

# Compassionate Intervention: Addressing Stillbirth in a Persian Cat

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Normal gestation in cats ranges from 61 to 72 days from first day of mating with an average of 65 days (Niyas *et al.*, 2023). It has been noted that after completion of gestation period normally cats take up to 16 h on an average to deliver all her kittens, some cats may even take 4 to 42 h (Root *et al.*, 1995). Dystocia is the inability to expel the foetus through the birth canal without assistance. Incidence of dystocia in cats is quite low as compared to dogs (Gunn-Moore and Thrusfield, 1995), but among cats, Persian cats are more prone to dystocia (Ekstrand and Forsberg, 1994). They show clinical signs like extreme restlessness and vocalization during queening.

## CASE HISTORY AND OBSERVATIONS

A 3-year old Persian cat weighing 4.5 kg was presented at VCC, DUVASU, Mathura on 31<sup>st</sup> May 2024 with the history of dystocia. According to owner the cat had completed full gestation period of 65 days. Queen displayed signs of restlessness, inappetence and rapid breathing. Owner reported the delivery of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> dead kitten with the time interval of 15-20 min each 2 days before. After 48 h of the delivery of 3<sup>rd</sup> dead kitten the case was presented to the hospital with the complaint of no signs of further straining and failure to deliver her next kittens. The queen was anorectic and depressed having temperature 102.3°F, respiration rate 38 per min and heart rate 175 beats per min.

Per vaginal examination revealed presence of foetus in the birth canal, while abdominal palpation revealed bone like structure in the pelvic cavity. Radiographic examination revealed presence of 2 foetuses in the gravid uterus, while ultrasonic examination revealed no signs of viability (no heart beats) in both the foetuses. The case was diagnosed as dystocia due to primary partial uterine inertia.

## TREATMENT AND DISCUSSION

Queen was administered with slow intravenous infusion of inj. Oxytocin 0.5 IU/kg body weight, inj. Ceftriaxone @ 25 mg/kg body weight (Monocef) and inj. Calcium gluconate 20 mg/kg body weight (Calcium Sandoz) in 100 mL of 25% Dextrose normal saline solution over 3 h. Owner was advised to wait but no progress in delivery of kitten was observed even after 24 h of induction therapy. Next day on

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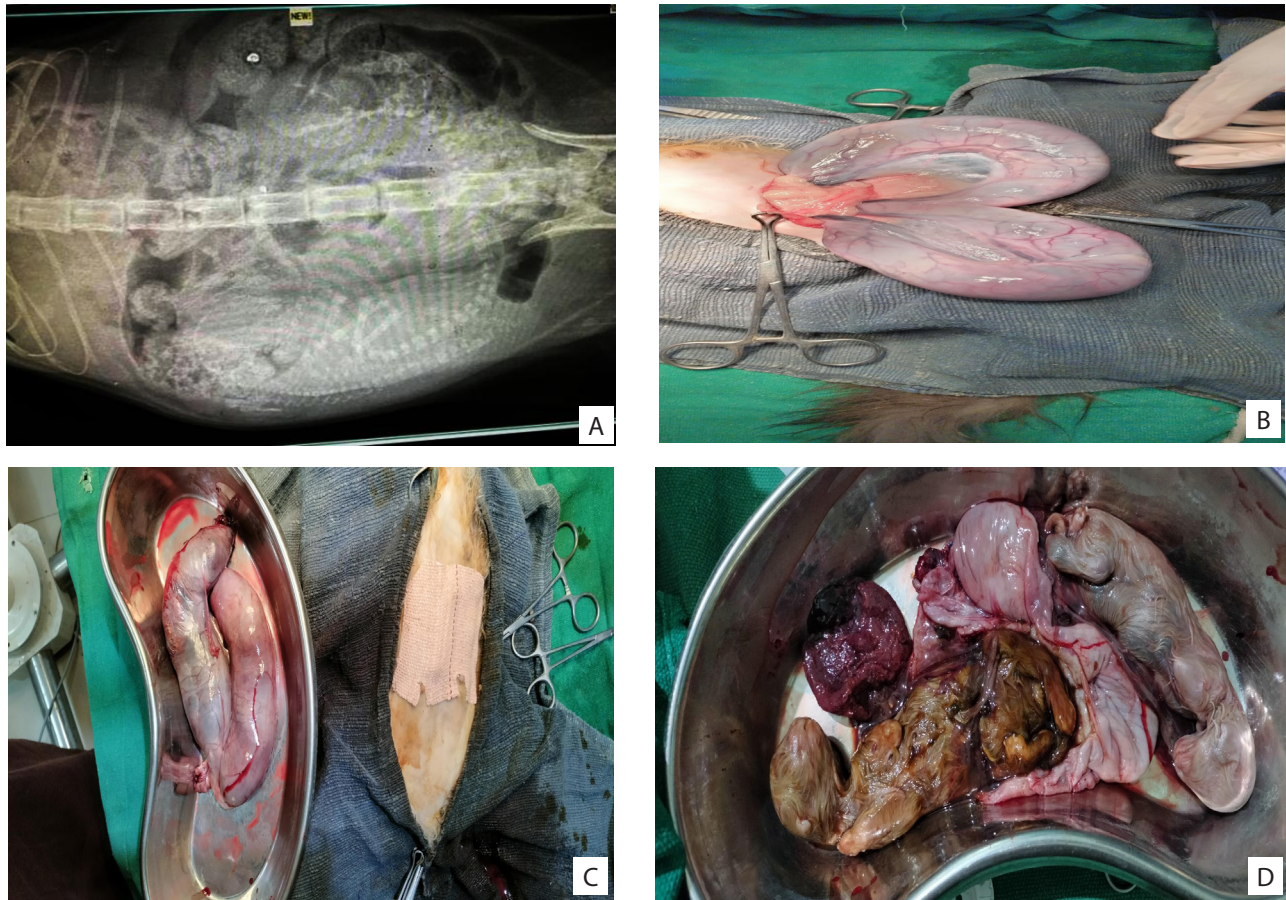
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per vaginal examination birth canal was found to be fully dilated and foetus was palpable in the birth canal. Birth canal was lubricated with 15 mL of liquid paraffin, but still normal delivery was not possible. So, emergency ovariohysterectomy was performed.

After 12 h of off feed and water withdrawal of 6 h, the queen was premedicated with inj. Xylazine @ 1 mg/kg body weight and induced with Inj. Ketamine hydrochloride @ 10 mg/kg body weight IM at an interval of 15 min and anaesthesia was achieved in 17 min. Animal was positioned in dorsal recumbency. Endotracheal intubation was done using no.3 endotracheal tube. Surgical site was prepared aseptically using chlorhexidine and povidone iodine (7%), 1 cm caudal to the umbilicus ventral midline incision of 4 cm was made. Intact gravid uterus with 2 dead foetuses were removed after ligation and transfixation proximal to cervix using absorbable suture material Polyglactin 910 no.1 (Vicryl). Reposition of cervix into abdominal cavity was done after crushing to prevent haemorrhage (Kefyalew *et al.*, 2021). Peritoneum, muscles and subcutaneous tissue were closed using Polyglactin 910 by simple continuous suture pattern. Skin was sutured using Polyamide (nylus) by horizontal mattress suture pattern.

In post-operative care, a broad spectrum antibiotic inj. Ceftriaxone (monocef), Vitamin B1, B6 and B12 (Tribivet),



**Fig. 1:** Operative procedure to remove the dead kittens from gravid uterine horn of a Persian cat. A- Diagnosis by radiography, B- Exteriorization of gravid uterine horn, C- Removal of gravid uterine horn, D- Dead kittens from uterine horn

inj. Meloxicam (melonex) were given intravenously with Dextrose normal saline, Ringer lactate, Metronidazole for 5 days followed by antiseptic dressing on every alternate day with liquid povidone iodine. Skin sutures were removed after proper healing on 12<sup>th</sup> day post-operative. The queen made an uneventful recovery.

Primary partial uterine inertia occurs when 2<sup>nd</sup> stage of labour gets initiated, and it causes difficulty in normal birth of all foetuses. Low plasma concentration of either oxytocin or calcium hinders the normal uterine contractions leading to primary partial uterine inertia. In present case, the birth canal was fully dilated and foetus was palpable per vaginally by tip of middle finger. Oxytocin administration in such cases is indicated to initiate and increase the frequency of rhythmic uterine contractions (Arthur *et al.*, 2001). Calcium also increases the strength of myometrial contraction and enhances the effect of oxytocin (Niyas *et al.*, 2023). So, it is necessary to give energy, oxytocin and calcium in cases of primary uterine inertia. However, some clinicians recommend estrogen-oxytocin combination protocol when cervix is partially or completely closed (Purohit *et al.*, 2011). Similar to our treatment, Rajesh and Rajesh (2002) used 5-10 IU of oxytocin by intravenous route successfully in a queen with

primary uterine inertia. However, some reported other routes like 2.5-10 IU intramuscular and 2-4 IU by subcutaneous route (Talukder *et al.*, 2021). In this case both injections (oxytocin and calcium gluconate) were given in saline intravenously over a period of 3 h, but queen didn't show any positive signs of parturition and vaginal discharge was still present. So, emergency ovariohysterectomy was performed to save the life of the queen. Adequate post-operative care used was also essential for better healing and recovery of dam to avoid any further complications.

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