

# Extraordinary case of dystocia due to hydrocephalus foetus in dairy Egyptian cow: a case report

## Case report

Congenital defects are present in all breeds of animals. The exposure to a mixture of environmental pollution (air, water and feeding) has become a major cause of reproductive animal failure. There are major factors that adversely influence prenatal development. Many congenital defects are caused by environmental factors. Major congenital anomalies are diagnosed in 2-4% of births.<sup>1</sup> Congenital defects are abnormalities of structure or function present at birth and may account for a high percentage of calf losses from just before to just after calving. In most herds, the frequency of these abnormalities within a herd will be high enough to be of considerable economic importance. Dystocia due to Hydrocephalus is commonly seen in pig, puppies and cattle.<sup>2</sup> Congenital hydrocephalus is present at birth and may be caused by either environmental influence during fetal development or genetic predisposition. In cattle congenital hydrocephalus may be caused by simple autosomal recessive dominant gene with incomplete penetrance.<sup>3</sup> Hydrocephalus is a dropsical condition with accumulation of fluid as a result of an imbalance between the formation and drainage of cerebrospinal fluid (CSF) either in ventricular system or subarachnoid space characterized by marked enlargement of cranium.<sup>4</sup> Hydrocephalus can be acquired, e.g. due to infection or trauma, or can be hereditary in nature.

From case history and clinical observations, a pluriparous full term dairy cow in its 4th parity in third parity and full term pregnancy with history of dystocia brought to clinical veterinary hospital, Faculty of veterinary Medicine, Assiut University, Egypt, with history of straining since last 8 hours with no progression in parturition as well as it fails to make any progress towards delivery the water bag was already ruptured. The case was unsuccessfully handled by a local veterinarian. During manual obstetrical examination, the cervix was found open with the foetus in anterior longitudinal presentation, dorso-sacral position and revealed 'hydrocephalus' condition in fetus, having excessive swelling over the head. Palpation of the foetus revealed absence of reflexes suggestive of dead foetus with ankylosis in limbs (Figure 1). On the basis of clinical observations, the case was diagnosed as dystocia due to foetal hydrocephalus tentatively which could only be confirmed after delivery of the foetus. To manage this dystocia, caesarean section was performed. Under local and high caudal epidural anaesthesia, caesarean-section was performed on the left flank region, adopting the standard operating procedure and the cow was positioned at standing condition. In this study, the incidence of hydrocephalus in dairy cattle reported as 0.73 % from all cases of dystocia from 2007-2015 which represented in to clinical veterinary hospital, Faculty of veterinary Medicine, Assiut University, Egypt. However, according to fetal causes of these cases, this incidence became 1.41%. Congenital defects may be defined as any defect in the foetus present at birth which commonly diagnosed by veterinary practitioners. The incidence and types of congenital defects are highly variable depending primarily on the number and types of cases submitted to veterinary faculties from those actually occurring on farms and field and observed by veterinary practitioners, which are not submitted.<sup>5</sup>

Volume 5 Issue 2 - 2017

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**Received:** December 23, 2016 | **Published:** March 24, 2017



**Figure 1** Hydrocephalus foetus with Ankylosis in limbs and placenta.

## Acknowledgements

None.

## Conflict of interest

Author declares that there is no conflict of interest.

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