

SURGICAL MANAGEMENT OF DYSTOCIA IN A QUEEN CAT WITH UTERINE UNICORNIS

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Congenital abnormalities of the uterus occur infrequently in cats. A one year old non-descript queen cat was presented to the University Veterinary Hospital, Kokkalai with a complaint of difficulty in kitting. Per- vaginal examination revealed the presence of dam's intestine in the birth canal which indicated vaginal tear. An emergency caesarean section was carried out and three dead fetuses from the right uterine horn were removed. Detailed examination of the reproductive tract revealed the presence of a tiny band like left uterine horn lacking a lumen; but with normal ovaries. The condition was grossly diagnosed as uterine unicornis and ovario-hysterectomy was performed to avoid further complications due to a severely necrosed uterine tissue.

Keywords: Cat, dystocia, Uterine unicornis.

Uterine unicornis is a rare type of congenital uterine abnormality, which is caused by the agenesis of one uterine horn and the incidence rate has been recorded as 0.06% (McIntyre *et al.*, 2010). In such cases only one uterine horn has lumen and the other will represent a narrow flat band. Most of the affected animals will have normal ovaries in both the sides due to its embryonic origin from gonadal ridge, so that the animal exhibit oestrus signs and may conceive. The embryologic distinction between ovarian tissue and tubular reproductive tissues explain the presence of normal ovaries in animals affected with uterine abnormalities (Brookshire *et al.*, 2017).

Diagnosis of these uterine abnormalities will be incidental during surgeries involving reproductive tract. The severity of uterine horn abnormalities can range from hypoplasia to complete agenesis (McIntyre *et al.*, 2010). The condition is reported more commonly in Ragdoll cats than in other breeds or non-pedigreed cats. The cause of uterine anomalies in dogs and cats are not known. The role of genetic, endocrine, or environmental influences remains uncertain (Little, 2011). Jones *et al.* (1997) attributed the occurrence of uterine abnormalities in cats to inbreeding and various forms of intersex.

Reports suggest that 28% of the cats having reproductive anomalies also show renal agenesis (McIntyre *et al.*, 2010). Concurrent uterine and renal anomalies can originate as a

result of the interdependence between the tracts during embryological development as both tracts are derived from a common embryonic intermediate mesoderm. Herron (1986) observed these lesions to be associated with the absence of the ipsilateral kidney and ureter.

Case History and Observations

A one year old, full term non-descript queen cat was presented to University Veterinary Hospital, Kokkalai, Kerala Veterinary and Animal Sciences University with a complaint of difficulty in kitting. Animal had started with signs of kitting the previous day evening and attempts to relieve the dystocia by a veterinarian was unsuccessful. Clinical examination of the animal revealed normal body temperature (101.5° F) and pale-roseate mucous membrane. Foetal skeleton was appreciated on abdominal palpation, and vaginal examination revealed a dead foetus along with the presence of dam's intestine. Radiographic examination revealed the presence of three foetal skeletons and sonographic assessment confirmed non-viable foetuses.

Treatment and Discussion

Owing to vaginal tear with presence of dam's intestine in the birth canal, an emergency caesarean section was performed to save the life of cat. Surgery was performed

under general anaesthesia with xylazine (1mg/kg), ketamine (20mg/kg) and midazolam (0.2mg/kg) combination. Uterus was exteriorized through a mid-ventral incision. The entire uterine horn was blue in colour and examination of the reproductive tract revealed a tear in the right uterine horn with intestine protruding out through the tear (Fig 1). The left uterine horn was rudimentary and was like a narrow band like structure without lumen (Fig 2). The right uterine horn was gravid with three dead foetuses. As the uterus was necrosed, ovario-hysterectomy was performed to avoid future complications. The intact and rudimentary uterine horns along with ipsilateral ovaries were removed after clamping and ligation. The surgical incision was closed as per standard procedure and the animal was treated with antibiotic (Cephalexin @20mg/kg body weight) and supportive therapies post-surgically. The surgical site healed normally, sutures were removed on 10th day and the animal had an uneventful recovery.



Fig. 1: Intact right horn with rupture

Uterine anomalies include hypoplasia, segmental agenesis and unicornuate uterus. The absence of normal layering and lumen in the band like tissue existing in the place of uterine horn in this case confirms the unicornuate nature of the condition as has also been reported by Buttram and Gibbons (1979). The diagnosis of uterine anomalies as an incidental finding during laparotomy procedures finds agreement in this report too, as the anomaly was detected during an emergency caesarean section following dystocia. The probability of concurrent urogenital anomalies ipsilateral to the uterine abnormality though likely in such conditions as also reported by McIntyre *et al.*, 2010, was lacking in this case. The presence of normal ovaries in this reported case of uterus unicornis corroborates the embryologic distinction between ovarian tissue and tubular reproductive tissues as also reported by Brookshire *et al.* (2017).



Fig. 2: Rudimentary left horn

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