

EPITHELIOGENESIS IMPERFECTA (APLASIA CUTIS CONGENITA) CONCOMITANT WITH ARTHROGRYPOSIS IN A BUFFALO FETUS - A RARE CASE REPORT

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ABSTRACT

The present case describes the delivery of a buffalo fetus with Epitheliogenesis Imperfecta concomitant with Arthrogyrosis and its successful removal by judicious traction in a graded Murrah buffalo.

Keywords: *Bubalus bubalis*, buffaloes, epitheliogenesis imperfecta, aplasia cutis congenita, arthrogyrosis

INTRODUCTION

Teratologic, abnormal development or arrests in development of the ovum, embryo or fetus may result in death or malformations of the antenatal individual (Roberts, 1986). One of the malformations in which skin fails to form include Epitheliogenesis Imperfecta also known as Aplasia Cutis Congenita, is a recessive hereditary condition characterized by the congenital missing of epithelium on the skin and oral mucosa (Dalir *et al.*, 2004). In the present case, this condition is incident along with Arthrogyrosis which is a congenital disease characterized by non-

progressive joint contractures that can affect upper or lower limbs and/or the vertebral column, leading to various degrees of flexion or extension limitations, evident at birth (Albarella *et al.*, 2017). In this clinical case report, the delivery of a buffalo fetus with Epitheliogenesis Imperfecta concomitant with Arthrogyrosis is discussed.

CASE HISTORY AND OBSERVATIONS

A primiparous graded Murrah buffalo in its full term gestation was presented with the history of prolonged second stage labour with unproductive straining. On clinical examination, vital parameters were in normal range. Vaginal examination revealed fetus engaged in birth passage in anterior longitudinal presentation, dorso sacral position and extended forelimbs. Expulsive force was not sufficient enough to push the fetus out.

TREATMENT AND DISCUSSION

Animal was administered with 4 ml of 2% Lignocaine HCl as epidural anaesthesia followed by application of CMC (Carboxy Methyl Cellulose)

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lubricant liberally over the fetus. After application of snares at fetlock joints and by judicious traction, a live female fetus was delivered which died after 24 h. The gross examination of fetus revealed the absence of skin on major portion of the body except a few patches of skin present over head and thigh region (Figure 1). Fetus also had arthrogryposis of hindlimbs. Hence, the condition is diagnosed as Epitheliogenesis Imperfecta (Aplasia Cutis Congenita) concomitant with Arthrogryposis.

Epitheliogenesis Imperfecta was first reported in cattle by 1928 wherein it was suggested to be a result of inbreeding and was given name Epitheliogenesis Imperfecta Neonatorum Bovum (Leito *et al.*, 2002). Since then, many cases were reported in almost all species. Etiological factor is basically due to recessive hereditary gene. Other literatures documented this condition as patches of skin absent in various parts of body like below the knee, hock, oral mucosa, muzzle, nostril, tongue, hard palate and cheeks. However, in the present case, the lesion was much extensive that it was observed throughout the entire body and only

few patches were appreciated over face and thigh region making it as a rare incidence.

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Figure 1. Fetus with extensive absence of skin in major portion of the body except on face and thigh region.