

## Uterine inertia in a rabbit doe

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### ABSTRACT

A case of dystocia due to uterine inertia in rabbit doe was treated with combined oral and parenteral calcium therapy along with parenteral injection of Oxytocin and delivered all the live kits successfully.

**Key words:** Uterine inertia, dystocia, rabbit

Uterine inertia in polytocous species like canine and feline has frequently been reported. The uterus gets exhausted due to the repeated straining for expulsion of large number of foeti in animals in polytocous species. Sometimes due to the oversized fetus uterus gets exhausted in the process of expulsion of fetus and thereby develops inertia. In this condition, the animal suffers from dystocia. Reports on uterine inertia leading to dystocia in rabbit doe are scanty. In the present paper a case of dystocia due to uterine inertia in a rabbit doe is reported.

A Grey Giant rabbit doe of around 5 months of age was presented to the Division of Animal Reproduction, Gynaecology and Obstetrics with the history of expulsion of 2 kits about 5 hr before presenting the case. The rabbit doe belonging to the University Sheep Research Station (SRS), Shuhama was on its first kindling. The two kits were delivered normally and thereafter the doe was not showing any straining or symptoms of labor. During the delivery of two kits, the doe showed very little straining and took 15 minutes to parturate the 2<sup>nd</sup> kit. The doe was taking feed and water normally without showing any kind of discomfort.

On clinical examination, vulva and vagina were

found empty. During palpation of the lower abdomen, fetal masses could be palpated. The animal was observed for 10-15 minutes but no straining was observed. The case was diagnosed as uterine inertia of intermediate type (between primary and secondary uterine inertia) leading to dystocia as reported by Benesch and Wright (1951) in bitch.

The doe was administered with oral liquid calcium therapy (Ostovet\*) @ 3 ml orally once and the animal was observed for 30 minutes but no prominent straining was observed. Subsequently Caldee-12\*\* (Calcium, Vitamin D and, Vitamin B<sub>12</sub>) @ 0.5 ml was injected intramuscularly (im) once and im injection of Oxytocin\*\*\* @ 0.2 ml (1 IU) was also given. The doe responded well and after 10 minutes of the 2<sup>nd</sup> regime of treatment the doe showed prominent straining and started kindling again. Six kits delivered normally within 15 minutes. Induction of delivery in the rabbit by a single injection of 100 to 200 mu of Oxytocin has also been reported (Cross, 1958). The kits were normal immediately after parturition. The total litter weight was 180 gm (22.5 gm/ kit), which was much lower than the average birth weight (48-58 gm/ kit) observed in the farm. The body weight of the doe at kindling was 2.5 kg and the gestation length (32 days) was within the normal

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ange. The death of all kits occurred gradually within 50 hours of birth might be attributed to the birth of weak and under weight kits and also due to the unavailability of milk in the doe. One of the kits was severely bitten by the mother. It indicated that the doe suffered from mineral deficiency of calcium, as mild uterine contractions were observed initially followed by uterine inertia. The non availability of milk might be due to low calcium level and inadequate let down of milk as a result of low level of oxytocin. Low plasma oxytocin level was a cause of primary uterine inertia in bitches and aggravated the condition in bitches with low calcium levels (Bergstrom *et al.* 2006). Ramagnoli *et al.* (2004) reported that three doses of oxytocin (1.0, 2.0 and 2.0 IU) on the first day were ineffective, however, 5.0 IU oxytocin im on the second day was effective in expelling the fourth pup 34 hr after the expulsion of last foetus and 7 hr after the last injection in a bitch with uterine inertia. The exogenous administration of oxytocin might have helped the exhausted uterus to contract again by the action of oxytocin on the estrogen primed uterus (Mc Donald, 1980; Hafez, 1993). Oxytocin, by direct action on the myometrium and/ or indirectly through stimulation of greater release of PGF<sub>2</sub> $\alpha$ , causes uterine contractions

to be stronger, more rhythmic and more frequent (Bearden and Fuquay, 1997). Generation of stronger, rhythmic and more frequent straining seen in the present case helped to expell the entire live fetus within a short period of time.

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