

*Case Report*

**MANAGEMENT OF BUFFALO POX IN NATIVE BUBALINE  
SPECIES: A CASE REPORT**

**G. Raju\*<sup>1</sup>, N.Vamshi Krishna Reddy<sup>2</sup>, M. Rajashri<sup>3</sup>, K. Ramchandra Reddy<sup>4</sup>**

<sup>1</sup>PG Scholar, <sup>2</sup>M.V.Sc, <sup>3</sup>Ph.D Scholar, <sup>4</sup>Associate Professor & Head  
Department of Veterinary Gynaecology and Obstetrics

P.V. Narsimha Rao Telangana Veterinary University, Rajendranagar,  
Hyderabad, Telangana-500030

E-mail: rajareddy.gouru@gmail.com (\*Corresponding Author)

**Abstract:** The present communique reports management of Buffalo pox in bubaline population of Hyderabad, Telangana

**Keywords:** Buffalo pox virus; non-descript buffalo; human infection; zoonosis.

**Introduction**

Buffalo poxvirus (BPXV) is the causative agent of buffalopox disease that has been reported throughout the world (Souza, Trindade *et al.*, 2003) and pondered to be emerging and re-emerging disease in buffalo-raising countries (Singh *et al.*, 2007; Bhanuprakash *et al.*, 2009) and has zoonotic repercussions (WHO) (Goraya *et al.*, 2015). Outbreaks of buffalopox affect udder and teats, which may ultimately lead to mastitis in dairy buffalo and can significantly compromise the production (Goraya *et al.*, 2015). Though the disease is not responsible for increased mortality, it adversely affects the productivity and working capacity of the animals resulting in high economic losses (Chandra *et al.*, 1986; Cockrill, 1997; Venkatesan *et al.*, 2010). The present report describes a case of buffalo pox in native Buffalo.

**History and Observation**

A non-descript Murrah buffalo was brought to Teaching veterinary clinical complex (TVCC), Rajendranagar with a history of pustules on the udder, teat, around the vulval lips, mouth and lateral part of the body, inappetence and drop in milk yield. On clinical examination, the animal had pyrexia (Rectal Temperature -104.5°F). Pustules and scab lesions were seen on the teat and udder tissue (Fig. No.1). Lesions were also seen on the muzzle, mouth, the vulval lips and lateral part of the body. Hematological values and differential leukocyte count (DLC) were represented in Table No. 1 & 2 respectively.

*Received July 8, 2017 \* Published Aug 2, 2017 \* www.ijset.net*

Secondary lesion might lead to mastitis which resulted in great discomfort to the animal while milking.

#### **Treatment:**

The infected animals were treated with broad spectrum antibiotics to prevent secondary bacterial infection (Inj. Enrofloxacin – 1500mg; I/M) for 5-7 days along with Meloxicam (Inj. Melonex; Intas) for 3 days. External application of antibacterial cream and multipurpose Ayurvedic gel Charmin plus was also advised. Few maggotized wounds were observing on ear, udder and vulval region. These areas were treated with application of oil turpentine maggots were removed later neem oil was applied on wound 2-3 times daily. Pustules healed quickly upon treatment and lead to scab formation due to formation of granulation tissue underneath. The scab size varied from 0.5-1cm in diameter and the granulation tissue caused elevation of the lesion and after one week the scabs dropped off leaving a wart like granuloma surrounded by a characteristic horse shoe shaped ring of little scabs. Some other buffaloes of neighboring farmers herd were also affected with similar symptoms. The affected animal was kept in isolation in order to reduce the risk of spread of infection to the neighboring animals. Localized milkers nodes were usually treated symptomatically by applying protective bandages with desiccating ointments, powders and local antibiotics to prevent secondary infection.

#### **Discussion**

In India, buffalo pox virus (BPXV), a variant of vaccinia virus, is associated with severe disease outbreaks among buffaloes (Singh *et al.*, 2007). Buffalopox is an important zoonotic infection, which affects domestic buffalo (*Bubalus bubalis*), cattle and humans (Bhanuprakash *et al.*, 2009). The disease is of public health importance and warrants bio-safety measures in handling the virus/disease (Yogesh *et al.*, 2011). Lesions noticed on the milk man's hand (Fig. No. 2- A & B) might be due to direct contact with the infected animal. Due to suckling, lesions were also developed on muzzle of buffalo calf. Moreover, other buffaloes were also affected which may be spread through the common milkman.

The elevation of ESR & mild neutrophilia might be due to local inflammation. Secondary mastitis was developed & it was probably due to interference with the teat sphincter which allowed the entry of mastitis organisms and thus predisposed to mastitis. Buffalo recovered uneventfully within 20 days of treatment. The spread of the disease was controlled by adopting control measures. Emphasis should be laid on education of the farmers

regarding zoonotic infections and the practice of using gloves while milking should be enhanced to reduce the spread of infection from infected buffaloes to the uninfected ones.

### References

- [1] Bhanuprakash, V., Venkatesan, G., Balamurugan, V., Hosamani, M., Yogisharadhya, R., Gandhale, P., Reddy, K.V., Damle, A.S., Kher, H.N., Chandel, B.S., Chauhan, H.C., Singh, R.K. (2010). Zoonotic infections of buffalopox in India. *Zoonoses Public Health.*, 57, 149–155. doi:10.1111/j.1863-2378.2009.01314x.
- [2] Chandra, R., I.P. Singh, S.K. Garg, K.C. Varshney. (1986). Experimental pathogenesis of buffalopox in rabbits. *Acta Virol.*, 30, 390–395.
- [3] Cockrill, W.R. Buffalo production holds promise, in *Dairy India*, 5th edn., ed. by R.P. Gupta (Gupta R.P., New Delhi, 1997, p. 13
- [4] Goraya, M.U., Zafar ul Ahsan Qureshi, Muhammad Abbas, Muhammad Ashraf, Muhammad Munir. (2015). Isolation of buffalo poxvirus from clinical case and variations in the genetics of the B5R gene over fifty passages. *Virus Genes.*, DOI 10.1007/s11262-015-1209-6.
- [5] Singh RK, Hosamani M, Balamurugan V, Bhanuprakash V, Rasool TJ, Yadav MP. (2007). Buffalopox: an emerging and re-emerging zoonosis. *Anim Health Res Rev.*, 8:105–14. <http://dx.doi.org/10.1017/S1466252307001259>.
- [6] Souza, T.G., F.G. da Fonseca, J.T. Marques, M.L. Nogueira, L.C. Mendes. (2003). Aracatuba virus: a vaccinia-like virus associated with infection in humans and cattle. *Emerg. Infect. Dis.* 9, 155–160
- [7] Trindade, G.S., F.G. da Fonseca, J.T. Marques, M.L. Nogueira, L.C. Mendes, A.S. Borges, J.R. Peiro, E.M. Pituco, C.A. Bonjardim, P.C. Ferreira, E.G. Kroon (2003). Aracatuba virus: a vaccinia-like virus associated with infection in humans and cattle. *Emerg. Infect. Dis.* 9(2), 155–160
- [8] Venkatesan, G., V. Balamurugan, M. Prabhu, R. Yogisharadhya, D.P. Bora, P.N. Gandhale, M.S. Sankar, A.M. Kulkarni, R.K. Singh, V. Bhanuprakash. (2010). Emerging and re-emerging zoonotic buffalopox infection: a severe outbreak in Kolhapur (Maharashtra), India. *Vet. Ital.* 46(4), 439–448
- [9] Yogesh K.G., Chandrashekhkar G. Raut, Pragya D. Yadav, Babasaheb V. Tandale, Aruna Sivaram, Milind D. Pore, Atanu Basu, Devendra T. Mourya, Akhilesh C. Mishra. Buffalopox outbreak in humans and animals in Western Maharashtra, India. *Preventive Veterinary Medicine* 100 (2011) 242– 247.

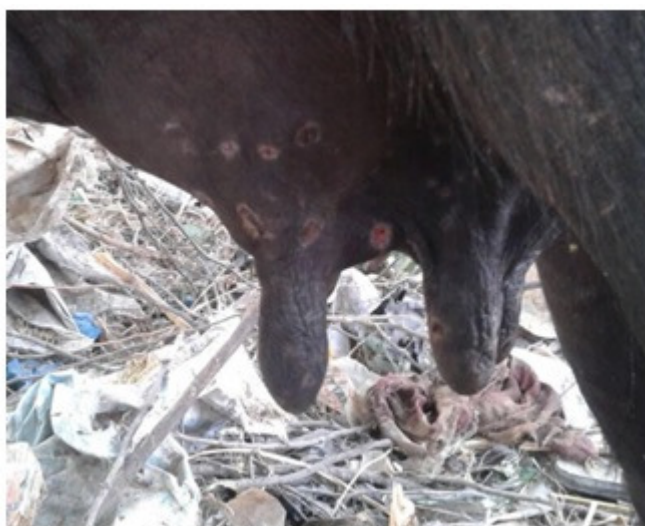
## TABLES

**Table 1. Hematological values**

S.No	Parameters	Values
1.	Haemoglobin (Hb)	13.9%
2.	Erythrocyte sedimentation rate (ESR)	25mm/hr
3.	Packed cell volume (PCV)	35%
4.	RBC count	$6.2 \times 10^6/\text{cmm}$
5	WBC count	$9.8 \times 10^3/\text{cmm}$

**Table 2: Differential Leukocyte Count (DLC)**

S.No	WBC type	Percentage
1.	Neutrophils	46%
2.	Lymphocytes	46%
3.	Monocytes	3%
4.	Eosinophils	2%
5.	Basophils	3%



**Fig. 1:** Showing typical pock lesions on the teats and udder of the affected Buffalo



**Fig. 2A:** Lesions on the milk man's hand due to direct contact with the infected animal.



**Fig. 2B:** Lesions on the milk man's hand due to direct contact with the infected animal.