# CONGENITAL INTERNAL HYDROCEPHALUS IN A NEW BORN COW CALF

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## ABSTRACT

A case of congenital internal hydrocephalus in a new born indigenous cow calf and its successful therapeutic management has been reported.

**Key words :** Hydrocephalus, Congenital calf, Treatment.

## INTRODUCTION

Congenital hydrocephalus either external on internal is of great clinical and obstetrical importance and is usually encountered as an infrequent intrauterine developmental pathology of brain and the skull as a whole, characterized by the dropsical condition of the brain and has been reported in different breeds of cattle both indigenous and exotic. External hydrocephaly in bovine foetus occurs with higher frequency than that of internal hydrocephaly. It has been reported to occur in indigenous cattle (Jana and Ghosh, 2005) and in cross bred jersey cow (Balasubramanian *et al.*, 1997) with characteristic accumulation of fluid within the cerebral ventricles. The present communication deals with a report on congenital internal hydrocephalus in a new born calf and its therapeutic management.

## CASE HISTORY AND OBSERVATIONS

A newborn indigenous cow calf weighing about 12 kgs was presented to the clinic as an ambulatory patient with the complaint of lateral recumbency, inability to rise its head and non-suckling of milk. On physical inspection it revealed malformed skull with head appearing rounded and visible distortion of cranium and on palpation of the cranial vault it felt very soft as of low density bony configuration with incomplete ossification. On careful clinical examination it revealed its body temperature 101.4°F, pulse 96/min and respiratory rate 14/minute. The calf exhibited occasional tremor on its trunk, paddling and convulsions. The calf was found very weak, dehydrated and apathetic to external stimuli. History revealed that the calf was normally born to a local non-descript cow five days back from the day of presentation to the clinic at its fifth parity, sired by a stray bull. There was no such abnormal birth in previous calvings.

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## TREATMENT AND DISCUSSION

As an emergency treatment slow intravenous infusion of 5% DNS, 200ml alongwith Vit. B Complex-2ml (Hivit ® Vetnex) was carried and the said infusion was repeated for another three days. Oral therapy was recommended by prescribing syrup Kafcare ® (Kapila) @ 15 ml orally B.I.D., Syr. Ostovet fort ® (Glaxo Smithkin) @ 15ml orally B.I.D. and syrup Neogadine ® (Elixar) @ 10ml BID. Parenteral administration of antibiotic Inj. Britax (Brihans) @ 500 mg, per day for 5 days Inj. Vit. A 6 lakhs @ 1ml at 3 days interval and Inj. Dexona ® (Zydus AHL) @ 2 ml, 1.5 ml and 1 ml daily with a tapering dose were done. The calf responded nicely and resumed suckling with disappearance of convulsion. Unfortunately it was reported dead at 32 days of age with exposure to foot and mouth disease (FMD) during the outbreak in the same herd.

It is believed that many cases of still birth and early post natal deaths are due to internal hydrocephalus with genetic origin rather than nutritional and environmental factors. A simple autosomal recessive gene (Roberts, 1971) and autosomal dominant gene with incomplete penetrance (Greene *et al.* 1973, Leipold and Dennis, 1986) have been reported to be linked with hydrocephalus in cattle. It could also be inherited with

co-existing hypovitaminosis-A in some cattle too (Jubb and Kennedy, 1970). Generally the enlarged head in congenital hydrocephaly can not easily pass through the birth canal and results in dystocia, although sometimes the foetus may be delivered normally and presented later for therapy (Mouli, 1987) as occurred in the present case. The calf recovered uneventfully with slow resorption of fluid and compactness of bony architecture of cranial sculpture with increase in bone densities by combined effect of total therapeutic measures.

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