Case Report

A RARE CASE OF DYSTOCIA DUE TO FOETAL ANASARCA AND ITS MANAGEMENT IN A PERSIAN QUEEN CAT

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ABSTRACT

A 9-month-old female Persian cat was presented with a history of vaginal discharge and straining. On clinical examination, serosanguinous discharge was noticed in the vaginal region. Radiographic and ultrasonographic examination revealed the presence of one dead foetus, which was removed surgically. Gross examination, radiographic and CT imaging of the dead male anasarca foetus revealed an abnormal accumulation of fluid in the subcutaneous tissues.

Keywords: Anasarca foetus, Dystocia, Persian cat, Ovariohysterectomy

Received : 28.06.2024 Revised : 20.02.2025 Accepted : 15.03.2025

INTRODUCTION

Dystocia in cats is an uncommon condition that occurs in approximately 3.3 to 5.8 per cent of cases of queening (Pretzer, 2008) caused by maternal or foetal or a combination of both. The maternal origin may be related to primary or secondary uterine inertia (Talukder *et al.,* 2021; Li *et al.,* 2021), while foetal origin may be related to malpresentation or oversize or anomaly of foetus (Pretzer, 2008). Of the reported foetal anomalies, the incidence of anasarca condition is rare in dogs and cats compared to farm animals (Cunto *et al.,* 2015; Gokulakrishnan *et al.,* 2008). The present case reports a rare occurrence of dystocia due to foetal anasarca and its effective management in a Persian queen cat.

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CASE HISTORY AND OBSERVATION

A 9 month old Persian queen cat, weighing 3.8 kg was presented to the Small Animal Gynaecology and Obstetrics unit of Madras Veterinary College, Chennai with a history of bloody vaginal discharge and intermittent straining since 24 hrs and had delivered three dead and one live kitten 48hrs before presentation. On clinical examination, the rectal temperature was 100.1˚F and the conjunctival mucus

membrane was pink. On digital examination of the vagina, serosanguinous discharge with no foetal parts were palpable.

Diagnosis and Treatment

Abdominal lateral radiography revealed one foetal skeleton and on ultrasonographic examination no heartbeat could be noticed. Based on the above clinical signs and diagnostic procedure, the case was diagnosed as an obstructive type of dystocia. Hence, an emergency cesarean section was planned. A preoperative haematological and biochemical examination revealed leucocytosis and thrombocytopenia (WBC-26,500/cmm, Platelets 1,16,000 /cmm), while all the other parameters were within normal range. The animal was premedicated with injection xylazine @ 1 mg/kg b.wt and ketamine @ 10 mg/kg b.wt intramuscularly. Anesthesia was maintained with inj. ketamine @ 5 mg/kg b.wt and inj. diazepam @ 0.25mg/kg intravenously. Mid-ventral laparotomy was performed to expose the gravid uterus and one dead anasarca male foetus was retrieved upon incising the right gravid uterine horn, (Fig.1). Since it was a delayed case and to avoid further complications, an ovariohysterectomy was performed as per standard procedure. The muscle layer and subcutaneous tissue were closed by a continuous suture pattern using polyglycolic acid (PGA 2-0) while the skin cross mattress was followed using polyamide 2-0. Postoperatively, inj. Ringers Lactate 5 ml/kg b.wt, inj. doxycycline @ 10mg/kg b.wt and inj. pantaprazole @ 1mg/kg b.wt were given intravenously for 5 days and the animal recovered uneventfully.

Gross examination of the dead anasarca foetus revealed an abnormal accumulation of fluid throughout the body with a jelly-like consistency on palpation of head region. Histopathology of the foetal tissue showed congestion and dermal oedema. Radiographic and computed tomography (CT) scan images of anasarca foetus revealed subcutaneous oedema (Fig.2 and Fig.3).

RESULTS AND DISCUSSION

In veterinary medicine, the pathophysiology of foetal anasarca remains unclear compared to human medicine. Foetal anasarca is characterized by excess accumulation of subcutaneous fluids in the foetus due to cardiac malformations, infectious, trauma, genetic abnormalities, abnormal lymph node or kidney development, teratogens, immune mediated causes, placental and umbilical disorders (Roberts, 1971; Arthur *et al.,* 1996; Brough *et al.,* 2016). The functional disturbance associated with these factors can create an imbalance between plasma oncotic and hydrostatic pressure resulting in interstitial fluid accumulation (Bellini *et al.,* 2009; Cunto *et al.,* 2015). Although high incidences were recorded in certain brachycephalic breeds of dogs (Hopper *et al.,* 2004), no such breed predisposition has been reported in cats. Previously, Brough *et al.* (2016) reported a case of foetal anasarca in an Abyssinian kitten and suggested placentitis as a probable cause due to ascending route of infection. Even though we have not confirmed any infectious cause in the present case, the CT images and haematological findings were

suggestive of infection. The present case is considered to be an uncommon condition of foetal anasarca resulting in the obstructive type of dystocia in a queen cat, which was successfully removed by careful prepartum diagnosis and planned caesarean section.

The present communication reports managing the obstructive type of dystocia and a rare incidence of foetal anasarca in a Persian cat.

Fig. 1 Anasarca foetus delivered by cesarean section in a Persian cat

Fig. 2 Lateral View of Radiogrpahic image of anasarca foetusshowing subcuatneous edema in a Persian cat

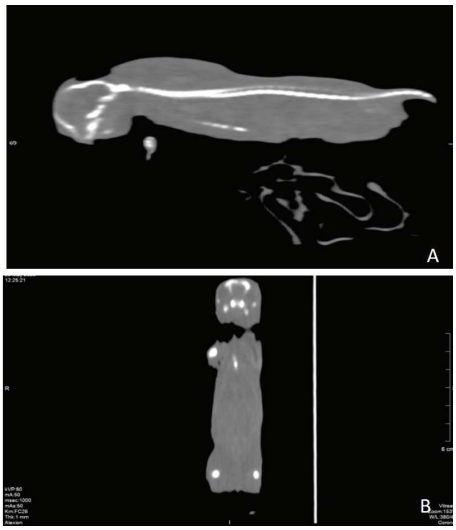

Fig. 3 Lateral (A) and Ventro- Dorsal (B)View of CT image of Anasarca foetus showing subcutaneous edema in a Persian cat

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