Efficacy study of Styplon Vet Bolus as supportive therapy in management of hemorrhagic conditions of ruminants

Ravikumar B. R[1],Mohan D[2] and Bhagwat V.G.*[3]

1- Veterinary Officer, Veterinary Hospital, Mahalakshmipuram, Bagalore.,
2- Veterinary Officer, Veterinary Hospital, Doddagattigenabbe, Hoskote Taluk, Bagalore rural
3- Research Scientist, The Himalaya Drug Company, Makali, Bangalore
* Corresponding author

Abstract

On-field trial was conducted in dairy animals to evaluate efficacy of Styplon Vet Bolus (M/s Himalaya Drug Company, Banglore, India) as supportive therapy in management of hemorrhagic conditions (Hematuria, hemoagalectia, bleeding wounds, uterine bleeding and epistaxis) of ruminants. Styplon Vet 1-2 boli twice daily was administered to cows and buffaloes, and ½ bolus twice daily for sheep till they recover clinically. The results indicated that Styplon Vet Bolus is a safe and effective styptic in ruminants.

Key words: Ruminants, hemorrhagic condition, Styptic.

Introduction

Hemorrhage is defined as loss of blood either within the body (internal) or on the body surface (external). Excessive bleeding is a very dangerous situation that needs attention quickly in animals. The blood flow must be suppressed as soon as possible, as there is a danger of the animal going into shock. The causes of bleeding include traumatic injuries (e.g. epistaxis), surgical wounds (cesarian section, cystotomy), presence of calculi in the urethra or urinary bladder, infections causing enteritis, cystitis, urethritis, mastitis, hemoagalectia, hematuria, blood in stools, etc. Keeping these in view, the present trial was undertaken to assess the efficacy of Styplon Vet Bolus as supportive therapy in management of hemorrhagic conditions like bleeding wounds, hematuria (blood in urine), hemoagalectia (blood in milk), epistaxis (nasal bleeding), and uterine bleeding. The Styplon Vet Bolus of The Himalaya Drug Company, Bangalore mainly contains extracts of Amalaki (Emblica officinalis), Mocharasa (Bombax ceiba), Vasaka (Adhatoda vasica), Sariva (Hemidesmus indicus), Kamala (Nelumbo nucifera), Durva (Cynodon dactylon), Lajjalu (Mimosa pudica), and powders of Mouktika sukti, Sourashtri bhasma and Trinakantamani pishti.

Materials and methods

A total of 40 ruminants (30 cows of Jersey, Holstein and non-descriptive breeds, 8 buffales of Surthi and Murrah breed, and 2 sheep of Bannur breed) were enrolled in the present field trial in and around the veterinary hospitals of Bangalore district.

Table-1. No of ruminant cases enrolled for various hemorrhagic conditions

Conditions	Cows	Buffaloes	Sheep	Total
Hematuria	15	2	2	19
Hemoagalectia	6	2	-	8
Bleeding wounds	3	1	-	4
Uterine bleeding	4	1	-	5
Epistaxis	2	2	-	4

Standard managemental practice was followed throughout the trial period. History, clinical signs, general health, etc. were recorded for all the animals. Hemorrhagic condition was diagnosed based on the history and clinical examinations. Styplon Vet Bolus (M/s Himalaya Drug Company, Banglore, India) was administered as supportive (rapid acting styptic/ coagulating agent) to antibacterial therapy 1-2 boli twice daily for cows and buffaloes, and ½ bolus twice daily for sheep till they recover clinically. Time taken (in days) for arresting bleeding was recorded. Efficacy of the therapy was judged based on the clinical recovery and disappearance of clinical symptoms.

Results

Styplon Vet Bolus was used as supportive (rapid acting styptic/coagulating agent) to antibacterial therapy in hemorrhagic conditions of ruminants .

Hematuria cases: Blood in urine ceased in 31.57%

cases in 2 days, in 47.34 % cases in 3 days and in 21.04 % cases in 4 days respectively on the administration of Styplon Vet Bolus as supportive therapy to antibacterials.

Hemagalectia cases: Blood in milk had stopped in 50% of cases on each days 2 and 3 of Styplon Vet Bolus administration along with antibacterials.

Bleeding wound cases: Both external and internal wounds were treated with Styplon Vet Bolus. In 75 % of the cases, bleeding from the wound had stopped in 2 days, whereas remaining 25% cases it ceased in 3 days from the administration of Styplon Vet Bolus.

Uterine bleeding cases: On days 2, 3, and 5 of Styplon Vet Bolus administration, 20 % each of uterine bleeding cases had recovered while in the remaining 40% cases, bleeding was arrested in 4 days.

Epistaxis cases: Styplon Vet Bolus arrested bleeding in 3 days in 75% cases and 25% cases in 4 days.

No adverse effects were observed throughout the trial period.

Discussion

On-field trial was conducted in a dairy farm for assessing the role of Styplon Vet Bolus as supportive to antibacterial therapy in hemorrhagic conditions of ruminants. Excessive bleeding in ruminants needs quick attention. The coagulation cascade consists of a complex network of interactions resulting in thrombin-mediated cleavage of fibrinogen to fibrin, which is one of the major components of thrombus. The coagulation cascade can be initiated either by the “exogenous pathway” or by the “endogenous pathway” so called contact activation. Finally, both the pathways lead to the activation of thrombin, which in turn cleaves fibrinogen to fibrin. The styptic/hemostatic activity of Styplon Vet Bolus would be due to the synergistic action of various ingredients in the formulation.

1. Hemostatic action: *Emblica officinalis*(1), *Hemidesmus indicus* (2&3), *Cynodon dactylon* (4) and *Mimosa pudica* (5) have hemostatic actions, which control local tissue hemorrhage effectively. *H. indicus* (6) is a vasocons-trictor that checks capillary blood flows. *Adhatoda vasica* (7) is a styptic used in bleeding disorders. *Trinakantamani pishti* (8) is useful in hemorrhages, hemoptysis, hematuria, hemorrhoids, menorrhagia, and other bleeding disorders. *Sourashtri bhasma* (9) has hemostatic activity that helps control bleeding faster.

2. Wound-healing activity: *Bombax ceiba* (9) helps in wound healing.

3. Demulcent activity: Demulcent herbs have high content of mucilage, and help soothe and protect the irritated or inflamed internal tissues. *Nelumbo nucifera* (10) has demulcent activity.

4. Enhancing effectiveness of antibiotics:

It was observed that pearl preparations do not show any antibacterial activity but when used at a concentration of 200 g/ml with antibiotics, then even at a sub-lethal dose, the antibiotic had effectively shown the results with reduced contact time (11).

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