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A rare case of single pup syndrome and its management in Labrador bitch: A case report

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Abstract
This case report describes an unusual case of a single puppy syndrome in a four year old Labrador bitch carrying single fetus in her first parity. This case was presented with the history of breeding approximately 65 days before and failure to deliver on the expected day of whelping. On examine per vaginal, very little greenish discharge was observed, however no fetal parts were felt in the vagjnal passage. Abdominal radiology and ultrasonography revealed the presence of fully developed single pup and presence of heart beat. This case was handled successfully with oxytocin and calcium therapy with fluids for prompt whelping process.

Keywords: Single, puppy, bitch, whelping, radiology, ultrasonography

Introduction
Dogs are polytocous species with an average litter size ranging from three to seven [1]. But in some instances, single fetus pregnancy is observed in bitches termed as "single pup syndrome" [2] and is considered as high-risk pregnancy. There are many factors influencing pregnancy that contribute to its classification as high risk. In addition to infectious factors (bacterial, viral and others), they include advanced age of the female and the male used for breeding, previous pregnancy loss, brachycephalic dogs and singleton litters [3-6]. In single pup syndrome, there may be inadequate cortisol release from the foetus to initiate $PGF_{2\alpha}$ release by the endometrium, which initiates CL regression and whelping [7]. In many instance, uterine inertia due to single pup syndrome can lead to dystocia in dog. Once the foetus exceeds its due date, it will demand more nutritional support than the actual capacity of placenta, resulting in foetal death in utero [7]. There are several etiological factors responsible for singleton puppy syndrome, which include breeding of older animals, death of embryos during early gestation and resorption of embryos before mineralization [8]. Recent literature shows that, the failure to initiate delivery of single puppy in canine pregnancy may be due to insufficiency of ACTH and cortisol [9, 10].

Case history and observations
A four year old Labrador she dog in her first parity was presented to Veterinary Clinical Complex (VCC), Post Graduate Institute of Veterinary Education and Research (PGIVER), Jamdoli, Jaipur with the history of breeding approximately 65 days before and failure to deliver on the expected day of whelping but nesting behavior was observed by owner. Previously, the bitch had undergone radiological and ultrasound examination to confirmed the fetal count and viability. Clinical examination revealed restleness and presence of greenish discharge hanging out from vulva without any pup or fetal membrane in the birth canal. During the course of examination engorged mammary glands were also observed with oozing of milk (Fig. 1). A lateral abdominal radiograph from right side was performed which confirmed the presence of single fully-grown fetus in the uterus (Fig. 2). After confirmation by radiograph and clinical examination the case was diagnosed as uterine inertia because of the single pup in the bitch.

Treatment and Discussion
The medical treatment for the uterine inertia was attempted with Inj. Oxytocin 2ml (10 IU) Slow Intravenous infusion, Inj. Dextrose (25%) 200ml IV and Inj. Calcium Sandoz 10%

(Novartis; 10 ml) slow IV followed by cervical feathering. After half an hour medication the bitch was examined per-vaginally for any fetal part but no any fetal part was felt, than advised to owner to wait for 24 hours for expulsion of fetus. However, after 24 hours animal failed to respond to the medication and again the animal owner called back and same treatment was repeated. After 2 hours, one fully matured fetus was delivered (fig. 3). Next 3 days the bitch was given antibiotic therapy Inj. Cefotaxime @20 mg/kg B.W. I/M. It can be concluded that uterine inertia due to single puppy syndrome can be diagnosed by radiography and ultrasonography and treated by fluid therapy along with oxytocin and calcium.

Fig 1: oozing of milk during the course of clinical examination and treatment.

Fig 2: Radiograph of the bitch confirmed presence of one fully developed fetus**.**

Fig 3: fully matured fetus delivered per-vaginally

Reference

1. Suresh A. Did you know about single puppy syndrome? Dogs and Pups magazine, 2018, 14.
2. Jackson PGG. Dystocia in the dog In: Hand book of Veterinary Obstetrics (ed), Saunders and Imprint of Elsevier Ltd. Edinbourgh. 2004; 2:141-166.
3. England GCW, Russo M. Ultrasonographic characteristics of early pregnancy failure in bitches. Theriogenology. 2006; 66:1694-1698.
4. Givens MD, Marley MSD. Infectious causes of embryonic and fetal mortality Theriogenology. 2008; 70:270-285.
5. Johnson CA. High-risk pregnancy and hypoluteoidism in the bitch. Theriogenology. 2008a; 70:1424-1430.
6. Johnson CA. Pregnancy management in the bitch. Theriogenology. 2008b; 70:1412-1417
7. Jayakumar C, Chinu PV, Amritha A. Challenges in management of canine high-risk pregnancies with single pup syndrome. 2017, 22-26.
8. Domoslawska A, Jurczak A, Janowski T. A one-foetus pregnancy monitored by ultrasonography and progesterone blood levels in a German Shepherd bitch: a case report. Veterinarni Medicina. 2011; 56:55-57.
9. Sridevi P. Canine reproduction. The theory and practice. 1st Edn. Active Ads & Printers Pvt. Ltd., Hyderabad. 2015
10. Ganesan A, Sankar P, Ninu AR, Mohanambal K, Enbavelan PA, Ram Prabhu R. A rare case of single pup syndrome and its management in a Labrador bitch. Indian Journal Animal Research. 2016; 2:395-397.