

Polydactylism in a Cow- A Case Report

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Polydactylism is a condition in there is increase in the number of digits, even though it is observed in all species of animals, it is most common in cat, horse, dog and rarely occurs in cattle (Jubb and Kennedy, 1970). The additional limb may be one (Abraham Manickarajan, *et. al.*, 1992) or two (Iyer, 1987). Polydactylism is recorded in cattle (Iyer *et. al.*, 1989), buffalo (Ranga Reddy, *et. al.*, 1984; Mishra and Angelo, 1984) and sheep (Abraham Manickarajan, *et. al.*, 1992).

Case history and the clinical examination

A local bred cow aged about six-year was presented to the Veterinary Dispensary, Hanabe, Doddaballapur, Bangalore rural District, with the complaint of anorexia for the past 3-4 days, hurried respiration and decrease in the milk yield. On clinical examination, there were ticks on the body, the rectal temperature was about 104°C, respiration and pulse rate was increased and there were enlarged pre-scapular lymph nodes.

The cow had two additional fore limbs on its back. These additional limbs were originated from the vertebral column (fifth thoracic vertebra) just behind the withers and they were hanging on the right lateral aspect of the chest (scapular region). Additional limbs were of normal size and consisted of humerus and radius-ulna with normal elbow joint. The humerus and radius-ulna were also of normal size. The point of elbow was prominent in one limb (anterior) when compared to the other limb but, the knee joints of both the additional limbs appeared normal. Even though, both limbs found attached through skin with one another from the point of origin to fetlock joint (Joint between metacarpus and phalanges), beyond the fetlock joint there was no attachments between hooves of the two limbs. All the digital joints were well developed and could be flexed. Though there were two pairs of well-developed hooves with interdigital space, only one set of dewclaws (one in each limb) were present and they were clearly prominent in both the additional limbs. The additional limbs were having the sensation which was tested by pin pricking and they were dangling during the animal movement.

Treatment: Based on the clinical symptoms it was tentatively diagnosed as a case of theleriosis and treatment was initiated for the same. The animal was

treated with Oxytetracycline@10mg/kg B.Wt. I/V along with 500ml of 5% dextrose, Meloxicam and B-complex (10ml each) I/M for 3 days. The animal showed complete recovery after 3 days. After the recovery excision of the additional limb was planned but the strange appearance of the animal was a centre of attraction for the public, the owner was unwilling to get the additional limb removed, as he was earning the daily bread from this strange cow.

Discussion

Developmental anomalies affecting embryos of bovines are well documented (Morrow, 1980). Among the cattle, the incidence is common in Holstein Frisian and Hereford breeds (Roberts, 1971). The polydactylism may arises from excessive division due to alteration in the tissue differentiation which might have arised from a single area in the embryonic disc (Runnels, 1960).The development of the skeleton is a complex process, as it develops from mesenchyma there is an opportunity for error. The development of the additional limbs can be attributed to this factor (Jubb and Kennedy, 1970). Most of the reports on congenital anomalies are on development of deformed limbs.

Acknowledgement

Authors are thankful to, Assistant director, Veterinary Hospital, Doddaballapur, Bangalore rural district, for giving permission to publish this article.

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