Review Article

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SOME IMPORTANT AYURVEDIC MEDICAMENTS FOR HORSE DISEASES FROM ASHVAPALAPRAKASHA

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ABSTRACT

Animals received good medical care in ancient India. In ancient and medieval periods not only the physicians but also the kings and the princes, were well-versed in animal care. Among the animal's horses were given paramount importance, as they are desired by individual person, the society and the king in times of war as in times of peace. Shalihotra the first known veterinarian of the world an expert in horse husbandry and horse medicine has written a famous book on horse diseases and treatment. Based on this many books were further written by many medieval scholars. "Asvaphalaprakasha" is one of those famous treatises on horses with illustrations. This manuscript was found in Sri Samarth Vagdevata Mandir, Dhule during the medical manuscripts digitization under the Dept. of AYUSH EMR project "Collection and Digitization of Medical Manuscripts from South India, Maharashtra and Madhya Pradesh" (CDMM). It is a complete guide of horses, dealing with various species, auspicious and inauspicious characters of the horses, assessment of the horses for various purposes, their care in health and disease condition. The manuscript is composed with beautiful colour diagrams in support of description of the whorls, characteristic features of various types of horses, clinical findings of various diseases, locations for treatment procedures like bloodletting by venesection etc. Present article reveals certain important Ayurvedic medicaments of horses mentioned in this paper manuscript.

Keywords: Ashvapalaparakasha, Shalihotra, Himmat bahadur, horse.

INTRODUCTION

This text, Ashvapalaparakasha, is also having another name as "Shalihotra". Shalihotra name is pre-eminent as the expert of horses. Studies by Indian Council of Agricultural Research, New Delhi, suggests that the Indian treatise Shalihotra was explored by Shajahan and he translated it into Arabic by Saiyed Abdulla Khan Bahadur Feroze Jung by the name Kitab-ul-Vitrat and later translated into English¹. Some of the later authors have named their veterinary works by the name of Shalihotra. Though the text name is Salihotra/ Salotra, here the term Shalihotra refers to similar texts of Shalihotra tradition.

Manuscript

The name of the manuscript is Ashvapalaparakasha. Salotra and Shalihotra are other names mentioned in this manuscript (Figure 1). It has 65 folios and 130 pages. The manuscript contains 43 colourful drawings of horses. These drawings cover various types of whorls of horses and various disease conditions. Total text is divided into seven pariccheda (chapters). Language is Sanskrit. Script is Devanagari. Main subject is Horse diseases and treatments. So far it is not published or translated in any language.

Author

Author of the manuscript is Himmat bahadur. Colophon of the manuscript and the initial stanzas support this (Figure 2). As per research done by William R. Pinch, Himmat bahadur is a brave king and people used to sing in praise of "Himmat Bahadur

Anupgiri Gosain", northern India's most celebrated ascetic warlord. Anupgiri began his military career in the 1740 as the Chela or disciple of Rajendragiri Gosain of Moth, near Jhansi in Bundelkhand. After Rajendragiri's death, Anupgiri became a mainstay of the Awadhi army.²

Material and method followed in identifying the medicaments

Digitized copy of the original Asvaphalaprakasha manuscript was the basis for the present work. After reading the Sanskrit shloka, identified important medicaments. Assessed botanical and English equivalents of sanskrit drugs' names after referring various Ayurvedic books like various Ayurvedic Nighantu, Dravyaguna Kosh, Sanskrit English dictionaries and consulting the botanists. In the same way identified various old measurements' metric equivalents by verifying various scholarly works. Finally, the medicaments presented in universal understanding way along with Sanskrit, English/ Botanical names of the ingredients and clear dosage in metric equivalents.

Content and important medicaments

First chapter is explained in 3 sub headings. 1. Content of the text 2. Good and bad omen while purchasing the horses and 3. Auspicious right sided whorls. Second chapter explains about characteristic features of best and inauspicious horses. Third chapter mainly deals with age of the horse in accordance with the teeth position of the horse. Fourth chapter deals with bloodletting through venesection and treatment of various diseases.

Various horse diseases and their treatments mentioned in fourth chapter

Raktavata dosha

The horse with Raktavata dosha gets red and black spots in the eyes and called as Kamtutadosha. Administering the mixture of equal quantities of cow's ghee and honey, in the dose of 2 pala (96 g), cures the disease.

Veli dosha

Repeatedly drinking the water and searching for the shade are the symptoms of Veli dosha. After conducting bloodletting at appropriate places, every day administering 2/7 Shetaka (2/7 Sher = $2 \times 960/7 = 274$ g)^{3,4,5} jaggery cures the disease.

Tridoshajavyadhi (vitiation of three body humors)

Due to the excess Pitta horse suffers from Tridoshajavyadhi (a disease with vitiation of three body humors). In this condition horse suffers from restricted vision and breathing problems (dyspnoea) and refuses the fodder. After the bloodletting, administering the mixture prepared from 30 Pala (1440 g) black pepper, long pepper, Veshya (root of *Cissampelos pareira* L.)^{6,7} along with 2 Shetaka (1920 g) jaggery for 3 days cures the disease.

Raktabindu (bloody spots in the eyes)

If horse suffers from sudden Raktabindu (bloody spots) in the eyes, administer errhine therapy with dry zinger powder.

Mukharakta Dosha (epistaxis)

Excess sleep, lassitude, low digestive fire, cough, shivering and giddiness/ vertigo are the bad consequences of Mukharakta dosha (epistaxis).

Bloodletting through venesection in nijatola (12 g?) measure is beneficial (exact location is not advocated).

Fasting and administering one Shetaka (960 g) Munja (*Saccharum munja* Roxb.) during the night-time cures the disease.

Administering the 1/7th part of bolus of 5 Pala each of Madya (liquor), Rishta (Arishta - *Sapindus emarginatus* VAHL.), Navasneha (new oil), Abhaya bija (seeds of *Terminalia chebula* RETZ.) added with 2 Shetaka (1920 g) water cures the disease.

Krimi (worm infestation)

Every day early in the morning, administering the mixture prepared from 1 Pala of Rishta (Arishta - *Sapindus emarginatus* Vahl.), 1 Pala of Abhaya bija (seeds of *Terminalia chebula* Retz.) and 10 Pala of Navasneha (new oil) cures Krimi (worm infestation). Further this medicine increases the appetite, enhances the strength and destroys the intestinal worms.

Netrasarva bimduharana (to destroy all the types of spots in the eyes)

Administering the mixture of 5 Pala (240 g) each of Haritaki (*Terminalia chebula* Retz.), Gomutra (urine of cow) and tila (sesame seeds) for 21 days cures all the types of spots in the eyes. Administering this medicine, after the bloodletting, is more beneficial.

Sarvarogavinasha aushadha (medicine for destroying all the diseases)

Prepare the decoction of Amkapala (1 or 9 pala) each of bark of Dadima (*Punica granatum* Linn) and Madhuka (*Madhuca indica* Gmel.); 6 Pala of Smara Phalam (?), Vamana (Madana Phala- *Randia dumnetorum* Lam?). Administering 1/8th part of the decoction for 2 days cures all the diseases of the horse.

Strength promoting medicine/ diet in various months

Bhadrapada (August - September)^{8,9,10}

During the month of Bhadrapada horse becomes free from diseases by administering the milk mixed with 1/4th water.

Ashvina and kartika (September - November)^{8,9,10}

Administering 6 Pala (288 g) of the mixture prepared from 5 Shetaka (4800 g) hot milk and 4800 g rice makes the horse free from diseases and enhances the strength during Ashvina and kartika months.

Margashirsha and Pausha (November - January)^{8,9,10}

During the months of *Margashirsha* and *Pausha*, administering the leaves of Maushti (Bimbi? *Coccinia indica* Wight & Arn.) Canaka (Bengal gram) and Masha (black gram) enhances the strength and makes the horse free from diseases. Further administer 2 Shetaka (1920 g) each of oil and ghee.

Magha and Phalguna (January -March)^{8,9,10}

Good quality of Canaka (bengal gram), Yava (barley) are indicated in Magha and Phalguna. Administering boiled barley for 28 days and every evening providing green gram, that is boiled in oil, pacifies the vitiation of Tridosha, relieves Bhrama (giddiness) and Shula (colic pain).

Madhu-Madhava Masa (March - May)^{8,9,10}

Administering 3 Pala (144 g) lakuci rasa (juice of *Artocarpus lakoocha* Roxb) mixed with rock salt (Shaindava lavana) is beneficial in Madhu-Madhava Masa (*Caitra- Vaishakha*).

Jyeshtha and Ashada (May - July)^{8,9,10}

Administer the mixture of one Shetaka (960 g) measure each of pure sesame oil and ghee of cow mixed with 1Pala (48 g) of latex of Arka (*Calotropis procera* R.BR.) in Jyeshtha and Ashada Masa. Prepare 2 Shetaka (1920 g) measure of bolus by the mixture of Dikpala (8 pala-384 g) measure each of Lashuna (garlic), Dipana (seeds of *Trachyspermum ammi* (L.), Shumthi (dry ginger) along with sufficient measure of jaggery. Administering this for 3 days enhances the strength of the horse.

Various horse diseases and their treatments mentioned in fifth chapter

Fifth chapter explains about Caturvidha nasya (Four types of errhine therapies) and their suitability for persons according to Dosha. As per this text Nasya (errhine therapy) is 4 types viz. Sachikkana (greasy /oily), Ruksha (dry), Mishta (sweet) and Katu (pungent). In Pitta dosha predominant diseases, Mishta type of Nasya; In Kapha, Ruksha and Katu (pungent) and for Vata, Mishta (sweet) and Sneha (oily) Nasya are more suitable.

Indications of Nasya

Errhine therapy is indicated in Kasa (cough), Shwasa (dyspnoea), Shrama (fatigue), Alasya (laziness/ sloth) and vitiation of Vata, Pitta and Kapha dosha.

In cough and other respiratory diseases

Prepare the mixture of one tamka (4 g)¹¹ each of Shyama (Shyama Trivrit- black variety of *Operculina turpethum* (L.) S. MANSO)¹², Pippalimula (root of *Piper longum* LINN.), Picumanda rasa (juice of fruits of *Azadirachta indica* A. JUSS.), Saindhava (rock salt) and one Kudava (384 g)^{13, 14} of cow's milk and boil. Administering this milk as Nasya relieves cough and other respiratory diseases.

In Chaitra Masa (March - April) administering Nasya of grapes juice mixed with half Pala (24 g) measure of Yavakshara (alkali prepared from the husks of barley) relieves cough and other respiratory diseases.

General treatment for all the diseases

Administering the Nasya prepared from 3 pala (144 g) measure of latex of banian tree mixed with equal measure of sugar cures the diseases of the horse.

Prepare a fine powder of one Tamka (4 g) measure Yavakshara (alkali prepared from the husks of barley), Shashti dhanya (rice variety which yields within 60 days), Kanaka (*Datura metel* L.) and Vaca (*Acorus calamus* L.). Administering cold water mixed with this powder as Nasya in the early morning cures the diseases.

Prepare a Nasya from the water mixed with 3 Tamka (12 g) Guduchi (*Tinospora cordifolia* (Willd.) Hook.F. & Thoms.), Talapatra (leaves of *Borassus flabellifer* L. / *Curculigo orchoides* Gaertn.) and Kamala (*Nelumbo nucifera* Gaertn.). Horse becomes free from diseases by administering this Nasya early in the morning during the months of Magha and Parguna (January - March).

One Pala (48 g) measure of Nasya prepared from the fruits (rind) of Haritaki cures all the chronic diseases of the horse.

Administering 8 pala (354 g) measure of Nasya prepared from the mixture of cow's urine, Kakajangha (whole plant of *Peristrophe bicalyculata* Nees.)¹⁵, Dhumrarasa (Kitamari rasa - expressed juice of root of *Aristolochia bracteolata* Lam.)¹⁶ pacifies the Kaphaja diseases.

Administering Nagapala (7 or 8 Pala= 336-384 g) measure of Nasya prepared from water of the well mixed with Kirata (whole plant of *Swertia chirata* (Roxb. ex. Flem.) Kar.), Marica (black pepper) and Shunthi (dry zinger) destroys the Pittaja diseases.

Prepare Nasya from water of the well mixed with Musta (roots of *Cyperus rotundus* L.), Tagaru (roots of *Delphinium bruonianum* Royle), Vishva (dry ginger) and Shvetasarshapa (white mustard seeds). Administering 8 Pala (384 g) measure of this Nasya early in the morning for 3 days' cures Sannipatavyadhi (disease manifested by three vitiated Dosha).

Various horse diseases and their treatments mentioned in sixth chapter

Sixth chapter deals with various Pimda (bolus) and their indications. Administering one Pala (48 g) measure of bolus from the mixture of powders of Marica (black pepper), Pippali (long pepper), Shunthi (dry ginger), Musta (roots of *Cyperus rotundus* L.), and Shatavari (roots of *Asparagus racemosus* Willd.) enhances the strength of the horse.

Prepare the mixture of the equal quantities of Ela (cardamom), honey, ghee, Shyama (root of Shyama Trivrit- black variety of *Operculina turpethum* L), Mushali (roots of *Asparagus adscencus* Roxb.), sugar, Shatavari (roots of *Asparagus racemosus* Willd.), Marjjarikamda (bulb of *Ipomoea pes-tigridis* L.)¹⁷, Karkari (it is a Hindi word, tuberous root of *Gloriosa superba* L.), Simhika (whole plant of *Solanum indicum* LINN.) and enough measure of jaggery. Administering eighteen Pala (864 g) measure of bolus from this mixture pacifies the Pitta.

Administering the bolus from the mixture of equal quantities of Guduchi (stem pieces of *Tinospora cordifolia* (Willd.) Hook.F. & Thoms.), Kantaki (bark of *Acacia catechu* Willd./ *Flacourtia ramontchi* L'herit.), Musta (roots of *Cyperus rotundus* L.), Jikeddrane (?) destroys the Vata.

Administering 22 Pala (1056 g) measure of bolus from the mixture of equal quantities of Marica (black pepper), Mritashamkha (*Bhasma* of conch shell), Hasticitkaraka (elephant dung), Brihat (*Solanum indicum* Linn.), Hingu (*Ferula foetida* Regel.), Vacha (root of *Acorus calamus* L.), jaggery and ghee destroys the strong Kaphaja disease as well.

Prepare boluses by grinding equal quantities of Jatiphala (fruit of *Myristica fragrans* Houtt.) Draksha (grapes), Kamkola (fruits of *Piper cubeba* L. F.), honey, sugar, Sajjhika (*Mimosa rubicaulis* Auct. non Lam.), Ketaka mula (root of *Pandanus*

odoratissimus L.F.), 8 Pala (384 g) ghee and 2 Shetak (1920 g) jaggery. Everyday administering 7 boluses enhances the strength of weak horse.

At the end of night administering 1/2 Shetak (480 g) or 1/4 Shetak (240 g) of honey for 8 days enhances the speed and strength of the horse.

Prepare fifteen Tamka (60 g) measure of mixture from the equal parts of Dhatri (*Emblica officinalis* Gaertn.), Guduchi (stems of *Tinospora cordifolia* (Willd.) Hook.F. & Thoms.), Kamkola (fruits of *Piper cubeba* L. F.), jaggery, Musta (root of *Cyperus rotundus* L.), Shaka (*Tectona grandis* L.F.), Bijapurakam (fruits of *Citrus medica* L.) and Balada traya (roots of Bala- *Sida cordifolia* L.; Atibala- *Abutilon indicum* (L.) Sweet; Nagabala- *Grewia hirsuta* Vahl). Along with this mixture prepare 15 Pala (720 g) measure of another mixture from the equal parts of Chitraka (*Plumbago zeylanica* L.), Arkakinjalka (flowers of *Calotropis procera* R.BR.), Musta (roots of *Cyperus rotundus* L.), Vatavidamgak (fruits of *Embelia ribes* Burm), Pathimulam (root of *Cissampelos pareira* L.) and Bilvamulam (root of *Aegle marmelos* (L.) Correa ex.). Administering these mixtures along with enough jaggery, for 7 days enhances the strength of the horse.

Administering the mixture of Guduchi (stem pieces of *Tinospora cordifolia* (Willd.) Hook.F. & Thoms.) Bilvapatra (leaves of *Aegle marmelos* (L.) Correa ex.) and Vaca (roots of *Acorus calamus* L.) along with 8 Pala (384 g) measure of ghee destroys all the eye diseases.

Administering 8 Tamka measure of the mixture prepared from the equal parts of Priyamgu (*Callicarpa macrophylla* Vahl), Patra (*Cinnamomum tamala* Nees & Eberm.), Musta (*Cyperus rotundus* L.) and Jambhira (*Citrus limon* (L.) Burm.F) along with enough jaggery cures fever.

Prepare 25 Pala (1200 g) measure of mixture from equal parts of Atisha (*Aconitum heterophyllum* Wall. ex Royle), honey, Apamargistamdu (seeds of *Achyranthes aspera* L.) and Pushkaramulakam (rhizome of *Inula racemosa* Hook. F.). Administering this mixture along with 5 Shetaka (4800 g) of jaggery and 5 Shetaka of milk, every day for 7 days enhances the strength of the horses and these become best to attract the kings.

Administering Karanja (*Pongamia pinnata* (L.) Pierre) and Jayapala (*Croton tiglium* L.) along with Gajonmanapala (8 Pala-384 g) curd for 7days pacifies Vata.

Prepare mixture with 30 Pala (1440 g) rhizomes of *Acorus calamus* L., 5 Pala (240 g) of gum of *Shorea robusta* Gaertn. F. and 6 Pala (288 g) salt. Administering this along with Mudgavari (soup of green gram) cures the pains or diseases of the horse. The same along with Bhujapal (2 pala 96 g?) camphor cures worms.

Prepare mixture from the equal parts of the powders of camphor, Pathake (patha - *Cissampelos pareira* L.; Rajapatha - *Cyclea peltata* (LAM.) Hook.F.&Thomson), cardamom and leaves of *Cinnamomum tamala* Nees & Eberm. Administering 8 Pala (384g) measure of the bolus prepared from this mixture and jaggery immediately gives relief from pain produced from the burns.

Administering the mixture of garlic and urine of buffalo, in the dose of 1 Kudava (384 g) for 3 days' cures Raktapitta (bleeding disorder).

Administering the mixture prepared from 5 Pala (240 g) cardamom, 240 g rice, 2 Shetak (1920 g) jaggery and more than 1 Pala (48 g) Varvarika (?) for 3 days cures the pain produced due to the Gulma (lump of abdomen)

Administering the mixture prepared from Shiva Pala (3 pala - 144 g?) measure each of roots of *Vernonia cinerea* LESS., rhizomes of *Acorus calamus* L., rhizome of *Saussurea lappa* C.B.CL. and honey is beneficial for voice.

As per the Ghritapakavidhi (method of preparation of medicated ghee) Shyama (root of black variety of *Operculina turpethum* (L.) S. Manso/ flowers of *Callicarpa macrophylla* Vahl/ *Argyrea nervosa* (Burm.F.) Boj.) 18 and Kola (Pipali-long pepper) are cooked in one Shetak measure of cow's ghee. Administering this ghee cures Shvasa (dyspnoea).

Prepare 40 *Pala* (1920 g) quantities of fine powders of flowers of *Callicarpa macrophylla* Vahl, bark of *Symplocos racemosa* Roxb. and fruits of *Terminalia bellerica* Roxb. Prepare bolus by mixing these powders in 5 Shetak (4800 g) jaggery. Administering this bolus for 3 days' cures cough and dyspnoea. Prepare two types of medicated buttermilks by mixing 18 Tamka (72 g) camphor and 18 Tamka (72 g) rock salt in one Shetak (960 g) of buttermilk. Massaging the horses for 3 days with these medicated buttermilks, in sunrays, cures Vata disease. Prepare a mixture of Shyama (root of black variety of *Operculina turpethum* (L.) S. Manso/ flowers of *Callicarpa macrophylla* Vahl/ *Argyrea nervosa* (Burm.F.) Boj.) and rock salt. Take 18 *Pala* of this mixture and add Tithi Tamka (15 Tamka- 60 g- Monier Williams) ¹⁹ measure of Indrani (*Nirgundi* - *Vitex negundo* L.) ^{20, 21} and 15 Tamka of jaggery. Administering this mixture for 3 days' cures Urinary diseases.

Dik *Pala* (4/8 pala -192 or 384 g Monier Williams) ²² measure each of flowers of *Callicarpa macrophylla* Vahl, heartwood of *Cedrus deodara* (Roxb., Mura (roots of *Selinum tenuifolium* Wall.) ²³, roots of *Nardostachys jatamansi* DC., fruits of *Terminalia chebula* Retz., Gamdhaka (purified sulphur) and sandal wood are ground to prepare fine powders. Administering the bolus prepared from these powders along with 2 Shetak (1920 g) measure of jaggery cures Vishta Dosha (Mala Dosha - all the diseases related to the feces).

Administering 1 *Pala* (48 g) measure of bolus prepared from Veshya (root of *Cissampelos pareira* L.), fruit of *Myristica fragrans* Houtt, fruits of *Trichosanthes dioica* Roxb., Tranava(?) Adri (Shilajit- bitumen) cures Vatarakta (gout).

Administering 15 *Pala* (720 g) measure of Atasi (*Linum usitatissimum* L.) along with the latex of banyan tree cures Jalodara (ascites).

Administering Arkapala (12 *Pala*- 576 g Monier Williams) ²⁴ measure of Varuna Mula (root of *Crataeva religiosa* Forst.) and Indravaruni Mula (root of *Citrullus colocynthis* (L.) Schrader) along with 3 Shetaka (2880 g) buttermilk cures Udara (distension of abdomen/ abdominal diseases).

Take Arkaphala measure (equal to Fruit of *Calotropis procera* R.BR.) of Maricha (black pepper), Patra (*Cinnamomum tamala* Nees & Eberm.) and Simhara Pallava (young leaves of *Solanum indicum* L.). Prepare a bolus by grinding the mixture in enough jaggery. Administering this bolus cures the Ghata (blow/injury).

Prepare a mixture of Dikpala (192 or 384 g) measure of sulphur, enough (as per classics) Darunisha (stem pieces of *Berberis aristata* DC.) and Manashila (realgar- measure of realgar is not mentioned. It should be taken in minute quantities.). Process this mixture in one Shetaka (960 g) measure of ghee. Administering half the measure of this medicated ghee internally and half externally for massage gives divine shape to the horse.

Prepare a mixture from Tithi *Pala* [15 *Pala*- 720 g (this measure seems high)] measure each of Suvarnamakshika (Chalcopryrite/ copper pyrite) ²⁵, leaves of *Azadirachta indica* A. Juss., and enough Yavaksharam (alkali prepared from the husk of barley). Process this mixture in triple the measure (2160 g) of ghee. Administering half Shetaka measure (480 g) of this processed

ghee for massage and the same measure internally controls excessive bleeding.

Prepare mixture of whole plant of *Eclipta alba* Hassk., realgar, honey, roots of *Inula racemosa* Hook. F., roots of *Aristolochia bracteata* Retz. and roots of *Delphinium bruianum* Royle. Prepare decoction by boiling 10 *Pala* (480g) of this mixture in enough water till its 1/8th part remains. Administering this decoction cures pain produced due to excess appetite.

Various horse diseases and their treatments mentioned in seventh chapter

Seventh chapter deals with topics like qualities of suitable horses, Shiramokshana (Bloodletting by venesection / venous puncture), pathogenesis and diagnosis of the diseases, treatment with various decoctions etc.

Pathogenesis of various diseases, clinical findings and their treatment

Administering the milk processed with 5 *Pala* (240 g) measure two types of Cardamomum (Brihat Ela - *Anomum subulatum* Roxb.; Sukshma Ela - *Elettaria cardamomum* Maton) and roots of Kasha (*Saccharum spontaneum* L.) cures bleeding from the nostrils (epistaxis).

Smelling the shoulder region, getting horripilation and shivering of the body are the symptoms of Virecanashula. It is advised to burnt Gajapala measure (8 *Pala* 384 g) of seeds of *Celastrus paniculatus* Willd. to ashes. Administering this along with ghee cures the disease.

Digging the soil with face and holding it with the teeth are the symptoms of Vatavyadhi. Nasal instillation of about Artha Shetaka (480 g) of milk mixed with 2 Tamka (8g) of honey cures the Vatavyadhi.

Administering Dikpal (192 or 384 g) measure of gum of *Ferula foetida* Regel., Tri Lavana (Saindhava Lavana - Rock salt, Samudra Lavana- normal salt, Vidavalavana- Ammonium chloride), rhizomes of *Aconitum heterophyllum* Wall., Kirvara (Kitamari - roots of *Aristolochia bracteata* Retz.?) along with hot water cures Kampadosha (shivering/ tremors in the body).

Predominance and vitiation of Pitta causes Dadrukushtha (a type of skin diseases with blisters on skin- ring worm infection) in the horse. Administering decoction prepared from roots of *Pandanus odoratissimus* Roxb), root of *Musa paradisiaca* Linn. and bark of *Ficus glomerata* Roxb. cures the disease.

Prepare a mixture of equal parts of purified Chalcopryrite/ copper pyrite, roots of *Cyperus rotundus* Linn., bark of *Strychnos nuxvomica* Linn., Limgi (Shiva Lingi- *Bryonopsis laciniosa* (Linn) Naud.) ²⁶ and fruits of *Embelia ribes* Burm. Keeping this bolus in mouth of the horse in the measure of Navacandrapala [91 *Pala*=4368 g or 19 *pala* 912 g; *Candra* indicates one number hence *Navacandrapala* indicates 91- Monier Williams] ²⁷ cures oral ulcers of the horse.

Early morning administering Dikmal/ Dikpala (192 to 384 g) measure of the mixture of roots of *Cyperus rotundus* Linn., fruits of *Piper longum* Linn., dry ginger, black pepper, fruits of *Carum roxburghianum* Kurz. Along with water of the well cures the swelling developed in front legs.

Administering Dikmala/Dikpala (192 to 384 g) measure of the mixture of garlic, fruits of *Anethum sowa* Kurz., fruits of *Trachyspermum ammi* (L.), fruits of *Carum roxburghianum* Kurz.), whole plant of *Swertia chirata* (Roxb. ex. Flem.) Kar., rhizomes of *Picrorhiza kurroa* Royle ex Benth., gum of *Ferula foetida* Regel.), yellow mustard, whole plant of *Fumaria vaillantii* Loisel, root of *Saccharum spontaneum* L., black pepper, bark of *Symplocos racemosa* Roxb cures Katistambhadosha (rigidity and pain in lumbar region).

Figure 1: Manuscript with salotra name (source Sri Samartha Vagdevata Mandir, Dhule, Maharashtra)

Figure 2: Full manuscript view with author details in stanza no-4 (source Sri Samartha Vagdevata Mandir, Dhule, Maharashtra)

Figure 3: Full manuscript with a colour image showing various whorls (source Sri Samartha Vagdevata Mandir, Dhule, Maharashtra)

DISCUSSION AND CONCLUSION

Ashvupalaprakasha is an exclusive text on horses with uniqueness and importance. It is mentioned as Shalotra and Shalihotra in certain places but it seems entire different from original Shalihotra samhita. Author Himmat Bahadur of Anupgiri Gosain family has historic importance as beloved ruler. Initial two chapters of this text deals the topics like Good and bad omen while purchasing the horses, auspicious and inauspicious whorls (Figure 3), quality of horses like Candrakshi, Padmakshi, Uttamashva, Ashtamamgalashva etc.

Assessing the age of the horse in accordance with the teeth position of the horse is a scientific discussion which is also proved in modern medicine. The manuscript contains 43 colourful drawings of horses. These drawings denote various types of whorls of horses, different types of horses, clinical findings in various diseases, locations for venesection etc. These drawings reveal the practical experience of the author in identifying quality of horses, diagnosing various disease conditions and treatment of horses in different disease conditions. Ancient measurements like Shetaka, Kudava, Tamka etc and their metric equivalents are further reestablished based on the time period of author. Some of the drugs quantities like latex of *Calotropis procera*, Chalcopyrite etc. seem high and their doses needs validation. Clinical findings in various disease conditions, diet and drugs indicated according to the month,

boluses and decoctions in various diseases seems scientific and outcome of time-tested clinical practices. Certain drugs indications are new in comparison with traditional texts, some are same as in traditional Ayurvedic classics and certain indications are similar to ethnobotanical claims.²⁸ Based on its important content it is concluded that “with the consent of trust Sri Samartha Vagdevata Mandir, Dhule, Maharashtra, present text can be taken up for translation with consultation of contemporary research scholars in the field of *Ayurveda*, Veterinary, History, Art etc. for most authentic outcome.

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