

Clinical Article

CLINICAL MANAGEMENT OF BURNS IN GRADED MURRAH SHE BUFFALOES

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Abstract: Four she buffaloes in different lactations were treated for burn and scalds in different parts of the body. The degree of burns ranged from superficial partial thickness to deep and full thickness burns. Mild to moderate dehydration, unable to lie down and mild to moderate dehydration were the predominant systemic illness. Treatment was carried out using Dextrose normal saline, Streptopenicillins ciprofloxacin and Metronidazole, antihistamines. Topically Amnacrine hydrochloride and silver sulphadiazine ointments were applied. Significant recovery was observed in all the animals.

Keywords: Burns, buffaloes, silver sulphadiazine, Amnacrine hydrochloride.

Introduction

The reports on burns and scalds in animals appear to be less in animals. The percentage of burn injuries in farm animals among the total cases is significantly lesser. This could be due to fewer incidences and infrequent reporting. The knowledge of treatment of burns in animals has been extrapolated from that of human medicine. The etiology for burns in animals more often includes, fire hazards involving cattle barns, huts and thatched houses. Individual cases of burns are comparatively rare in veterinary practice.

Although burn injury pain was well-described as a major clinical problem over 2 decades ago, researchers continue to report that burn pain remains under treated. This is of concern because unrelieved pain is thought to contribute to long-term sensory problems, including chronic pain, paresthesias and dyesthesias, a common occurrence after burn injury as well as debilitating psychological conditions in human beings (Yu and Dimsdale, 1999). But the pain due to burns in animals appears to be less. In the present paper, burns in graded Murrah she buffaloes have been reported.

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History and clinical examination

Four graded Murrah she buffaloes ranging from second to fifth lactations, were brought to the Department of Veterinary Surgery and Radiology with burn injuries over different parts of the body. Two animals met with fire accidents when they fell in to the holy camp fire conducted during the biggest festival of Andhra Pradesh i.e. Pongal. The other two animals had thermal injuries, when the sheds in which they were accommodated caught fire. The animals had lesions ranging from simple partial thickness burns on the face characterized by loss of superficial layers of skin at some places, complete black charring at the base of the ear and shriveled appearance of the skin at the lateral canthus of the left eye (Fig 1). In the second animal, the lesions involved the shoulder joint where full and partial thickness burns were noticed in the same animal at different areas (Fig 2). In the third case, localized lesions were seen over the right flank region (Fig 3). In the fourth case, the lesions were deep thickness burns and were mostly seen over the hind quarters, gluteal region, perineum and tail (Fig 4). In the same animal, the tail was affected to the maximum extent such that the entire switch was completely burnt and there was distortion of the structure (Fig 5). The outer border of the ears in same animal showed loss of auricular cartilage (Fig 6). The systemic signs were less pronounced in superficial thickness burns while more conspicuous in deep thickness burns. The other clinical signs included shriveled skin, inappetance, loss of milk yield etc. The affected animals had increased thirsty.

As the animals were tied to strong polls with iron chains, they could not escape from the accident. The animals lying down at the time of the fire accident were found affected to a significant level, when compared to those that were standing. However, they could not escape themselves as they were tied to the polls with strong iron chains. All the animals were inclining to take water but could not take when offered. All the animals had either normal or subnormal temperature.

Treatment and discussion

All the four animals were stabilized by affording fluid therapy with crystalloids and colloids. Dextrose normal saline and Ringer's lactate were infused each @ 45 ml/Kg body weight. Colloids like, Haemaccel (450 ml) was administered after the administration of crystalloids. Streptopenicillins (Dicrysticin-S 5g) were given IM for one week to ten days. Meloxicam (Melonex) @0.2 mg/Kg was administered SC for two to five days. Ciprofloxacin and Metronidazole infusions were also administered intravenously to control the anaerobic infections. Cool water was sprinkled over the body intermittently so as to mitigate suffering.

All the animals were housed with air cooling facilities. Silver sulphadiazine ointment (Silverex^R) was applied topically over the lesions. Fluid therapy was continued till when the packed cell volume values returned to physiological ranges. All the animals recovered completely after a period of one to three weeks. In the animal, that had extensive burn injuries at the hind quarters, the wound healing was a bit delayed. The tail lost its movement and it was amputated in due course.

Burn injuries occur universally and have plagued mankind since antiquity till the present day (Chawla *et al.*, 2011). It is a well known fact that the etiology of burns in animals differs highly significantly from that of human beings. Fire and flame induced burns are frequently reported causes of burns in large animals (Yadav *et al.*, 2010 and Sandhya *et al.*, 2016). In the present study, the magnitude of pain in superficial and partial thickness burns was less when compared to full thickness burns seen in case No. 4. The burn injury might have damaged the nerve endings and hence pain was minimal in cases with second degree burns, despite severe tissue damage.

The parenteral therapy with intravenous fluids and broad spectrum antibiotics was more appropriate in the present instance, as the improvement was significant and progressive day by day. The treatment adopted in the present case is similar to that done by Sagar *et al.* (2010) in a graded Murrah she buffalo and Kavitha *et al.* (2011) in twenty one Hallikar cattle. Silver sulphadiazine and Amnocrine hydrochloride ointments yielded better and quick results in the present study. Camphorated neem oil was applied liberally over the skin lesions for a period of 3 to 5 days to avoid infestation of maggots and flies. Devi Prasad *et al.* (2016) reported similar treatment for treating individual cases of burns in a monkey, Emu bird and a dog with different etiological factors.

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<p>Fig 1: First degree burns on face.</p>	<p>Fig 2: First degree burns on the shoulder</p>
	
<p>Fig 3: First degree burns on the left flank</p>	<p>Fig 4: Note second degree burns over the croup and loins.</p>
	
<p>Fig 5: Note loss of switch of tail</p>	<p>Fig: Note superficial partial thickness burns on the pinna</p>