

## Case Study

### Therapeutic Management of Degnala Disease in Bovine

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#### ABSTRACT

#### Keywords

Degnala  
Disease,  
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Degnala diseases commonly affected buffaloes & cattle in Indian subcontinent. It occurs in animal due to feeding of wet paddy straw. Study carried out in a private dairy farm after outbreak of skin lesion. Skin lesion includes alopecia, scales, cracking of skin & ulcerative wound on different part of body. All animal were treated with Pentsulphate at the dose rate of 30gm/animal, Enrofloxacin long acting at dose rate 10 ml/100kg body weight intramucularly along with mineral mixture & feed treated with mycotoxin binder or advice for change the feed. All animals respond well & return to normal within 7 days.

#### Introduction

Degnala disease is a common infection, affecting cattle & buffaloes in Indian subcontinent. It occurs in animal, when they are exclusively feed on paddy straw get wet during the maturing stage on plant in field or during threshing period & stored without proper drying.

Raising buffaloes and cattle in India is one way of augmenting the financial resources of village people. These animals are mainly raised on rice and wheat straw which are of poor nutritional quality. Rice and wheat plant when infested by fungus *Fusarium* causes severe health problem. Infections that may be debilitating in nature can cause significant economic losses as a result of decreased production confounded by

reduced growth rate, mortality and poor animal performance. Almost all cases showed gangrene of the tail, which was shriveled and cold to the touch. Invariably, one or both ears showed signs of dry gangrene. In some cases the muzzle and even the tip of the tongue became gangrenous and were shed. One or more hooves showed lesions in varying stages of development. In some cases the affected feet and legs were swollen up to the knee; hair was denuded and inflammatory changes set in. Later, wounds appeared on the coronet, fetlock, pastern, and knee and in the hock region. In very advanced cases the lower regions of the feet become gangrenous. In some cases the hooves were shed and bones were exposed. It was first time reported by

shirlaw in 1939 from Seikhpura districts (Pakistan) near deg Nala. After this, the disease was reported from many parts of India from time to time like Punjab (Karla *et al.*, 1972), Gujrat (Jadhav *et al.*, 2003) and West Bengal (Sikdar *et al.*, 2000). The present study reports the outbreak of degnala disease in the cattle and their management.

### **Materials and Methods**

An outbreak of skin lesion of a private dairy farm observed in ten cattle and two buffaloes. Skin lesion characterized by alopecia, scales, cracking of skin, ulcerative wound on different part of the body. The animals had history of change the previous straw and fed with mould paddy and lentil straw in recent past. On the basis of these clinical sign and history affected animals were diagnosed as clinical cases of degnala disease. These clinical finding correlates with findings of Kaushik and Sinha (1999). All animals were treated with a penta-sulphate mixture (ferrous sulphate 166 gm, copper sulphate 24 gm Zinc sulphate, 75 gm cobalt sulphate 5gm and magnesium

sulphate 100gm) at the dose rate of 30 gm per animal for 20 days, Enrofloxacin long acting (Flobac SA\*) at the dose rate 10 ml per 100 kg body weight intramuscularly and supplemented with mineral mixture (Nutricell\*\*) at the dose rate of 50 mg per animal per day. Enrofloxacin (Flobac SA\*) was repeated after 72 hrs as per required. Owner also advice changed the straw or treated it with mycotoxin binder before feeding the animals.

### **Results and Discussion**

Improvements of clinical signs were noticed within 72 hrs and all animals responded well and returned to normally within 7 days. Schoental (1980) also reported a cure rate of 80% with a penta sulphate mixture. Karki *et al.*, (2008) & 2012 observed complete recovery from mycotoxin by the injection of anti Degnala liquor (diethylamine acetarsol derivatives). Present recovery indicates that the

\*Intas Pharmaceutical Ltd.

\*\* T.T care Ltd.

### **Clinical cases of Degnal diseases**



Compound act as antifungal & helps in controlling the mycotoxins. Enrofloxacin is a bactericidal drug which belongs to fluoroquinolones group. Fluoroquinolones are potent DNA gyrase inhibitor causing bactericidal action (Prescott & Baggot, 1994) is active against most of gram positive & gram negative bacteria. It might be due to high bioavailability & better tissue penetration of fluoroquinolones (Anadon *et al.*, 1995). So it prevents secondary bacterial infection of the lesion, who is responsible for severity of disease.

On the basis of this study, it could be concluded that in the field level successful treatment of degnala disease in bovine can be done by pentasulphate mixture & broad spectrum antibiotics.

### References

- Andon, A., Martijez – Larranaga, M.R.M., Diaz, J., Bringas, P. Martinez, M. A., Fernandez, Cruz, M. L., Fernandez, M. C. & Fernandez, R. 1995. Pharmacokinetics & residues of enrofloxacin in chickens. *Amer. J. vet. resear.* 56: 501-506.
- Karki, K. and Manandhar, p. 2008. Clinical-Epidemiological investigation of mouldy corn poisoning due to penicillium spp. In mutes at Udaynagar district, Nepali vet. word. 1: 107-110.
- Karki, K. and Manandhar, p., Koirala, P. & Mandher, S. 2012. Moldy Rice straw poisoning in dairy cattle in Kathmandu Valley Nepal. *Bull. Unv. Pharma Life sci.* 1: 18-20.
- Kaushik, S. K. and Sinha and Sinha, B. P. 2004. Hematobiochemical profile in clinical gangrenous syndrome. *Indian J. Ani. Health.*
- Shirlow, J.E. 1939. Degnala Disease of Buffaloes: An account the lesions and essential pathology. *Indian. Vet. Sci. Animal. Husb.* 9853-864