

Paśu Āyurvēda (Veterinary Medicine) in Garuḍapurāṇa[#]

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Abstract

The history of veterinary medicine is closely tied to the development of human medicine. Evidence of animal medicine has been found in ancient civilizations, such as those of the Hindu, Babylonians, Hebrews, Arabs, Greeks, and Romans. Ancient Indian literature in the form of the holy Vēda, Purāṇa, Brāhmaṇa, epics, etc. is flooded with information on animal care. The Purāṇa are ancient scriptures discuss varied topics like devotion to God and his various aspects, traditional sciences like Āyurvēda, Jyōtiṣa (Astrology), cosmology, concepts like dharma, karma, reincarnation and many others. The treatment of animal diseases using Ayurvedic medicine has been mentioned in Garuḍapurāṇa, Agnipurāṇa, Atri-saṁhitā, Matsyapurāṇa and many other texts. The Garuḍapurāṇa is one of the important Sāttvika purāṇa, the subject matter is divided into two parts, viz. Pūrvakhaṇḍa (first part) and an Uttarakhaṇḍa (subsequent part). Gavāyurvēda, Gajāyurvēda narrated briefly and Aśvāyurvēda described in detail in Pūrvakhaṇḍa.

Introduction

The history of veterinary medicine is closely tied to the development of human medicine. Rudimentary medical skills are thought to have existed as early as 9000 BC among Middle Eastern shepherd cultures. These skills developed further by Egyptians from about 4000 to 300 BC. Archaeologists have discovered papyrus fragments from an Egyptian medical textbook of 1850 BC that described diseases of cattle, dogs, birds, and fish. The papyrus shows that ancient Egyptians understood veterinary anatomy. Recognized signs indicating certain diseases and practiced specific methods of

treatment. Evidence of animal medicine has also been found in other ancient civilizations, such as those of the Hindu, Babylonians, Hebrews, Arabs, Greeks, and Romans.

Ancient Indian literature such as holy *Vēda*, *Purāṇa*, *Brāhmaṇa*, epics etc. contain abundant information on health care of animals. References of physicians also been mentioned who were specialized in the healthcare of all animals and have also specialized in specific class of animals. *Śalihōtra*, who is considered the father of Indian veterinary sciences, was one among them. He is also the well-known veterinarian of the world.

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The treatment of animal diseases in ancient India was well-developed and carried out with great care and precision by well-trained personnel. The treatment of animal diseases using Ayurvedic medicine has been mentioned in *Agnipurāṇa*, *Atri-saṁhitā*, *Matsyapurāṇa* and many other texts.

India with its ecological and climatic diversities is perhaps the richest nation with herbal medicinal wealth. *Āyurvēda*, the oldest existing medical science of India, with its generous and veritable material medica, fulfills the mission of serving the ailing population through the ways of nature since time immemorial. Although research on medical science has opened new sources of remedies, *Āyurvēda* is continuing as a mainstay in the treatment due to its easy availability coupled with safe, effective, and

sustainable claims. *Āyurvēda* is not only responsible for the health of human beings but also plays an important role in Veterinary sciences. Since antiquity, different branches of *Āyurvēda*, like

- *Vṛkṣāyurvēda* - deals with *Vṛkṣa* (Plants)
- *Hastyāyurvēda*/ *Gajāyurvēda* - deals with *Hasti/Gaja* (elephants)
- *Aśva/Hayāyurvēda* - deals with *Aśva/Haya* (horses)
- *Gavāyurvēda* - deals with *Gava* (cows) etc.

The *Purāṇa* are ancient scriptures, discuss varied topics like devotion to God in his various aspects, traditional sciences like *Āyurvēda*, *Jyotiṣa* (Astrology), cosmology, concepts like *dharma* (right way of living), *karma* (deed), reincarnation and many others. Sage *Vyāsa* is credited with compilation of *Purāṇa*. One of the main objectives of the *Purāṇa* was to make available the essence of the *Vēda* to the common man, and the *Vēda* were basically meant for the scholars but not for the ordinary man. The *Purāṇa* are perhaps the most important or commonly used scriptural texts for the mankind specifically in India. They were guidebooks for the whole life and society.

Purāṇa usually refer to the *Mahāpurāṇa*. There are also smaller *Purāṇa* known as *Upapurāṇa*. There are eighteen (*aṣṭādaśa*) main *Purāṇa*, which were known as *Mahāpurāṇa* and equal number of secondary works of the *Purāṇa*, known as *Upapurāṇa*. The *Mahapurara* are¹

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1. *Brahmapurāṇa*
2. *Padmapurāṇa*
3. *Vaiṣṇavapurāṇa*
4. *Śivapurāṇa*
5. *Bhāgavatapurāṇa*
6. *Nāradapurāṇa*
7. *Mārkaṇḍēyapurāṇa*
8. *Agnipurāṇa*
9. *Bhaviṣyapurāṇa*
10. *Brahmavaivartapurāṇa*
11. *Liṅgapurāṇa*
12. *Varāhapurāṇa*
13. *Skandapurāṇa*
14. *Vāmanapurāṇa*
15. *Kūrmapurāṇa*
16. *Matsyapurāṇa*
17. *Garuḍapurāṇa*
18. *Brahmāṇḍapurāṇa*

The above list is from the *Bhāgavatapurāṇa*, and corresponds to the list given in the *Viṣṇupurāṇa*. Sometimes, the *Vāyupurāṇa* is substituted for the *Agnipurāṇa* or the *Śivapurāṇa*. *Narasimhapurāṇa* sometimes replaces the *Brahmāṇḍapurāṇa* in this list.

Bhāgavatapurāṇa is the highest of all *Purāṇa*. The *Viṣṇupurāṇa* comes next, and then comes *Garuḍapurāṇa*. These three are principal *Purāṇa* in the *Kali* age.

Introduction to *Garuḍapurāṇa*

The *Garuḍapurāṇa* is a *SāttvikaPurāṇa* which contains approximately nineteen thousand *ślōka*. It is a medium-sized *Purāṇa*, divided into two parts, viz. *Pūrvakhaṇḍa* (first part) and *Uttarakhaṇḍa* (subsequent part). Each *khaṇḍa* has several chapters (*adhyāya*). The *Pūrvakhaṇḍa* that is called as

Ācārakhaṇḍa deals mainly with *karma* and it is much lengthy, containing 240 chapters. There is a brief note on creation, but greater part of the *Khaṇḍa* occupied with the description of *vratas* or religious observances, sacred places dedicated to the Sun, *Śiva*, *Viṣṇu*. Besides, it also contains treatises on astrology, palmistry, politics, *Sāṅkhyā*, *Yōga*, anatomy, precious stones, and still more extensive on *medicine-Āyurvēda*.

The *Uttarakhaṇḍa* consists of two *Khaṇḍa* viz. *Dharmakhaṇḍa* and *Brahmakhaṇḍa*. The *Dharmakhaṇḍa* also known as *Prēta-kalpa* (obsequial rites) which deals with *dharma*, contains 42 chapters and described the rites to be performed at the time of death, funeral, rites, and ancestor worship and special funerals rites for the *Satī*. There are legends of the *Prēta* (spirits), describing the causes of their wretched existence which recall the Buddhist legends recorded in *Pēavaṭṭhu*. The *Prētakalpa* portion of the *Garuḍapurāṇa* is generally recited during the period of mourning. And the *Brahmakhaṇḍa* deals with the *Mōkṣa* (liberation), which leads to salvation. It consists of 29 chapters and this section contains a dialogue between Lord *Kṛṣṇa* and *Garuḍa* on supremacy of *Viṣṇu*, the nature and forms of Gods, descriptions of *Vēṅkaṭēśvara* shrine at Tirupathi and other *Tīrtha*.²

Animal health care

Before the advent of modern allopathic system of medicine, it seems possible that the healing art was almost the same

throughout the world including India. This system of medicine has given the term ethno-medicine (when implied to human treatment) and ethno-veterinary medicine (in the context of animal treatment). In India, ethno-veterinary practices were in vogue since time immemorial. In ancient India, the Vedic literature, particularly *Atharvavēda* is a repository of traditional medicine including prescriptions for treatment of animal diseases.

Cow's health care

Cows were regarded as wealth and were the backbone of the economy of ancient Indians, i.e., Aryans. Wars were fought for acquiring cows. Cattle were one of the most frequently used animals described in *Vēda*. Cows were regarded as mother (*Gōmātā*) and referred to as *Aghanya*. The Vedic Society in India was dominated by the 'cow culture' and Vedic people adored the cow and regarded it as the source of their good fortune, happiness, and good health (*Ṛigvēda* 6.28.1, 6). It is believed that the religious priests, who had the responsibility of maintaining cattle, were the first animal healers or veterinarians. A number of Vedic hymns indicate medicinal values of the herbs and it is likely that these

priests were also apt to it and used their medical knowledge to keep the sacred cattle free from ailments.

In later Vedic period, which includes the two epics, i.e., *Mahābhārata* (c.1400 BC) and *Rāmāyaṇa* (c. 2000 BC), which depict the religious, social, political, and economic life of the Aryans during post-Vedic period. In the epic *Mahābhārata*, references have been made to many domestic animals including cattle, sheep, goats, dogs, elephants, and horses and their uses. Cow dung was used as manure. *Rāmāyaṇa* is the oldest literature of Sanskrit, because no written history is available of that period. The treatments of various ailments using medicinal herbs were used widely to cure ailments of men and animals. The *Purāṇa* were written to popularize the *Vēda* and they contain the essence of the *Vēda*. The aim of the *Purāṇa* is to impress on the minds of the masses and they are Not for the Scholars, but for the ordinary people who could not study the *Vēda*. Even to this day, the *Purāṇa* are popular. The knowledge of treating animal diseases using medicinal plants was documented not only in *Vēda* but also in later Scriptures such as *Skandapurāṇa*, *Dēvīpurāṇa*, *Matsyaapurāṇa*, *Agnipurāṇa*, *Garucjapurāṇa*, and *Lingapurāṇa*.

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Āyurvēda is not only deals with the Health of Human beings but also Health of Animals and Plants. The medical science that deals with Animals is known as Veterinary science. Before the advent of modern Veterinary science, the ethno-veterinary practices were in vogue since

time immemorial. Animals received good medical care in ancient India. Physicians treating human beings were also trained in the care of animals. Indian medical treatises like *CharakaSaṁhitā*, *Suśrūta Saṁhitā* and *HārītaSaṁhitā* contain chapters or references about care of diseased as well as healthy animals.

Gōchikitsā (the treatment of cows) in Garuḍapurāṇa

In *Garuḍapurāṇa's* *Ācārakhaṇḍa* the chapter entitled "*Nānaśadha prayōga nirūpaṇam*" deals about *Gōcildtsa* (the treatment of cows) in brief, it is the discussion between *Hari* and *Hara*. The subject matter is described in 8 verses. But the 7th and 8th verses are pertaining to the treatment of horses also. Treatment mentioned in *Garuḍapurāṇa* for the disorders pertains to cows, buffalos etc. as follows.

In the beginning it discussed the disorder of cow which is not fond of her calf. For the management of this condition the prescription advised is- "Her own milk mixed with *Lavaṇa* (rock salt)". Afterwards described the management of few diseases and disorders. The details are as below.

The management of Kṛmijāla (micro and macro germs) in cows and buffaloes

If the cows or buffalo are affected by germs, the bits of dog's bones should be tied around the neck of the animal, with this the germs from their bodies will be shed off.

Treatment of Gōjaṅganābhi pataḥ (cast off horn)

The *Guñjñā* (*Abrus precatorius*) roots should be administered internally to bring about the castings of horns in homed cattle.

Treatment for Kṛmijāla (micro and Macro germs) in Chatuṣpāda (quadruped), Dvipāda (biped)

When the *Chatuṣpāda* (quadruped), *Dvipāda* (biped) animals are affected by germs, the *Svarasa* (juice) of *Varuṇaphala* (*Creteva nurvala* fruit) should be applied externally for shedding the germs.

Vraṇa (wounds) Chikitsā

For healing of the *Vraṇa* (wounds) in the wounded animals, external application of *Jaya* (*Premna integrifolia*) advised.

Gōmahīṣa (cows or buffaloes) Upasarga Chikitsā (treatment of bodily ailments)

If the *Gōmahīṣa* (cows or buffaloes) are suffering from *Upasarga* (bodily ailments), the urine of an elephant is advised for internal use.

Gōpuṁsaścahitam (for the beneficent of bullock)

The bullocks play important role in fieldwork, hence to keep up the general condition, *Masūra* (lentil) and *Sāli* (rice) pounded and mixed in the milk of a cow or a buffalo is advised internally. This formulation is useful in maintaining the strength of bullocks also.

Treatment of Vāri-sphōṭam (bulbous eruption) in Haya and Kēśara (horses and bullocks)

When *Haya* and *Kēśara* (horses and bullocks) are suffering from *Vāri-sphōṭam* (bulbous eruption) the leaves of

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Śarapuṅkha (Tephrosia purpurea) with *lavaṇa* (rock salt) is advised.

Turaṅga, Kēśara Kaṇḍu chikitsā (treatment of itches in horses and bullocks)

If the *Turaṅga* and *Kēśara* affected by *Kaṇḍu* (itching), *Ghṛitakumārī (Aloe vera)* leaves with *Lavaṇa* (rock salt) advised.

These are the few treatments mentioned in *Garuḍapurāṇa* for the disorders of cows and other animals.^{2 3 4 5}

Horse's health care

In ancient days Indians used the horses for rapid transportation, riding, chariot, and war, race, and even in agriculture activities like plowing etc. The horses were frequently mentioned in the Vedic age (1500-1000 BC). In the later Vedic period

(1000-600 BC), Buddhist period (600 BC), and Mauryan period (400 BC), the use of horses was well documented. During the Mauryan period (322-232 BC), the husbandry of horses made tremendous progress and these were used for riding and for war. The royal horses were under the charge of a superintendent of horses (*Aśvaadhyakṣa*), who used to register the breed, age, color, and place of origin. Detailed accounts of housing and feeding of horses were mentioned in *Arthaśāstra*. Veterinary doctors and horse trainers were assigned free endowment. In the Gupta dynasty (300-550 AD), horses were given more importance than elephants in Samudragupta's army because of their speed and easy maneuverability.

Haya/AśvaĀyurvēda (Medical treatment of horses) in Garuḍapurāṇa

The treatment pertains to horses was described in detail in *Garuḍapurāṇa Ācārakhaṇḍa* the chapter entitled *Gajāśvāyurvēda*. The name of the chapter indicating that, here the treatment pertains to *Gaja* (elephant) and *Aśva* (horse) were discussed. *Dhanvantad* narrates the subject matter and the numbers of verses are 39, out of which 32 pertain to *Aśva* (horse) and the remaining seven verses are about *Gajāyurvēda* (medical treatment of elephants). The chapter begins as- Now I am going to explain in detail the *Āyurvēda* of horses, which deals with the diseases of horses, and the means of keeping them in sound health etc. In the beginning described the *Haya Sarvārthalakṣaṇa* (the features of healthy and fit horse).

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Sarvārthalakṣaṇa of Haya (the features of healthy and fit horse)

There are many types of horses but the horse, which does not possess the following features, is considered as healthy and fit one. Such type of horses only useful for riding, wars and other purposes. The features are

1. *Kākatuṇḍī* (crow-lipped),
2. *Kṛiṣṇajihvā* (black-tongued),
3. *Rikṣaya* (bear-faced),
4. *Uṣṇatāluḥka* (hot-palated),
5. *Karāla* (fierce looking)
6. *Hīnadanta* (deficient or lacking in teeth),
7. *Śṛṅgī*, (horned),
8. *Virāladantaka* (few-toothed),
9. *Ēkāṇḍa* (single-testicled),
10. *Jātāṇḍakaṅcuka* (born with Scrotal tumour),
11. *Dvikhurī* (cleft hoofed),
12. *Stanī* (teated),
13. *Mārjārapāda* (cat-footed),
14. *Vyāghrabha* (resembling tigers),

15. *Kuhavjdradhjsannjbha* (appearing as if affected by *Kusha* and tumours),
16. *Yamaja* (twin-born),
17. *Vmana* (diminutive in size),
18. *Mijralo chana* (cat-eyed) and
19. *Kapilochana* (monkey-eyed).

The healthy and fit horses are classified into three types based on their features. They are

1. ***Uttama Asva* (the best horse):** The horses, which are *Turukaja* i.e., Turkish considered as the best.
2. ***Madhyama Asva* (best horses):** The horses, which are five Hasta (cubits) in height considered as best.
3. ***Kanyama Asva* (average horse):** The horses, which are three Hasta (cubits) in height is considered as average.

In general the horses which are having *Dirghapadāda* (long-limbed), *Hrasvakarma* (short ears) and *Musika varna* (mouse-coloured) will live long and are best ones. For the *Raksha* (protection) of the horses from diseases and evil spirits, in *Garudapura* the following rites are mentioned.

The *Aśva Rakṣaṇa* (protection) rites

For the *Raksha* (protection) *Revant puja*, (worship of God *Revanta*) *homa* (sacrificial offerings) and *Dvija Bhojana* (feeding of brahmins) should be perform in favor of the horse. And a compound made up of following drugs should be tied round the neck of the horse.

1. *Saraḷa* (*Pinus longifolia*)
2. *Nimbapatra* (neem leaves)
3. *Guggulu* (*Commiphora mukul*)
4. *Sarṣapa* (mustard)
5. *Tila* (gingelli)
6. *Vacā* (sweet flag)
7. *Hirṅgu* (asafoetida)
8. *Ghṛita* (ghee)

When using the horses for riding, wars etc., there is a possibility of causing ulcer/wound naturally or by the weapons and also they may be affected by various diseases. Such types of ulcers/wounds and diseases should be diagnosed properly and treated in time for keeping the horse healthy and fit. In *Garuḍapurāṇa* after explaining the features of healthy and fit horse, classification of the same and protecting them from diseases and evil spirits, the classification of ulcers/wounds, diseases and their treatment, etc. are described in details.

The classification of ulcers /wounds in horses:

In *Garuḍapurāṇa* the *vraṇa* (ulcers/wounds) are classified broadly into two types based on the causative factors i.e.

1. *Āgantujavraṇa* -The ulcers /wounds caused by *Āgantuja kāraṇa* (traumatic, or extraneous factors).
2. *Dōṣaja vraṇa* - The ulcers / wounds due to derangement of *Dōṣa* i.e. the humors.

They are sub classified based on the type of *Dōṣa* as

1. *Vātaja vraṇa* - The ulcers/wounds

caused due to the derangement in *Vāta*. The main characteristic feature is *Chirapākī* (delayed suppuration).

- 2; *Kaphaja Vraṇa* - The ulcers / wounds caused due to the derangement in *Kapha*.

The main - characteristic feature is *Kṣiprapākī* (suppuration speedily).

3. *Pittaja Vraṇa* - The ulcers / wounds caused due to the derangement in *Pitta*. The main characteristic feature-is *Dāha* (burning sensation).

4. *Śōṇitaja/Raktaja Vraṇa* - The ulcers /wounds caused due to the derangement in *Rakta*. The main characteristic feature is *Manda vedanā* (mild pain).

The *Vraṇa chikitsā* (management of the ulcers / wounds)

In the management of ulcers / wounds the first step for the *Āgantuja vraṇa* (traumatic ulcers/wounds) caused by *Śāstra* (weapons) and for the *Duṣṭa vraṇa* (non healing ulcers/wounds) is *Viśōdhana* (wash off the ulcer's/wound's impurities by medicated decoction). After that the following formulations can be used for *Sōdhana* (purification) and *Rōpaṇa* (healing) externally.

1. The *Ēraṇḍa mūla* (Caster root), two types of *Haridrā* (*Turmeric*), *Chitraka* (*Plumbago zeylanica*), *Viśvabhēṣaja* (*Zingiber officinale*), *Rasōna* (*Allium sativum*) and *Saindhava* (rock salt) are ground well with *Takra* (butter milk) or *Kāñjī* (sour gruel).

2. The *Tila* (gingelly), *Saktukapiṇḍikā* (fried grain flour), *Saindhava* (rock salt) and *Nim̄bapatra* (neem leaves) are ground well with *Dadhi* (curds).

The management of various diseases

Kṛimi, *Śleṣmā*, *Mada*, *Ani/avināśa chikitsā* (treatment of worms, mucous discharges, Intoxication and deranged *Vāyu*)

A compound formulation made up of powdered *Paṭṭola* (snake gourd), *Nim̄ba* (neem) leaves, *Vacā* (sweet flag), *Chitraka* (*Plumbago zeylanica*), *Pippalī* (*Piper longum*) *Śṛṅgavēra* (*Zingiber officinale*) should be administered to the horse with water.

***Kuṣṭha chikitsā* (treatment of cutaneous infections):** In any cutaneous infection a decoction of *Nim̄bapatra* (neem leaves), *Paṭṭola* (snake gourd), *Triphalā* (three myrobalans), and *Khadira* (*Acacia catechu*) should be successively given for three days to a horse, after *Raktamōkṣaṇa* (bloodletting).

***Vraṇa, Kuṣṭha chikitsā* (treatment of ulcers/wounds and cutaneous infections):** Application of *Sarṣapa taila* (mustard oil) is better, and *Laśunādi kaṣāya* (a decoction of garlic, etc.) to be administered.

***Nasya karma*:** In certain afflictions when *Nasya* (errhines) become necessary either the juice of *Mātuluṅga* (*Citrus medica*) or that of *Māmsī* (*Nardostachys jatamansi*) should be used for that purpose. The first day's dosage is two *Pala* (48gms) weight.

Every day it has to be increased by a *Pala*. The maximum for a first class horse is eighteen *Pala*. In the average class it is fourteen and for the lowest class of horse it is eight *Pala* weight. Errhines are not to be administered in autumn or summer seasons.

***Anupāna* useful in *Aśvarōga chikitsā* :** The *Anupāna* i.e. the drink take along with or after medicine was important in treatment. Because it may help in carrying, absorption, assimilation and enhancing action of the drugs. Normally the selection of *Anupāna* is done depends upon disease, *Dōṣa* etc. The following *Anupāna* are mentioned in *Garuḍapurāṇa* based upon the *Dōṣa*.

- Vāta rōga*:** In diseases of the deranged and aggravated *Vāyu* the medicine should be administered through the *Taila* (oil), or in combination with *Śarkarā* (sugar), *Ājya/Ghṛita* (ghee) or *Tōya* (water).
- Kapha rōga*:** In diseases of the deranged *Kapham Sarṣapa taila* (mustard oil) with *Vyōṣa/Trikaṭu* powders are used as *anupāna*.
- Pitta rōga*:** In the diseases of the deranged *pitta* the drugs should be administered along with *Triphalā* decoction as *anupāna*.

***Najugupsā Aśva lakṣaṇa*:** (characters of the horse which is liked by all): The horse, which *Pakva Jambunibha* (complexion of ripe jamun fruit), *Svarṇāvarṇa* (golden coloured) and regularly fed on *Ṣaṣṭika Śāli* grains and milk, will never come to a state of being condemned and liked by all.

The management of *Ardhprahara Aśva* (partially/slightly injured horse): The horse when hurt or injured should be treated immediately so as to keep fit. When the horse is partially injured, in such condition *Guggulu* is advised. And the diet should be *Dugdha pāyasa* (milk pudding) for immediate/ speedily recovery.

The diet for horses during illness: The diet also plays a role during the treatment because the food imparts a greater strength and vigour to the horses and acts as a general prophylactic against diseases. The following diets are mentioned for the horses in *Garuḍapurāṇa*, which are according to the *Dōṣa*.

1. **The diet in *Vātaja vikāra*:** The *Dugdha* (milk) and *Śalyannam* (rice) is the ideal diet in *Vātaja vikāra*.
2. **The diet in *Pittaja vikāra*:** In diseases due to the action of the deranged and aggravated *Pitta*, the diet should consist of a *karṣa* (12gm) weight of *Maṁsarasa* (meat soup) mixed with *Madhu* (honey), *Mudgarasa* (green gram soup/ gravy) and *Ājya* (clarified butter).
3. **The diet in *Kaphaja vikāra*:** In diseases of the deranged *Kapha*, *Mudga* (green gram) or *Kulattha* (horse gram) *rasa* (soup/ gravy) mixed with *Kaṭu*, *Tikta* (pungent, bitter drugs), should be given to horses.

Treatment of *Bādhirya* (deafness) and *Tridōṣajanya rōga* (diseases manifested by three humors)

In the management of *Bādhirya* (deafness) and the affections or in diseases of *Tridōṣa* origin, *Guggulu* is to be administered along with *Grāsa* (mouthfuls) of grass, etc.

Dūrvā Kalpa* for the management of *Sarvarōga

In the management of *Sarvarōga* just like *Vardhamāna Pippalī kalpa*, *Dūrvā* (*Cynodon dactylon*) is advised to take in increasing doses. The details are as follows-One *Karṣa Dūrvā* should be given to a horse on the first day, and the dose should be increased by a *Karṣa* measure, each day, till the dose reaches five *pala*. During this treatment Eighty *pala Pāna* (drinks) or *Bhōjana* (diet) is consider as *Para/Uttama* (best/ maximum), Sixty *Pala* is the *Madhyama* (average) and forty *pala* is the *Adhama* (lowest/ minimum).

Management of miscellaneous disorders

The drugs along with decoction of *Triphalā* are advised if the horse is affected by *Vraṇa* (ulcers)/*Kuṣṭha*/*Khaṅja* (lameness). The medicines should be administered with *Gōmūtra* (cow's- urine) in *Mandāgni* (impaired digestion), *Śōtharōga* (swelling/ oedema). If they are affected by *Vātapitta*, *Vraṇa* (ulcers) the *Ghṛtasaṁyukta Gōkṣīra* (cow's milk along with ghee) is advised. If the horse is *Kṛṣa* (emaciated), the diet shall be supplemented by *Māṁsa* (meat) for *puṣṭyārtham* (to improve the body).

Rōgaghna, Puṣṭi, Bala, Tējō Vivardhana Yōga

For protection of the horses against diseases and to nourish, to impart greater strength and vigour the following *Kalpa* of *Guḍūcī* (*Tinospora cordifolia*) are advised.

1. Five *Pala* weight of *Guḍūcī* should be given to a horse during *Śarad* (autumn), *Grīṣma* (summer) in early morning along with *Ghṛita* (clarified butter). This imparts a greater strength and vigour to a horse and acts as a general prophylaxis against disease.
2. *Guḍūcī* along with milk
3. *Guḍūcī* along one or three or four palms of powdered *Śatāvarī* (*Asparagus recemosus*) and *Aśvagandhā* (*Withania somnifera*).

Features and management of epidemics outbreak

In the stud form when suddenly the horses assume uniformity in colour and features or die together, it must be immediately considered as an epidemic outbreak. It has to be managed and should take proper precautionary measures to prevent it. For this the following rites and remedies are advised.

The rites: The vitiation warded off by the performance of proper prophylactic rites, and *Hōma*, as well as by feeding the pious and learned Brahmins.

The medicines: The medicine known as *Harītakī-Kalpa* given to horses under these circumstances will be beneficial. The

mode of administration of *Harītakī-Kalpa* is as follows.

"On the first day, five *Harītakī* (*Terminalia chebula*) pasted together with *Gōmūtra* (cow's urine), *Taila* (gingili oil), and *Lavaṇa* (rock salt) are given. Every day the dosage is increased by five *Harītakī* till the maximum of hundred. The *Uttama mātrā* (best dose) is hundred, and eighty *Madhyama* (average) and sixty *Harītakī* is *Adhama/Kaniṣṭha mātrā* (the smallest dose).^{2, 3, 4, 5}

Elephant's health care

Elephant is a largest land animal living in Asia and Africa. In ancient India the elephant is an important tool for Army as well as civil work of a King and also for temple rituals. Elephants are considered as *Vajra* in war and also for different types of work. Only one elephant can win over six thousands horses. Hence one has to keep up the fitness of the elephants always. *Pālakāpya*, an ultimate authority on elephant medicine belonged to the Rigvedic period 2000-4000 B.C., recognized the importance and wrote a treatise known as *Gaja Āyurvēda* or *Hastī Āyurvēda* which deals with elephant medicine and dedicated to Lord *Gaṇēśa*. Hence in India elephant is considered as sacred animal like cow.

Gajāyurvēda/Hastīyurvēda (medical treatment of elephant) in Garuḍapurāṇa

Ancient Indian literature is flooded with information on animal care, health management, and treatment of disease. The *Gaja Āyurvēda* or *Hastī Āyurvēda* is

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mentioned in *Veda*, *Pūraṇa*, *Brāhmaṇa* epics. In *Ācārakhaṇḍa of Garuḍapurāṇa* the chapter entitled "*Gajāśvāyurvēda*" the last seven verses mainly dealt with *Gaja Āyurvēda*. The subject matter discussed in brief It begins as "Now shall expound that branch of the *Āyurvēda* which deals with the medical treatment of the diseases of elephants".

Management of diseases

The drugs, treatments enumerated in connection with diseases of horses may also be employed in the diseases of elephants. But the dosage is four times of that of a horse. In *Garuḍapurāṇa a Kaṣāya* known as *Rōga Sāmaka Kaṣāya* mentioned for treating the diseases of elephants.

Rōga Sāmaka Kaṣāya

It is made up of the following pacifying drugs. They are

1. *Triphalā* (three myrobalans)
2. *Pañchakōla* (five drugs of *Piper longum*, its root, *Piper chaba*, *Piper cubeba*, dried ginger)

3. *Daśamūla*, (roots of ten plants viz. *Aegle marmelos*, *Oroxylum indicum*, *Prena integrifolia*, *Gmelina arborea*, *Stereospermum suaveolens*, *Solanum xanthocarpum*, *Solanum indicum*, *Uraria lagopodioides*, *Desmodium gangeticum*, and *Tribulus terrestris*.)
4. *Viḍaṅga* (*Embelia ribes*)
5. *Śatāvarī* (*Asparagus recemosus*)
6. *Guḍūcī* (*Tinospora cardifolia*)
7. *Nimba* (neem)
8. *Vāsaka* (*Adhatoda vasica*), and
9. *Kimśuka* (*Butea monosperma*)

Management of epidemics outbreak

The prophylactic, or curative rites, in respect of the *Upasarga* (epidemics outbreak) among elephants is by means of a *Śānti karma* (pacifying rite), the worship of Gods and Brahmins and the gift of a *Kapilā* (pale-brown or tawny) cow. A physician while observing a fast shall tie garland of *Vacā* (sweet flag), *Siddhārthaka* (white mustard seeds) around the tusks of an elephant for protecting from attacks of diseases. The worship of *Sūrya* (Sun), *Śiva*, *Durgā*, *Śrī Viṣṇu* was for protection of the elephant. *Bali* (Oblations), offerings must be given to *Bhūta* and the elephant must be bathed with *Chatur ghaṭa* (four pitcherfuls) of water. The diet consecrated by reciting the proper mantras shall be given to the elephant and the elephant must be smeared with holy ashes. The sacred rites act against the influences of malignant spirits and grant immunity.

These are few glimpses briefly expounded regarding the medical treatments to be employed for the cure of diseases of elephants mentioned in *Garuḍapurāṇa*. The chapter ended as "Thus I have summarised what is mentioned in the two *Āyurvēda* treatises (that of horses and elephants)".^{2,3,4,5}

Discussion and conclusion

The management of various diseases and disorders pertains to cows mentioned in the chapter entitled "*Nānauśadha Prayōga Nirūpaṇa*" and to horses and elephants in the chapter entitled "*Gajāśvāyurvēda*" of *Garuḍapurāṇa Ācārakhaṇḍa*. The *Aśvāyurvēda* is described elaborately but the *Gaja*, *Gavāyurvēda* are narrated briefly. In the chapter entitled "*Gajāśvāyurvēda*" other points like *Sarvārtha lakṣaṇa* - the healthy features, their classification, *Aśvarakṣaṇa* (horse protection) rites and classification of *Vraṇas* (ulcers/wounds), *Nasyakarma*, *Anupāna* (a fluid vehicle in medicine), *Pathyāhāra* (diet regime), management of *Upasarga* (epidemics) etc. of horses were discussed. And also some special rejuvenation therapies like *Dūrvā*, *Guḍūcī*, *Harītakī kalpa* and important formulations like *Rōgaśāmaka Kaṣāya* in *Gajāyurvēda* etc. are discussed. But it is mentioned that the drugs, treatment enumerated in connection with diseases of horses may also be employed in the diseases of elephants and other animals. The usage of metal and minerals drugs in the treatments of animals is not mentioned.

In India, history of traditional Veterinary medicine dates back to the

era of *Mahābhārata* i.e. 5000 B.C., recorded in the form of "*Nakula Saṁhitā*". Medicinal plants were used with predictable results during the famous war of *Mahābhārata*, where thousands of animals afflicted with wounds and diseases were successfully treated under the able guidance of *Pāṇḍava* Princes *Nakula* and *Sahadēva*. The "*Nakula Saṁhitā*" which is written by them during the period of *Mahābhārata*, deals with the diseases of the animals and their treatment by medicinal plants could be essential and useful to indicate the claim on modern scientific line to clearly assess their value. Similarly other references are also found in *Mahābhārata*, i.e. *Nakula* had the responsibility of horses and Prince *Sahadēva* had the responsibility of cows in the palace of King *Virāṭa*. So, Prince *Nakula* was known as the Veterinarian of horses and Prince *Sahadēva* as the Veterinarian of Cows. Prince *Nakula* was the author of the treatise "*Nakula Saṁhitā*" and "*Aśva Śāstra*", while Prince *Sahadēva* was the author of "*Gavāyurvēda*". *Achārya Śālihōtra* of North Western part of India was regarded as the expounder of "*Aśvāyurvēda*". Whereas *Āchārya Pālaāpya* of *Aṅgadēśa* was regarded as the expounder of *Gajāyurvēda* and Prince *Sahadēva* as the expounder of "*Gavāyurvēda*".

The present Veterinary Council of India adopted its insignia, the sculpture of a bull, which is a part of the text of the stone edict of Emperor Ashoka (around 300 BC), which projected the veterinary profession as its "best heritage" (Singh, 2002a)

In India, history of traditional Veterinary medicine dates back to the era of Mahābhārata i.e. 5000 BC, recorded in the form of "Nakula Saṁhita". Medicinal plants were used with predictable results during the famous war of Mahābhārata, where thousands of animals afflicted with wounds and diseases were successfully treated under the able guidance of Pāṇḍava Princes Nakula and Sahadēva.

Ashoka, the grandson of Chandragupta, who turned to Buddhism after Kalinga war, gave a new turn in India to veterinary science. It is described that the first veterinary hospital existed in Ashoka's regime (Schwabe). The 'Baniyan Hospital' of Surat is believed to be one of them, which consisted of a large piece of land enclosed by high walls. Provision was made inside to accommodate animals. Thus, it is proved that there was super specialty available in this country not only for Human beings but also for Animals. It

is high time that we *Āyurvēda* people develop such specialty in *Āyurvēda*, publish the available literature and research work should be done to prove the claims and for the attention and acceptance of *Paśu Āyurvēda* - the Ancient Indian veterinary medicine globally.

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