The occurrence of polydactyly might have been observed.

**Summary**

Congenital lateral hernia was corrected by Herniorrhaphy under inhalant anaesthesia. Animal was recovered uneventfully.

**References**


**Unilateral Polydactylyism with Brachygnathism in a Calf**

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(Received : 20-05-2016 217/16 Accepted : 27-09-2017)

**Abstract**

A Jersey crossbred cow was reported with the history of dystocia. A dead calf was removed by forced traction. The calf had polydactylyism in the left forelimb and also brachygnathism.

**Key words**: Calf, digit, polydactylyism, brachygnathism

Polydactylyism is a condition which is characterized by the presence of one or more additional digits (Suchitra et al., 2010). This condition has been reported in both humans and animals, and most commonly lower portion of limbs are involved (Talamillo et al., 2005). The incidence is common in cat, horse and dog but low in cattle (Suchitra et al., loc. cit). The present case records an incidence of unilateral polydactylyism of forelimb along with brachygnathism in a newborn calf.

**Case History and Observations**

A Jersey crossbred cow on its 4th calving was brought to the Teaching Veterinary Clinical Complex, Namakkal with the history of continuous straining and labor pain since last 9 hours and water bags having ruptured 7 hours before but was unable to deliver. At the time of admission the cow was able to stand and walk and the general clinical parameters were in the range.

**Treatment and Discussion**

On vaginal examination, the cervix was found to be fully dilated and the fetus was in anterior longitudinal presentation, dorso-sacral position with both the fore limbs was extended into the vaginal passage. By applying traction, a dead female fetus was delivered. The weight of the fetus was 23.76 kgs. On gross examination, the calf had additional digit on the metacarpal region of left forelimb. Further the lower jaw was under developed when compared to upper jaw (brachygnathism). All the changes indicated the fetus had polydactylyism in the left forelimb with brachygnathism (figure).

The occurrence of polydactylyism might...
be due to the genetic defect or foetal interaction with environmental causes (Alam et al., 2007). Johnson et al. (1982) reported that polydactylism in cattle could be subdivided into seven types: i). bilateral polydactyly of both forelimbs (Type I), i.e. additional metacarpal or phalanges. ii). unilateral polydactyly of one forelimb or one pelvic limb (Type II), i.e. additional metacarpal or metatarsal bones and phalanges. iii). all four limbs have additional digits (Type III), iv). bilateral duplication of digits either of the forelimb or hindlimb (Type IV), a rare occurrence, v). polysyndactyly (Type V), vi). bilateral incomplete formation of metacarpal II (Type VI) and vii). polydactylism in combination with a malformation-complex (Type VII). Type I to VI polydactylism might be due to genetic cause and Type VII polydactylism could be due to environmental factors (Johnson et al., loc cit).

Polydactylism could rarely be caused by external factors like exposure to toxins, physical forces or chemical agents (Giofre et al., 2004). Schonfelder et al. (2003) opined that over aged oocyte with decreased abilities for normal development might lead to polydactylism. Also cholesterol deficiency during pregnancy was found to have a negative influence on the development of the limbs due to interference with the signaling pathways of important morphogens in rats as a model for human malformation syndromes (Gofflot et al., 2003).

Murondoti and Busayi (2001) reported that polydactylism might occur in both the fore limbs and hind limbs, one fore limb/pelvic, all the limbs or any of the above combinations in the same animal. The presented calf was affected with Type II unilateral fore limb polydactylism. Surgical intervention could be performed to remove the excessive digit in live calves.

Summary

A Jersey crossbred calf removed during dystocia had an additional digit on the metatarsal region of left forelimb (Polydactylism) and also the lower jaw was under developed than upper jaw (brachygnathism) and is discussed.

References


