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## Therapeutic management of hemogalactia in crossbred COWS

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### Abstract

A total of 24 crossbred cows of 4-6 years age groups were presented with a history of calving 15 days to 2 months back, passing blood in milk from 1 or 2 teats and associated quarters. All the 24 animals were randomly divided into 2 groups i.e. groups 1 and 2 with 12 animals in each group. In group 1 (n = 12) animals were treated with injection stryptochrome @ 10 ml, intramuscular, once a day for 4 days. In group 2 (n = 12) animals were treated with injection stryptochrome @ 10 ml, intramuscular, once a day with Vitamin A, D3, E, H and nicotinamide @ 10 ml orally, twice a day for 4 days. The results indicated that the recovery rate from hemogalactia in crossbred cows after 4 days of therapies were 83.33% and 100%, respectively, in stryptochrome and stryptochrome with vitamin A, D3, E, H and nicotinamide treated groups of animals.

**Keywords:** Cows, hemogalactia, treatment

### Introduction

Blood in milk or hemogalactia or hemolactia produces milk that is reddish or pinkish due to the presence of blood. Hemogalactia causes economic losses because bloody milk is rejected by the industry and consumers. It is common in cows after parturition. Blood in milk occurs from 2-8 days after parturition (Rodosis *et al.* 1994) [7]. Blood in milk is usually diagnosed based on the clinical signs. Trauma to teat and udder is one of the common causes of blood in milk. Bacteria (*Leptospira spp.*, *Brevibacterium erythrogenes*, *Serratia marcescens*, *Micrococcus cerasinus*, *Micrococcus chromidrogenes rubber*, *Micrococcus roseus*, *Lactorube faciens gruber*, *Sarcina rubra etc.*), some viruses and red yeast (*Monascus purpureus*) may cause systemic infection associated with intravascular hemolysis and capillary damage in udder leading to reddish or pinkish discoloration of milk (Balhara *et al.* 2016) [1]. Leptospirosis is one of the common causes of blood in milk in dairy cows. In leptospirosis, milk from all the quarters would be red in color, thick in consistency and it contains both blood and milk clots (Champawat *et al.* 1984) [2]. Cattle affected with hemogalactia are characterized by low platelets count and it may show pinkish or reddish discoloration of milk due to leakage of blood into milk (George *et al.* 2008) [3]. Blood in milk or hemogalactia in lactating dairy cattle is common in heifers and multiparous cows (Rodosis *et al.* 2007) [6]. Reddish or pinkish discoloration of milk in cattle observed due to thrombocytopenia that may cause leakage of blood in milk (George *et al.* 2008) [3]. The present study was designed to evaluate the efficacy of stryptochrome and stryptochrome with Vitamin A, D3, E, H and nicotinamide (Intavita NH) for therapeutic management of hemogalactia in crossbred cows.

### History and clinical observations

A total of 24 crossbred cows of 4-6 years age groups were presented to Government Veterinary Hospital, Deoranian, Bareilly with a history of calving 15 days to 2 months back, passing blood in milk from 1 or 2 teats and associated quarters. The clinical examination of the affected quarters revealed normal consistency and reddish or pinkish in color and milk from unaffected quarters was normal in color and negative for California mastitis and white side test (Fig. 1, Fig. 2 and Fig. 3).

### Material and Methods

All the 24 animals were randomly divided in 2 groups i.e. groups 1 and 2 with 12 animals in

each group. In group 1 (n = 12) animals were treated with injection stryptochrome @ 10 ml, intramuscular, once a day for 4 days. In group 2 (n = 12) animals were treated with injection stryptochrome @ 10 ml, intramuscular, once a day with Vitamin A, D3, E, H and nicotinamide (Intavita NH, Intas Animal Health, Ahmedabad) @10 ml orally, twice a day for 4 days.



**Fig 1:** Examination of the affected quarter of milk revealed normal consistency and reddish in color and milk from unaffected quarters was normal in color



**Fig 2:** Blood in milk in a cross bred cow showed reddish to normal color of milk



**Fig 3:** Hemogalactia in a cross bred cow showed reddish to pinkish color of milk in all the quarters of an udder

## Results and Discussion

The clinical efficacy was assessed by gradual clinical improvements in terms of visual observation of color of milk, its characteristics and pH of the milk. The results indicated that the recovery rate from hemogalactia in crossbred cows after 4 days of therapies were 83.33% (10/12) and 100% (12/12), respectively, in stryptochrome and stryptochrome with vitamin A, D3, E, H and nicotinamide treated groups of animals.

Different treatment strategies are available for the treatment of hemogalactia which include parenteral calcium, parenteral and local coagulants local and parenteral vasoconstrictor, antioxidants, antibiotics, blood transfusion, homeopathic and veterinary treatment practices (Muhammad and Rashid, 2015) [5]. Parenteral injection of a coagulant such as tranexamic acid and adrenochrome are likely to give better cure rates than calcium borogluconates (Rodositis *et al.*, 2007, Muhamad and Rashid, 2015) [5, 6]. The circulatory system of the udder is very sensitive to the vasoconstrictor action of adrenalin (Heidrich and Rank, 1967, Muhammad and Rashid, 2015) [4, 5].

A slight admixture of blood after calving is considered to be physiological and does not persist longer than 14 days. Any other hemorrhage by diapedesis is pathological and results from damage to the epithelial lining of the teat cistern due to hares milking either by hand or machine (Heidrich and Renk, 1967) [4].

In the present study, injection of coagulant stryptochrome is used for the treatment of blood in milk. It is an effective medicine to prevent or stop bleeding from small blood vessels capillaries. Vitamin A, D3, E, H and nicotinamide are used to improve udder health, help in the regeneration of damaged alveolar epithelial cells, enhanced immune response and also acts as an antioxidant.

In the present study, it is concluded that stryptochrome with vitamin A, D3, E, H and nicotinamide is highly effective (100%) for treating the hemogalactia in crossbred cows.

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