion of a few pups or kittens will then cease, even though there is no obstruction

❖ Secondary Uterine Inertia/Inertia of Exhaustion:

- Linde-Forsberg and Eneroth (1998) refer to this as 'primary partial inertia', and identify it as a major cause of dystocia responsible for about 23% of the cases in both species
- If there has been an obstructive dystocia, which has been corrected and normal parturition has failed to resume, then this is clearly secondary uterine inertia

❖ Secondary Uterine Inertia/Inertia of Exhaustion:

- Polytocous species: management will depend on duration of labour, no. of fetuses still unborn and their condition.
  - Early case: delivery of fetus causing dystocia may be followed after a few hours by a return of uterine contractions and parturition may proceed without further hindrance (common in sow & rare in cat and female dog)
  - Longer duration: And there are still several young to be born, it is best to proceed with the delivery of the remainder.
    - Sow- hand inserted into the uterus per vaginum.
    - Female dog- Attempt forceps delivery (protracted use of forceps when three or four fetuses remain unborn has very little to commend it).

❖ Secondary Uterine Inertia/Inertia of Exhaustion:

- Calcium borogluconate and oxytocin therapy, is recommended (although the cause of the inertia apparently being due to 'myometrial exhaustion')
- Since the fetuses will soon die, or may already be dead, an early decision on performing a caesarean operation or hysterectomy is important