

## Late-Term Abortion and Retention of Placenta in Donkey (*Equus acinus*): A Report of Two Cases

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The incidence of equine abortion is higher than that experienced by cattle. Abortion in equine may be infectious or non-infectious. Infectious agents such as bacteria, viruses or fungi may attack the fetus or its membranes, resulting in fetal death and its expulsion. Non-infectious agents such as development of twins, torsion of umbilical cord or congenital anomalies may also result in death of the fetus and abortion (Kocabiyik *et al.*, 2005). Many causes of late-term abortion including infectious agents and placental abnormalities have been reported. Sometimes thorough post-abortion and post-delivery examination of the fetus, placenta and umbilical cord may reveal other causes that are not identified with laboratory procedures.

Retention of placenta is probably less common in equine because of simple, diffuse type of placentation and the strong uterine contractions aiding the separation of the villi from their maternal crypts and expelling the detached membranes (Roberts, 2004). Fetal membranes were defined as retained if they were not expelled completely within three hours after delivery in equine and has been regarded as a threat to the uterine health and general health of the equine. The reported sequelae of retained fetal membranes range from none to metritis, laminitis, septicemia and death (Provencher *et al.*, 1988). The present paper reports a successfully managed case of abortion at late-term gestation due to twisting of umbilical cord and retained placenta in a donkey.

### History and Clinical Observations

A 9 years old non-descript female donkey (*Equus acinus*) was presented to Veterinary Clinical Complex of the College of Veterinary Science and A.H. Anand with the complaint of eight month pregnancy with reddish-brown colored discharge from the vulva. Animal was unable to stand and was lying in lateral recumbency. Per-rectal examination revealed presence of dead fetus in the uterus, while per-vaginal examination revealed dead fetus in dorso-cranial presentation with the head turned laterally

to the right. The front legs of the fetus were folded backward at the carpus.

An another case of six years old non-descript female donkey (*Equus acinus*) was presented to same Clinic with a history of normal foaling, but the placenta was not expelled till 12 hours after foaling and also a little stump of the placenta hanging out from the vulva. Since foaling, the animal was restlessness and showing abdominal straining. Per-rectal examination was done to rule out the possibility of another fetus in the uterus. Per-vaginal examination revealed the tip

of the allantochorion extended in the non-gravid horn.

### Treatment and Discussion

In the first case, the fetal head was repositioned manually and the legs were manipulated into normal position for presentation through the pelvic canal. This dead fetus was delivered along with placenta (Fig. 1) per-vaginally with mild and gentle traction together with straining and abdominal contractions by the animal. Gross examination revealed twisting of the umbilical cord with its edema and discoloration of cord tissue. The present case report is in accordance with Mizushima (2005), who reported late term abortion associated with umbilical cord torsion in the mare and stated that it is an indicative of vascular obstruction preceding fetal death and abortion. In the present case, immediate postpartum examination revealed substantial findings to support the diagnosis of twisting of umbilical cord resulted into fetal death and abortion.



**Fig. 1:** Aborted fetus with placenta- twisting of the umbilical cord with its edema

The second case of retained fetal membranes following normal foaling was treated by applying gentle traction on the part of the placenta hanging out from the vulva (Fig. 2) and the whole of the placenta was successfully pulled out of the uterus (Fig. 3). Gross examination revealed an



**Fig. 2:** Placenta hanging out from the vulva



**Fig. 3:** Placenta of donkey - Velvety reddish tissue (Outer view)

apparently normal placenta without any inflammatory changes (Fig. 4). The chorion appeared as a normal velvety reddish tissue due to the villi. All the placentas showed avillous areas at the cervical pole in correspondence to endometrial folds. Manual removal is the most commonly described treatment for retained placenta in equine (Provencher *et al.*, 1988) and it may result in separation of microvilli from the large portion of the fetal membranes (Azawi and



**Fig. 4:** Placenta of donkey- avillous area at the cervical pole (Inner View)

Taha, 2008). According to Vandeplassche *et al.* (1971), the allantochorion situated in the non-gravid horn of the uterus is the portion of the membranes most likely to be retained causing retained fetal membranes in equines. However, the forceful traction should be avoided in cases of retained placenta as it may produce haemorrhage and further complicate the condition.

Therapeutically, both the cases were treated with Ceftiofur sodium 1 gm (Xyrofure, @ 2.2 mg/kg b.wt., Intas Pharma) intramuscularly for five days postpartum. Additionally, the supportive therapy in first case of abortion included 5% dextrose saline 1 litre, calcium borogluconate

(Mifex, @ 0.5 ml/kg b.wt., Novartis) 200 ml and flunixin meglumine (Megludyne, @ 1 mg/kg b.wt., Virbac) 10 ml intravenously on the first day. Both the cases made uneventful recovery without any complications.

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#### **Conflict of Interest**

Authors declare that they have no conflict of interest.

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