

EFFECT OF HERBOSTRONG* IN INDIGESTION IN CATTLE

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Through the ages, the plant kingdom has been a source of succour to both man and animals in times of illness. In the course of history, a large body of knowledge was developed on the use of herbs as cures for various ailments. This body of knowledge forms the basis of Ayurveda. From it developed several modern pharmaceutical preparations. Indigenous herbal preparations were successful in the therapy of many diseases of man and animals.

One of these herbal products, Herbostrong* is evaluated for its effect on simple indigestion in the bovine.

Herbostrong is a polyherbal preparation containing herbs such as *Andrographis paniculata*, *Peucedanum graveolens*, *Strychnos nux vomica*, *Zingiber officinale*, *Piper longum*, *Plumbago zeylanka*, *Curcuma longa*, *Gardenia gammifera*, *Cinnamomum iners* and *Sodii biboras*. It is recommended for as a stomachic and rumenotoric in anorexia, indigestion and impaction.

Materials and Methods

Ten bovine indigestion cases were selected from the Veterinary

College Hospital, Mannuthy, at random for the clinical trial. A complete history was obtained. Detailed clinical examination was carried out and the observations were recorded. These animals were given Herbostrong at the rate of 10g each twice daily for four days.

Blood and rumen liquor samples were collected and examined as per standard procedures for various parameters before the treatment. Blood and rumen liquor samples were collected and evaluated on the fifth day after the initiation of the treatment.

Results

The results of the rumen liquor analysis and hematology are presented in the Tables 1 to 3.

Rumen liquor

Physical characters: Rumen liquor of animals before treatments had slight brownish tinge and watery consistency. The colour changed to greenish after treatment with Herbostrong. No variation in the consistency was noticed after treatment.

* Respel Pharma

Table 1 Effect of Herbostrong on Various Parameters of Rumen Liquor in Bovines

Sl. No.	Parameter	Before treatment	After treatment
1	pH	7.25 ± 0.19	7.1 ± 0.15
2	SAT (min.)	7.1 ± 1.59	5.75 ± 0.88
3	MBRT (min.)	7.12 ± 1.16	5.2 ± 0.65*
4	TVFA(mEq/l)	38.3 ± 1.65	42.3 ± 1.75*

* $p < 0.05$ between, before and after treatment

Table 2 Percentage activity of Rumen Protozoa before and after treatment with Herbostrong

	Protozoan activity			Iodophilic activity		
	+	++	+++	+	++	+++
Before Treatment (%)	50	40	10	50	30	20
After Treatment (%)	20	60	20	20	50	30

Table 3 Effect of Herbostrong on Hematological parameters of bovines

Sl. No.	Parameter	Before treatment	After treatment
1	Hb (g/dl)	10.3 ± 0.38	10.17 ± 0.39
2	PCV (%)	34.02 ± 0.94	34.48 ± 0.99
3	TEC ($\times 10^6$ /cu.mm.)	4.99 ± 0.144	4.98 ± 0.14
4	TLC ($\times 10^3$ /cu.mm.)	5.036 ± 0.27	5.039 ± 0.28
5	DLC (%) Neutrophil	28.40 ± 0.93	28.50 ± 0.80
	Lymphocyte	65.70 ± 1.15	65.70 ± 1.36
	Eosinophil	3.20 ± 0.57	3.40 ± 0.60
	Monocyte	2.70 ± 0.90	2.40 ± 0.412

pH: pH of rumen liquor before treatment ranged from 6.5 to 8.5 with a mean value of 7.25 ± 0.19 . The pH of rumen liquor after treatment with Herbostrong ranged from 6.5 to 7.5 with a mean value of 7.1 ± 0.15 . There was no statistically significant variation in pH before and after treatment with Herbostrong.

Protozoan activity: Motility of rumen protozoa increased after treatment with Herbostrong. The proportion of animals with sluggish, moderate and vigorous protozoan activity were 50, 40 and 10 per cent respectively before the treatment. This changed to 20, 60 and 20 per cent respectively after the treatment with Herbostrong.

Iodophilic activity: This also followed the pattern of protozoan activity. The proportion of animals with sluggish, moderate and vigorous iodophilic activity were 50, 30 and 20 per cent respectively before treatment and this was changed to 20, 50 and 30 per cent respectively after treatment with Herbostrong.

Sedimentation Activity Time (SAT): SAT of animals before treatment ranged from 2.5 min. to 17 min. with a mean value of 7.1 ± 1.59 min. The SAT of rumen liquor after treatment with Herbostrong ranged from 3 min. to 11.5 min. with a mean value of 5.75 ± 0.58 min. There was no statistically significant variation in SAT.

Methylene Blue Reduction Time (MBRT): The MBRT of rumen liquor from animals before treatment with Herbostrong ranged from 1.5 min. to 11.5 min. with a mean value of 7.13 ± 1.16 min. The value of MBRT after treatment ranged from 2.5 min. to 9.5 min. with a mean value of 5.2 ± 0.65 min. This variation was statistically significant at 5 per cent level which suggested the enhanced microbial activity of rumen liquor following treatment with Herbostrong.

Total Volatile Fatty Acids (TVFA): TVFA level in the rumen liquor of animals before treatment ranged from 29 to 46 milli equivalents/litre with mean value of 38.3 ± 1.65 which changed to 32.0 to 49.0 with a mean value of 42.3 ± 1.72 milliequivalents/litre after treatment. Statistical analysis revealed that there was significant increase in the TVFA levels of rumen liquor following treatment with Herbostrong. This suggested increase in the microbial activity.

Blood

The mean values of haemoglobin, packed cell volume, total erythrocyte count, total leucocyte count and differential count are given in the Table 3. There was no statistically significant change after the treatment.

Discussion

Herbostrong is recommended for use as a stomachic and rumenotonic in bovines. It could be successfully used in treating non-specific anorexia condition in cattle (Sukumar *et al.*, 1998).

There was increase in both protozoan activity and iodophilic activity after the administration of the drug, although its effect on SAT was minimum. A distinct decrease was noticed in the MBRT and increase in TVFA level after the administration of the drug. This showed that the drug Herbostrong had beneficial effect on the ruminant microbial flora and thereby influence rumen fermentation. These findings are in agreement with that of Jagdish *et al.* (1998) and Venkateswarlu *et al.* (1998). The results suggested that Herbostrong can be successfully used in the treatment of primary indigestion in bovines.

Summary

The effect of Herbostrong (herbal preparation) 10 g BID for four days on primary indigestion in bovines was assessed. The results suggested that the product improved the protozoan motility, iodophilic activity, MBRT and TVFA level of rumen and it can be successfully used in the treatment of primary indigestion in bovines.

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