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THERAPEUTIC MANAGEMENT OF POSTERIOR PARESIS FOLLOWING ELECTRIC SHOCK IN BUFFALO: A CASE REPORT

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ABSTRACT

A six years old buffalo presented with electrocution with faulty earthing line due to an accident. Clinical and physical examinations revealed recumbency, depression, congested mucosa, posterior paresis, rectal prolapse, involuntary defecation and urination, no sensation to needle prick on both hind legs but front legs showed sensation although weak. Immediately animal was treated with fluid and electrolytes, corticosteroids, antibiotics, vitamin B complex and other supportive medications. Animal was putted on thick layer of sand, leukworm fomentation and massaging as emergency supportive measures. Low degree of electric shock and intensive therapy using all the possible emergency therapeutic measures made the case recover successfully.

Keywords: *Bubalus bubalis*, buffalo, therapeutics, clinic, electric shock, diagnosis

INTRODUCTION

A high-voltage electrical current is reported as cause of severe injury or residual nervous signs in animals and instant death usually results from cardiac or respiratory arrest (Radostits *et al*., 2007). The type of injury and extent of an electric injury is determined by voltage, current strength, resistance to flow duration of contact with source (Price and cooper, 2002). These injuries can lead to cutaneous necrosis and deep necrosis of soft tissue, for the survival of animal emergency and critical care is essential. The present study communicates a case of posterior paresis following electric shock with its successful therapeutic management in a buffalo.

CASE HISTORY AND OBSERVATIONS

A 6 years old buffalo weighing approximately 350 kg was presented to the teaching veterinary clinical complex, DUVASU, Mathura, Uttar Pradesh, India with a history of electrocution with faulty earthing line the day before without any visible lesions on the body. Physical examination revealed recumbency, severely depressed, congested conjuctival mucus membrane, posterior paresis, rectal prolapse, involuntary defecation and urination, no sensation to needle prick on both hind legs but front legs showed sensation although weak (Figure 1). No any compression

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or deformity of vertebral column was observed even after deep palpation. Clinical examination revealed rectal temperature of 100.2°F, respiratory rate of 15 minutes and pulse rate of 56/minute, >10% dehydration was observed using skin taint test. Based on history and physical examination case was diagnosed as posterior paresis following electric shock.

TREATMENT AND DISCUSSION

After the diagnosis of posterior paresis due to electric shock the efforts were made to restore the fluid and electrolyte deficit for that Dextrose normal saline 5 liters, and Ringers Lactate 10 liters were given I/V within 3 h along with Dexamethasone 1 mg/kg, IV, Inj. Ceftriaxone 10 mg/kg, Inj Pheniramine maleate 10 ml, i/m, Inj Meloxicam 0.5 mg/kg, i/m, Inj vitamin B complex 10 ml, i/m, suspension Blotosil 1% 100 ml po bid was administered to relieve the tympany. Animal was kept on the thick layer of sand for cushioning during recumbency and leukworm water fomentation and massaging of hind quarters were done throughout the day. On second day movement was observed in the hind limbs, animal becomes alert and sits on sternal recumbency without any assistance, therefore same treatment was repeated and animal stands on its own on third day and started taking small quantity of green fodder and water, all the treatments except fluid therapy was repeated for next 2 days and ruminotoric preparatioions such as buffazone 100 gm Po for 2 days along with Rumentas bolus 2 boli po for 2 days, on fifth day animal becomes completely normal.

Clinical manifestations such as rectal prolapse, posterior paralysis/paresis, involuntary defecation and urination sensory deficits and posterior paralysis secondary to electrocution were reported (Baskerville and McAninch, 2002). Electric current passing through the animal

Figure 1. Posterior paresis following electric shock in buffalo.

body may cause coma and death, if the current is sufficiently strong, in present case the electric shock was from the earthing line that might be the reason that animal might had survived it.

As there is no specific treatment suggested for accidental electrocution. Therefore our line of treatment was only intensive emergency and supportive therapy. Fluid support is critical and corticosteroid plays an important role in condition of shock it enhances blood pressure and there by accelerates cardiac output. Putting animal on thick layer of sand, leukworm fomentation and massaging as emergency measures could be the reason for prompt recovery in the present case. Electrocution following accidental injury can be successfully managed by emergency treatment (Kashyap *et al.*, 2011).

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