



CASE REPORT

Dystocia in Blackbucks (*Antelope cervicapra*)

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ABSTRACT

Four blackbucks, 4-6 years of age were handled for dystocia with a history of straining and without successful delivery. Clinical examination revealed normal vital parameters, partially opened cervix and dry birth canal. Water bags were ruptured in all cases. In three out of four cases (75%), the fetus was extracted out using standard obstetrical operations; however, one fetus (25%) was taken out using fetotomy. All fetuses were dead after assisted delivery. Three out of four (75%) dams were found active and behaved normally after delivery, however, one dam (25%) died soon after obstetrical procedure. It was concluded that dystocia in blackbucks can be effectively handled on similar lines as in caprines and timely veterinary assistance is required in order to save the newborns.

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INTRODUCTION

Blackbucks are antelopes that congregate in open plains and form territories. Females attain sexual maturity between one year and seven to eleven months (Roberts, 1997), but usually do not breed until nearly 2 years of age. Mating season of the blackbuck ranges from August to October and March to April. The lifespan is up to 15 years (Walther, 1990). The blackbuck population numbered approximately 19000 distributed throughout 70 countries (Wright *et al.*, 1988). In Pakistan, the main stronghold of Blackbuck used to be around Bahawalnagar and Fort abbas in the northern part of Cholistan (Roberts, 1997). Moreover, the trend of keeping blackbucks for fancy purposes in household and in small aviaries in this country is increasing.

In most zoos, and under natural conditions antelopes reproduce successfully, however, there are occasions when intervention becomes necessary in order to assist the reproductive process. Typically, such intervention is required when animal numbers are limited and chances of inbreeding are high (Holt *et al.*, 1988). Normally, delivery is uneventful in blackbucks. Dystocia, difficult birth, occurs when a female cannot deliver naturally and generally needs immediate assistance. Most birthing disorders in captive female does are handled by veterinarians, and these cases need an immediate assistance. Causes of dystocia in domestic animals include deviations from normal presentation, position or posture, fetomaternal disproportion, failure of cervical dilation

(ring womb), uterine torsion, and uterine inertia (Roberts, 1971). The present report describes the clinical features and handling of dystocia in blackbucks maintained at a private facility over a period of one year.

MATERIALS AND METHODS

Four, 4-6 year-old female blackbucks weighing about 40-50 kg were handled on the call for difficult birth in a local farm around Lahore, Pakistan. The history revealed off-feeding, isolation of does from the rest of the flock and restless behavior. Blood tinged watery fluid around the perineum and the straining posture of does at irregular intervals both in standing and sternal recumbency were also observed. In one of the four does the fetal legs were protruding outside the birth canal.

A description of clinical cases of dystocia in blackbucks is presented in Table 1. Clinical reproductive examination revealed partially opened cervix with very little straining but without successful delivery of fetuses. The birth canal was dry and appeared pink. All animals were active and healthy with normal vital parameters at the time of examination. The female does were caught using nets by attendants and no anesthesia was used for restraining. External genitalia were washed with an antiseptic solution (1% KMnO₄). Dilatation of the cervix was assessed by inserting the fingers inside the birth canal with considerable lubrication (liquid paraffin). All fetuses were found dead during examination. Presentation, position and posture of the fetuses were assessed. All the

Table 1: Description of clinical cases of dystocia in Blackbucks (*Antelope cervicapra*)

Animals	Straining hrs	Diameter of Cervix (cm)	Duration of handling (Min)	Status of fetus	Status of Dam	Obstetrical Operation	PPP of fetus	Remarks
1	12	4.1	30	Dead	Live	Forced extraction	Anterior longitudinal dorso right iliac	Inbreeding. Over-sized fetus, delayed parturition
2	4	4.6	45	Dead	Live	Bisection of pelvis in anterior presentation	Anterior longitudinal dorsosacral	Inbreeding, small pelvic size
3	8	3.5	20	Dead	Live	Retropulsion and Forced extraction	Posterior longitudinal dorsosacral	Inbreeding, small pelvic size
4	12	5.1	30	Dead	Dead	Forced Extraction	Anterior longitudinal dorsosacral	Uterus was found ruptured on Postmortem examination.

All females were administered oxytocin (Oxytocin, Star pharmaceuticals Pakistan), 15 i.u. i/m and Amoxicillin (Formox LA Fatro Pakistan), 10mg/kg. i/m.

fetuses were in anterior presentation. In all cases, the pelvis of the doe was small and it was harder to insert the hand inside the narrow birth canal. In three of the four does, dystocia was relieved through forced extraction, whereas in one female bisection of the pelvis of the fetus had to be performed. Medial canthus of the eye of the fetus was located and a short obstetrical hook was applied to pull the fetus. With gentle traction, the head was extracted up to the neck of the vulva. Thereafter, one of the forelegs was extracted out. This facilitated the removal of the entire fetus.

In the fourth doe, the birth canal was lubricated with liquid paraffin. The head of the fetus and one foreleg were retrieved from the birth canal after mutation, but fetus became wedged in hip lock posture. Bisection of the pelvis of the fetus was performed using a fetotome. A cut was made on the abdominal region of the dead fetus and evisceration was performed in order to reduce the size of the fetus and to pass the fetotome wire through the pelvis. One hind leg was cut and retrieved. This aided in pulling out the remaining fetal part. After the procedure all the dams got up and ran away. However, one suddenly collapsed and died within fifteen minutes. Postmortem examination revealed uterine rupture. The most likely cause of death was shock due to uterine rupture.

RESULTS AND DISCUSSION

The present report describes the management and handling of dystocia in blackbucks in captivity for the first time to the best of our knowledge. Seventy five percent (3 of 4) of the dams survived after the procedure, whereas none of the fetuses were alive. Incidence of dystocia in blackbuck could not be found in the available literature, however, in caprine it is reported to be around forty percent in certain flocks (Majeed and Taha, 1989). The most likely reason for dystocia in the present report was due to the disparity between the size of the fetus and the maternal pelvis known as fetomaternal disproportion (Roberts, 1971). Blackbucks maintained in captivity

usually have small herds where inbreeding could be a reason for dystocia. The other causes of dystocia generally occur in primipera where the fetus may be slightly larger than normal and the pelvis may be slightly smaller than normal, or both causes may be present (Morrow, 1986). Another factor in captive breeding is interaction with human beings that may have frightened the dam. Increased level of epinephrine may have hindered the act of normal parturition by blocking the release of hormones (Fraser, 2010).

Based on the results of the present report, we recommend that inbreeding be avoided, breeding record along with pregnancy diagnosis should be carried out in order to determine the time of parturition. Good care and close supervision is required during advanced pregnancy and if straining time during parturition is extended, then veterinary help should be sought. Caesarian section could also be an option. Future studies are indicated to study the physiology of different stages of parturition in blackbucks.

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