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Caesarean section in a bitch to relieve of dystocia due to deformity in the vertebral column (Foetal monster)

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Abstract

A one year old mixed bred bitch was presented to Teaching Veterinary Clinical Complex, College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram with the complaint of difficulty in parturition. Owner reported that the bitch had delivered two healthy pups followed by continuous straining for last 6 hours without expulsion of any more pups. Abdominal palpation revealed hard mass in the uterus. Presence of one fetus with abnormal posture was detected and confirmed through ultrasonography and radiology. Haematological and biochemical analysis revealed no abnormal values. A dead pup with prognathism and deformity in the vertebral column was recovered after caesarean section. Gross postmortem examination of the dead fetus revealed presence of cleft palate without any abnormality in visceral organs. The recovery of the bitch was uneventful with postoperative care.

Keywords: Caesarean section, dystocia, foetal monster, prognathism, cleft palate

Introduction

Dystocia is one of the reproductive disorder occurs in dogs. Dystocia is defined as difficult birth or the inability of the bitch to expel the fetus from the birth canal without assistance. It is of either fetal origin or maternal origin or both. Foetal dystocia occurs mainly due to oversize, mal-disposition and monsters [1]. The nongenetic anomalies or monsters may be of innumerable types and degrees. When the malformation involves only an organ or part of the body it is called as anomaly; if the deformity is extensive the animal is spoken of as a monster [2]. The overall incidence of dystocia in the bitch is probably below 5 percent [3]. Those causing dystocia in small animals include hydrocephalus, schistosomus reflexus, anasarca, conjoined twins and deformity in the vertebral column. In most cases the abnormal fetus is too large to enter the maternal pelvis. Per vaginal delivery is not possible and delivery by cesarean section is necessary. The exact nature of the deformity may only become apparent when the fetus is delivered. In this study we are going to discuss about the dystocia in a bitch due to fetal monstrosities.

Anamnesis: A one year old mixed bred bitch (fig 1) was presented to Teaching Veterinary Clinical Complex, College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram with the complaint of difficulty in parturition. Owner reported that the bitch had delivered two healthy pups followed by continuous straining for last 6 hours without expulsion of any more pups.



Fig 1: year old

Clinical observations: The bitch was presented with symptoms of dullness and depression with reduced feed and water intake. There was increase in heart rate (120 beats/min). Body temperature was 100.4 °F. On abdominal palpation hard mass was palpated and on per vaginal examination parts of foetal body at the birth passage was found. Then on ultrasonography (fig. 2) and radiography examination (fig. 3) ‘acute angulation of the vertebral column’ was revealed. 5 ml blood was collected from the cephalic vein out of which 2ml of blood was transferred to EDTA vial and 3 ml to Clot activator vial for haematological and biochemical analysis respectively. Serum was separated after centrifugation of clot activator vial at 3000 rpm for 10 minutes. Haematology (table 1) and biochemical parameters (table 2) were in normal range and analysed by MS4e auto-haemoanalyser and Fujifilm spectrophotometer respectively.

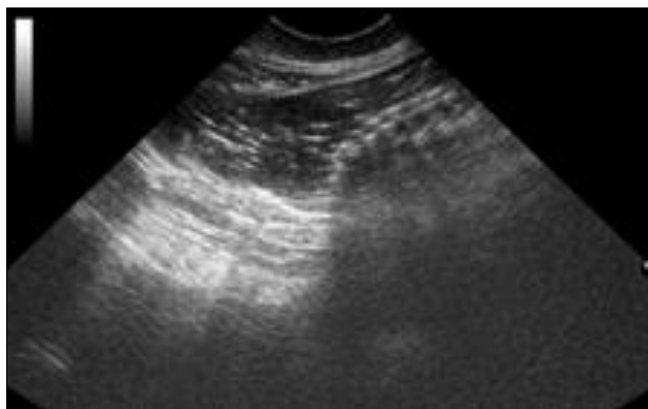


Fig 2: acute angulation of vertebra in USG



Fig 3: Acute angulation of vertebra in Radiography

Table 1: haematological parameters

Parameters	Value	Normal Range
WBC (10 ³ /mm ³)	15.51	06-17
RBC (m/mm ³)	5.69	05.5-8.5
PCV (%)	39.8	37-55
Hb (g/dl)	12.2	12-18
Lymphocyte (%)	22.8	08-38
Granulocyte (%)	73.4	51-84
Monocyte (%)	3.8	01-09

Table 2: Blood biochemical parameters

Parameters	Value	Normal Range
Calcium(mg/dl)	9.2	9.1-11.7
Phosphorus(mg/dl)	4.0	2.9-5.3
Magnesium(mg/dl)	1.5	1.6-2.4
Sodium(mEq/litre)	142	142-152

Diagnosis: After examination of the USG and Radiography reports, it was revealed that there was ‘acute angulation of the vertebral column’ of the fetus leading to dystocia.

Treatment: The manipulation for correction of the dystocia was not possible as the animal was already under stress due to straining for longer period. Therefore, it was decided for Caesarean Section (fig. 4). Anaesthetic protocol used was Propofol @ 6-8mg/kg body weight + Isoflurane @ 1-2% MAC (Mean Alveolar Concentration). Following Laparohysterotomy a dead pup was recovered with the deformity from birth passage i.e., lodging at the cervix (fig. 5). Deformities of the pup include prognathic maxilla (fig. 6), cleft palate (fig. 7) and acute angulation of the vertebral column (fig. 8) without any visceral abnormalities. Thus it was confirmed as a case of Foetal monster. Different measurements of the Foetal Monster is given in the table 3. After the operation it was prescribed with Ceftriaxone sodium + Tazobactam injection (Intacef Tazo; Intas Pharmaceuticals) @ 30mg/ kg body weight intravenously once daily for 5 days and Meloxicum + paracetamol injection (Melonex plus; Intas pharmaceuticals) @ 2ml intramuscularly for two days alternately as postoperative care. The owner is advised to take proper care of the bitch and to bring the animal after 1 week for removal of the suture. The bitch recovered uneventfully.



Fig 4: Laparohysterotomy



Fig 5: Dead pup with angulation of vertebra



Fig 6: Prognathic maxilla



Fig 7: cleft pallate



Fig 8: acute angulation of vertebra

duplication of the limbs, means that a wider than normal foetal diameter presented in the pelvic inlet and that resulted in severe dystocia ^[1].

Conclusion

In the present case, dystocia was caused due to foetal monster with abnormal posture and was relieved by Caesarean Section.

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Table 3: Measurements of different parts of the fetal monster

Parameters	Measurements
Length	24 cm
Girth	10.5 cm
Weight (with placenta)	0.22 kg
Weight (without placenta)	0.18 kg
Circumference of head	14 cm
Pelvic diameter	11.5 cm

Discussion

The dystocia in the present case was due to acute angulation of the vertebral column with Prognathic maxilla and Cleft palate. The grossly irregular development, including bending or twisting of the vertebral column and ankylosis or